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Annual report of the Wisconsin State Horticultural Society for the years 1895-96. Annual meeting at Madison, February 4, 5, 6 and 7, 1896. Semi-Annual meeting at Waupaca June 16 and 17, 1896.. Vol. XX...

Wisconsin State Horticultural Society

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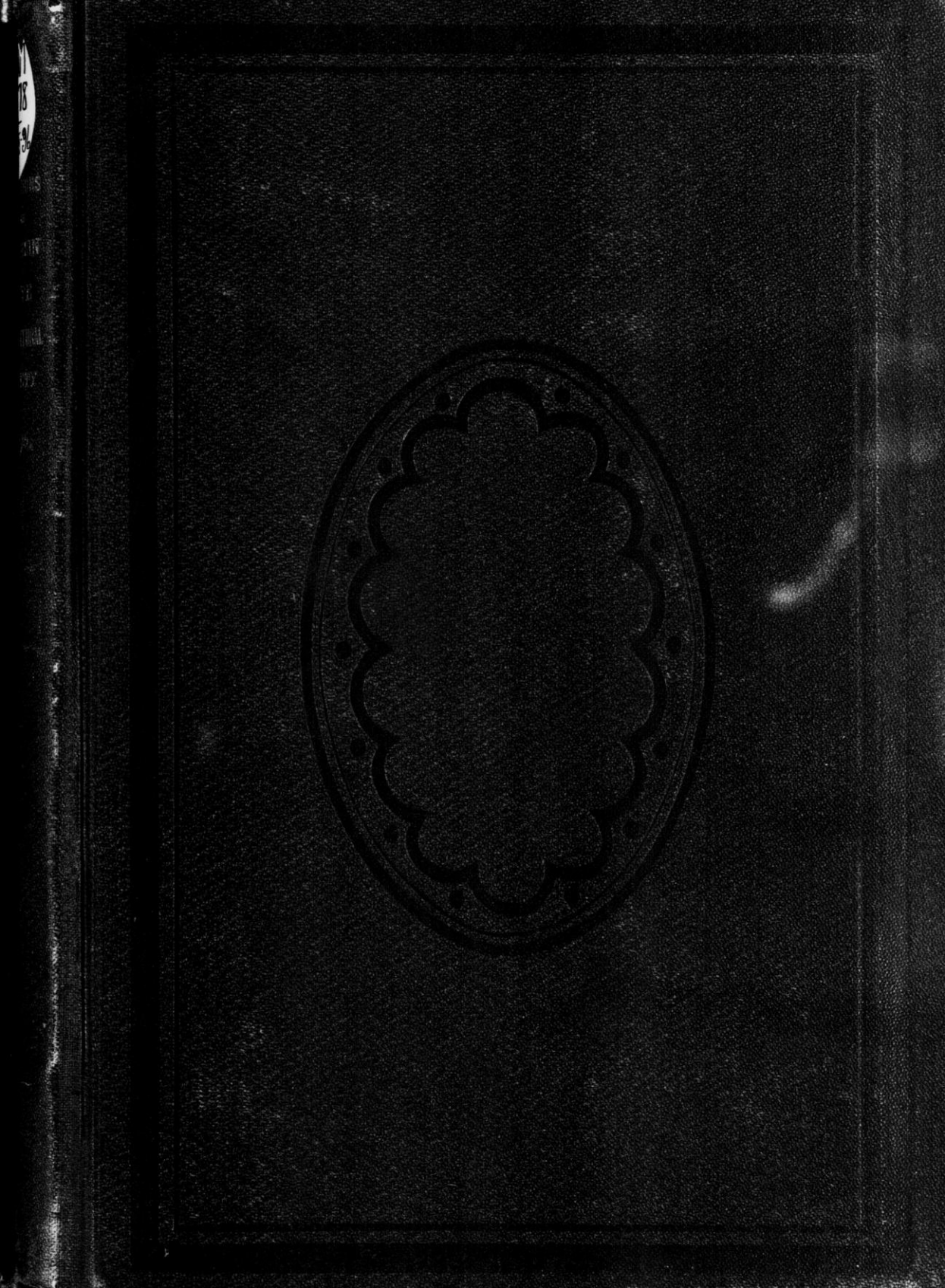
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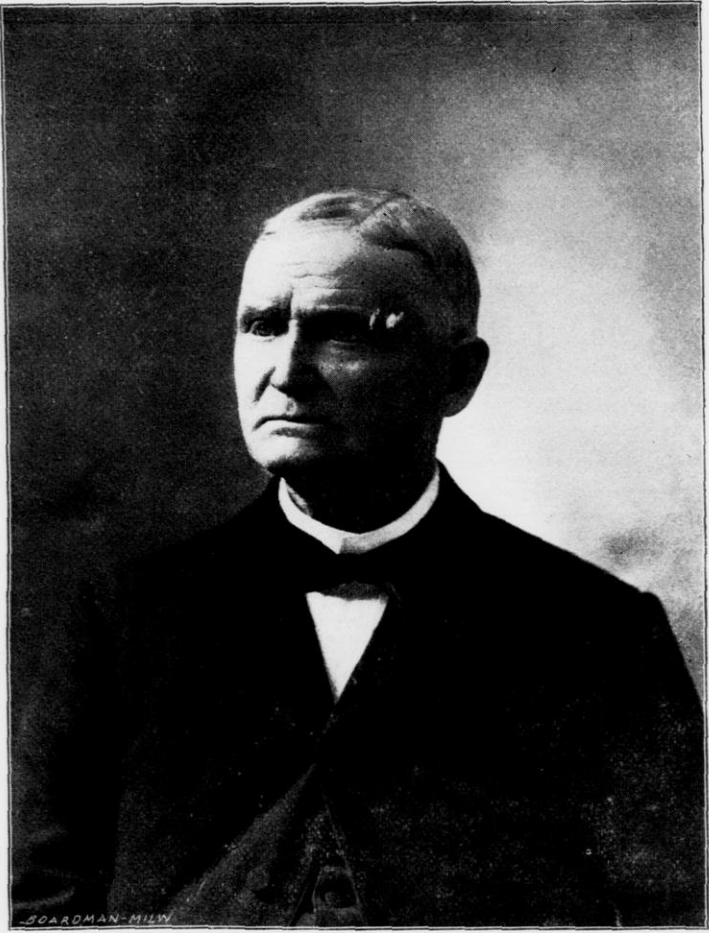
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A. G. TUTTLE

ANNUAL REPORT

OF THE

Wisconsin State Horticultural Society

FOR THE YEARS 1895-96.

Annual Meeting at Madison, February 4, 5, 6 and 7, 1896. Semi-Annual Meeting at Waupaca June 16 and 17, 1896.

VOLUME XXVI.

A. J. PHILIPS, Secretary,
WEST SALEM, WIS.



MADISON, WISCONSIN:
DEMOCRAT PRINTING CO., STATE PRINTER.
1896.

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JUL 17 1942

LETTER OF TRANSMITTAL.

TO HON. WM. H. UPHAM,
Governor of Wisconsin.

Dear Sir—I have the honor of presenting you as is required by law the twenty-sixth annual report of the Transactions of the Wisconsin State Horticultural Society, embracing the papers read and the discussions on the same at our yearly meetings, one of which we held in the city of Madison and one in the city of Waupaca. We have also published reports from local societies located in different parts of the state which show an increased interest in horticulture in these several localities. We also give the amount of money received from the state and the disposition made of the same during the past year. We are glad to say we have an increased demand from the children of Wisconsin for plants which have been so generously donated by the various nurserymen of our state. We have located and planted during the year a trial orchard in Marathon county near the city of Wausau, where the different tree fruits will be tested so that farmers and planters can find what varieties are suited and avoid being swindled by irresponsible tree peddlers.

A. J. PHILIPS,

Secretary.

West Salem, November, 1896.

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CONSTITUTION AND BY-LAWS.

As amended February, 1885.

CONSTITUTION.

ARTICLE I. This society shall be known as the Wisconsin State Horticultural Society.

ARTICLE II. Its object shall be the advancement of the art and science of horticulture throughout the state.

ARTICLE III. Its members shall consist of *annual* members, paying an annual fee of one dollar, which shall entitle the wife of such member to the privileges of full membership; of secretaries of local horticultural societies reporting to the state society, who shall be considered members *ex-officio*; or *life* members, paying a fee of ten dollars at one time; of *honorary life* members, who shall be distinguished for merit in horticultural and kindred sciences, or who shall confer any particular benefit upon the society; and *honorary annual* members, who may, by vote, be invited to participate in the proceedings of the society.

ARTICLE IV. Its officers shall consist of a President, Vice-President, Recording Secretary, Corresponding Secretary, Treasurer, Superintendent and an Executive Board, consisting of the foregoing officers and additional members, one from each congressional district of the state, five of whom shall constitute a quorum at any of its meetings. In addition to the foregoing officers, the presidents of all local horticultural societies reporting to this society shall be deemed honorary members and *ex-officio* vice-presidents of this society. All officers shall be elected by ballot, and shall hold their office for one year thereafter, and until their successors are elected; provided, the additional executive members may be elected by the county or local horticultural societies of their respective districts.

ARTICLE V. The society shall hold its annual meeting for the election of officers, commencing on the first Monday in February. It may also hold a meeting in December of each year, at such place and time as may be decided upon by the society, or the executive committee for the exhibition of fruit and for discussions, and such other meeting for dis-

cussions and exhibitions as the executive committee may direct, at such time and place as the executive board shall designate.

ARTICLE VI. This constitution, with the accompanying by-laws, may be amended at any regular meeting by a two-thirds vote of the members present.

AMENDMENT NO. I.

The foregoing article four of the constitution was amended at the annual meeting, February, 1895, to read: The president, vice-president, treasurer, secretary and corresponding secretary shall be the executive committee of the society; also, that three of the aforesaid committee shall constitute a quorum to transact business.

BY-LAWS.

I. The president shall preside at meetings, and, with the advice of the recording secretary, call all meetings of the society, and have general supervision of the affairs of the society, and shall deliver an annual address upon some subject connected with horticulture.

II. The vice-president shall act in the absence or disability of the president, and perform the duties of the chief officer.

III. The secretary shall attend to all the correspondence, shall record the proceedings of the society, preserve all papers belonging to the same, and superintend the publication of its reports. He shall also present a detailed report of the affairs of the society at its annual meeting. He shall also endeavor to secure reports from the various committees, and from local societies of the condition and progress of horticulture in the various districts of the state and report the same to the society. It shall be the duty of the secretary to make an annual report to the governor of the state of the transactions of the society, according to the provisions of the statutes for state reports.

IV. The treasurer shall keep an account of all moneys belonging to the society and disburse the same on the written order of the president countersigned by the secretary, and shall make an annual report of the receipts and disbursements, and furnish the secretary with a copy of the same on or before the first day of the annual meeting. The treasurer elect shall, before entering upon the discharge of the duties of his office, give good and sufficient bonds for the faithful performance of his duties subject to the approval of the executive committee.

V. The executive board may, subject to the approval of the society manage all its affairs and fill vacancies in the board of officers; three of their number, as designated by the president, shall constitute a finance committee.

VI. It shall be the duty of the finance committee to settle with the treasurer and to examine and report upon all the bills or claims against the society which may have been presented and referred to them.

VII. The standing committees of this society shall be as follows; 1st, Committee on finance, consisting of three members; 2d, Committee on nomenclature and new fruits, consisting of three members; 3rd, Committee on observation, as now provided. Said committee to be appointed annually by the executive committee of the society.

ACT OF RE-ORGANIZATION

AND LAWS RELATING TO THE

STATE HORTICULTURAL SOCIETY.

CHAPTER 151, LAWS OF 1879, AS AMENDED BY CHAPTER 14, LAWS OF 1887.

SECTION 1. The executive committee of the Wisconsin State Horticultural Society shall hereafter consist of (the president, secretary and treasurer of said society, and of one member from each congressional district of the state, said members from the congressional districts to be chosen annually by the county and local horticultural societies in the respective districts.

SECTION 2. The present officers and executive committee of said society shall hold their respective offices until the Tuesday next succeeding the first Monday in February, 1880, and until their successors are appointed.

SECTION 3. It shall be the duty of said society to aid in the formation and maintenance of county and local horticultural societies, to promote the horticultural interests of the state by the holding of meetings for discussion; by the collection and dissemination of valuable information in regard to the cultivation of fruits, flowers and trees adapted to our soil and climate, and in every proper way to advance the fruit and tree growing interests of the state.

SECTION 4. The annual meeting of the society for the election of its officers, the transaction of general business, and the consideration of questions pertaining to horticulture, shall be held at such time and place as may be determined at the last preceding annual meeting. In case of the failure of such meeting to so determine, the executive board may call such meeting by giving at least thirty days' notice to each member of the society.

SECTION 5. All vacancies in the offices of said society may be filled by the executive committee; and should there be a failure to elect a member of the executive committee in any district, the vacancy may

be filled by a two-thirds vote of the members of the society present at any regular appointed meeting.

SECTION 6. It shall be the duty of the secretary of said society to make an annual report to the governor of the state of the transactions of the society, including an itemized account of all moneys expended during the year, in addition to such matters as are now specified in the law relating to the same.

CHAPTER 526, LAWS OF 1889.

SECTION 5. And further, there shall be printed annually upon the approval and order of the commissioners of public printing, ten thousand copies of the transactions of the Wisconsin State Agricultural Society the same to embrace the reports of the county and other agricultural societies, and such matters pertaining to the agricultural industries of the state as shall be deemed important, provided the whole number of printed pages shall not exceed four hundred. Seven thousand copies of the transactions of the Wisconsin State Horticultural Society, the same to embrace such abstracts of reports of county and other horticultural societies, and such matters pertaining to the horticultural interests of the state as shall be deemed important, provided that the whole number of printed pages shall not exceed two hundred. Eight thousand copies of the transactions of the State Dairymen's Association, the same to embrace such other matters pertaining to the dairy interests of the state as shall be deemed essential, provided that the whole number of printed pages shall not exceed two hundred. Twelve thousand copies of the report of the Agricultural Experiment Station of the State University, provided that the whole number of printed pages shall not exceed two hundred and fifty. Two thousand copies of each of said reports to be bound separately in cloth, all others singly in paper.

SECTION 6. The reports provided for in the preceding section shall be distributed as follows, through the superintendent of public property: Fifteen copies to each member of the legislature, fifty copies to the State Horticultural Society, ten copies to each county agricultural society, and district industrial association, which embraces two or more counties and furnishes the State Agricultural Society a report of its proceedings, to each of the four societies named in the preceding section, fifty copies of each of the reports of the other three societies, twenty-five copies of each of the reports to the library of the state university; to the governor, lieutenant-governor, secretary of state, state treasurer, attorney general, state superintendent of public instruction, railroad commissioner and insurance commissioner, twenty-five copies each; to the state superintendent of agricultural institutes, fifty copies; to the superintendent of public property, commissioner of labor statis-

tics, adjutant-general, quartermaster general, state board of health, each ten copies; to each public library in the state, two copies; to each state normal school, two copies; to each of the state charitable and penal institutions, one copy; and the remaining copies to the respective societies for distribution by their secretaries.

SECTION 7. In no case shall the number of printed pages in any report provided for in the act exceed the maximum number specified, except upon written request of the officers submitting the same, and then only upon previous written approval of a majority of the commissioners of public printing, such application and approval to be filed with the secretary of state.

CHAPTER 417, LAWS OF 1889.

SECTION 1. The governor is hereby authorized to set apart by proclamation one day in each year to be observed as a tree planting or arbor day, requesting all public schools and colleges to observe the same by suitable exercises, having for their object the imparting of knowledge of horticulture, in the department known as arboriculture, and the adornment of school and public grounds.

SECTION 2. This act shall take effect and be in force from and after its passage and publication.

Approved, April 16, 1889.

JOINT RESOLUTION No. 19, A.

WHEREAS, The Wisconsin State Horticultural Society has many valuable books which it is desirable shall be preserved; and

WHEREAS, Many such have heretofore been lost in moving from room to room; therefore,

Resolved by the assembly, the senate concurring, That room number twenty-seven (27) in the capitol is hereby set apart for the permanent use of said horticultural society; provided, that nothing herein contained shall be construed to prevent its use by the clerical force of either branch of the legislature during any session thereof.

CHAPTER 148, LAWS OF 1895.

AN ACT to appropriate a sum of money to the Wisconsin State Horticultural Society.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. There is hereby appropriated the sum of fifteen hundred dollars out of the general fund annually, to the Wisconsin State Horticultural Society, and five hundred dollars to establish an additional experiment station.

SECTION 2. Chap. 117, of the laws of 1893 is hereby repealed.

SECTION 3. This act shall take effect and be in force from and after its passage and publication.

Approved April 8, 1895.

CHAPTER 339.

SECTION 3. There shall be printed seven thousand copies of transactions of Horticultural society, four thousand of which shall be bound in cloth, provided, the whole number of pages shall not exceed two hundred and fifty.

MEMBERS OF THE SOCIETY.

LIFE MEMBERS.

- Geo. J. Kellogg,	Janesville.
F. W. Loudon,	Janesville.
H. S. Woodruff,	Janesville.
Mrs. Ida Tilson,	West Salem.

HONORARY LIFE MEMBERS.

O. S. Willey, ex-Secretary,	Madison, Wis.
- F. W. Case, ex-Secretary,	Chicago, Ill.
- Prof. Wm. Trelease,	St. Louis, Mo.
J. S. Stickney, ex-President,	Wauwatosa, Wis.
A. G. Tuttle, ex-President,	Baraboo, Wis.
B. F. Adams,	Madison, Wis.
F. K. Phoenix,	Delavan, Wis.
J. C. Plumb,	Milton, Wis.
Peter M. Gideon,	Excelsior, Minn.
- J. S. Harris,	La Crescent, Minn.
- E. H. S. Dartt,	Owatonna, Minn.
- C. G. Patten,	Charles City, Iowa.
- M. E. Hinkley,	Marcus, Iowa.

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- Miss Lulu Philips,	West Salem, Wis.
- Miss Cornelia Porter,	Baraboo, Wis.
- Fred Craneheld,	Madison, Wis.
B. W. Strong,	Baraboo, Wis.
Mrs. Joseph Treleven,	Omro, Wis.
Mrs. C. E. Bushnell,	Appleton, Wis.
- Mr. Fry,	—, Illinois
- Miss Hatch,	Waupaca, Wis.
- Miss Ross,	Waupaca, Wis.

Mrs. Woodward,	Waupaca, Wis.
John Corse,	Racine, Wis.
A. L. Hatch,	Ithaca, Wis.

LIST OF ANNUAL MEMBERS, 1896.

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Anderson, Mrs. Matt	Pine Bluff, Wis.
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— Abbott, Mrs. Charles,	Appleton, Wis.
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— Allen, Mrs. M. T.	Waupaca, Wis.
Barney, F. L.	Viroqua, Wis.
— Barney, Mrs. F. L.	Viroqua, Wis.
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— Briggs, Mrs. H. A.	Elkhorn, Wis.
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— Bendixen, Mrs. W. J.	Waupaca, Wis.
— Benedict, Miss Myrtle	Waupaca, Wis.
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— Barnes, Mrs. A. D.	Waupaca, Wis.
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Case, J. F.	Eau Claire, Wis.
— Case, Mrs. J. F.	Eau Claire, Wis.
Cressy, G. A.	Hilbert, Wis.
Converse, D. C.	Ft. Atkinson, Wis.
— Converse, Mrs. D. C.	Ft. Atkinson, Wis.
Coe, R. J.	Ft. Atkinson, Wis.
— Coe, Mrs. R. J.	Ft. Atkinson, Wis.
Convey, Thos.	Ridgeway, Wis.
— Convey, Mrs. Thomas	Ridgeway, Wis.

Chappell, F. H.	Oregon, Wis.
Chappell, Mrs. F. H.	Oregon, Wis.
Cripps, Elon	Columbus, Wis.
Cripps, Mrs. Elon	Columbus, Wis.
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Coast, Thos.	Parfreysville, Wis.
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Chandler, S. S.	Waupaca, Wis.
Dennis, Ira B.	Evansville, Wis.
Doty, Prof. F. E.	Waupaca, Wis.
Dawes, Geo. H.	Waupaca, Wis.
Drake, W. H.	Lake Mills, Wis.
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Edwards, A. J.	Ft. Atkinson, Wis.
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Goff, Mrs. E. S.	Madison, Wis.
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Houser, John	Onalaska, Wis.
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Harris, H. H.	Warrens, Wis.
Harris, Mrs. H. H.	Warrens Wis.
Hontoon, John	Waupaca, Wis.
Hayward, M. L.	Waupaca, Wis.
Jeffrey, George	Milwaukee, Wis.
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Johnson, Mrs. Franklin	Baraboo, Wis.
Jenkins, J. P.	Bangor, Wis.
Jenson, J. F.	Waupaca, Wis.
Jenson, Sopheus	Waupaca, Wis.
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Kellogg, Mrs. L. G.	Ripon, Wis.
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Koons, E. H.	Waupaca, Wis.
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Linse, Mrs. Charles	La Crosse, Wis.
Meen, J. J.	Norwalk, Wis.
Menn, Mrs. J. J.	Norwalk, Wis.
Moon, L. G.	Stanley, Wis.
McKerrow, George	Sussex, Wis.
McKerrow, Mrs. George	Sussex, Wis.
Moyle, W. J.	Yorkville, Wis.
Meixner, J. W.	North Bristol, Wis.
McColma,	Plymouth, Wis.
Marsh, C. L.	Wonevoc, Wis.
Mead Charles	Waterford, Wis.
Marshall, S. H.	Madison, Wis.
Nelson, N. P.	Waupaca, Wis.
Ogden, C. S.	Waupaca, Wis.
Perry, E. A.	Beaver Dam, Wis.
Porter, A. H.	Lake Mills, Wis
Porter, J. W.	Oakland, Wis
Philips, A. J.	West Salem, Wis
Philips, Mrs. A. J.	West Salem, Wis.

Riedeberg, H.	Stonebank, Wis.
Robinson, A. S.	Centralia, Wis.
- Robinson, Mrs. A. S.	Centralia, Wis.
Robbins, Mrs. Lelia	Platteville, Wis.
Richardson, E. A.	Sparta, Wis.
Rostad, K. T.	Spring Valley, Wis.
Rice, W. V.	Rock Elm, Wis.
Rich, T.	Waupaca, Wis.
Skinner, F. R.	Eau Claire, Wis.
Scimmons, Charles	Stockton, Ills.
Seymour, A. N.	Mazomanie, Wis.
Searles, J. D.	Sparta, Wis.
Scofield, E. J.	Hanover, Wis.
Stammer, William	South Osborne, Wis.
Single, Ed.	Wausau, Wis.
Spry, John	Ft. Atkinson, Wis.
Stoneman, G. W.	Bailey's Harbor, Wis.
Scoville, C. L.	Waupaca, Wis.
Shaw, W.	Waupaca, Wis.
True, John M.	Baraboo, Wis.
- True, Mrs. J. M.	Baraboo, Wis.
Toole, Wm.	Baraboo, Wis.
- Toole, Mrs. Wm.	Baraboo, Wis.
Tobey, C. E.	Sparta, Wis.
- Tobey, Mrs. C. E.	Sparta, Wis.
Thayer, M. A.	Phillips, Wis.
- Thayer, Mrs. M. A.	Phillips, Wis.
Tarrant, Henry	Janesville, Wis.
- Tarrant, Mrs. Henry	Janesville, Wis.
Taylor, Miss Mary E.	Whitewater, Wis.
Thomas, Alfred	Menominee, Wis.
Treleven, Joseph D.	Omro, Wis.
- Treleven, Mrs. Joseph D.	Omro, Wis.
Williams, Daniel	Summit, Wis.
Wolcot, F. H.	Appleton, Wis.
Wilcox, W. A.	La Crosse, Wis.
Wilcox, Mrs. W. A.	La Crosse, Wis.
Ware, Henry	Mayville, Wis.
Wilson, T. S.	Ashland, Wis.
Youngs, W. P.	Weyauwega, Wis.

WISCONSIN STATE HORTICULTURAL SOCIETY.

OFFICERS AND EXECUTIVE COMMITTEE FOR 1896.

L. G. KELLOGG, President,	Ripon.
CHAS. HIRSCHINGER, Vice-President,	Baraboo.
A. J. PHILIPS, Secretary,	West Salem.
R. J. COE, Treasurer,	Ft. Atkinson.
J. L. HERBST, Corresponding Secretary,	Sparta.

COMMITTEES FOR 1896.

ON TRIAL ORCHARD.

Ex-Officio, the President and Secretary.

CHAS. HIRSCHINGER, Baraboo,	For one year.
J. D. SEARLES, Sparta,	For two years.
PROF. E. S. GOFF, Madison,	For three years.

NOMENCLATURE.

J. C. PLUMB,	Milton.
PROF. E. S. GOFF,	Madison.
D. E. BINGHAM,	Sturgeon Bay.

LEGISLATION.

CHAS. HIRSCHINGER,	Baraboo.
R. J. COE,	Ft. Atkinson.
GEO. MCKERROW,	Sussex.

FINANCE.

FRANKLIN JOHNSON,	Baraboo.
F. C. EDWARDS,	Fort Atkinson.
W. J. MOYLE,	Yorkville.

REVISION OF FRUIT LIST.

GEO. J. KELLOGG,	Janesville.
D. C. CONVERSE,	Ft. Atkinson.
G. A. FREEMAN,	Sparta.

RESOLUTIONS.

VIE H. CAMPBELL,	Evansville.
D. C. CONVERSE,	Ft. Atkinson.
A. L. HATCH,	Ithaca.

FIELD TRIALS.

PROF. E. S. GOFF, Madison.

BADGES.

VIE H. CAMPBELL, Evansville.

OBSERVATION.

A. S. ROBINSON, Centralia.
 J. L. FISK, Omro.
 J. BONNELL, Eau Claire.
 F. A. HARDEN, Weyauwega.
 E. A. RICHARDSON, Sparta.
 A. J. EDWARDS, Ft. Atkinson.
 E. SINGLE, Wausau.
 PROF. E. S. GOFF, Madison.
 JOHN MENN, Norwalk.
 W. D. BOYNTON, Shiocton.
 DANIEL WILLIAMS, Summit.
 FRANKLIN JOHNSON, Baraboo.
 MILES RICE, Milton.
 A. L. HATCH, Ithaca.
 F. H. WOLCOTT, Appleton.
 W. A. WILCOX, La Crosse.
 WARREN GRAY, Darlington.
 LELIA ROBBINS, Platteville.
 W. J. MOYLE, Yorkville.
 D. E. BINGHAM, Sturgeon Bay.
 M. A. THAYER, Phillips.

To the Members of above Committee:

You have been appointed to make observations in the localities where you reside, note changes as the season advances, note first blossoming of tree fruits, damages by frosts and droughts, acreages of fruits, and as near as possible give amounts received for fruits at your railroad stations. Give results in top working if it is practiced to any extent, make a short concise report of the fruit business, whether it is on the increase or otherwise. If you have a local society, if so how many members have you in state society. Get your report in by January 1st, 1897. We like to hear from all of our committees, as the reports interest the society.

A. J. PHILIPS,

Secretary.

LIST OF NURSERYMEN AND FRUIT GROWERS IN WISCONSIN.

- Alsmeyer, E. C., De Forest, nurseryman and seed grower.
- Barnes, A. D., Waupaca, Arctic nursery and fruit farm.
- Boynton, W. D., Shiocton, evergreen specialist.
- Chappell, F. H., Oregon, grower and dealer in nursery stock.
- Coe & Converse, Fort Atkinson, nursery and small fruit.
- Cash, W. H. H., New Lisbon, nurseryman and fruit grower.
- Edwards, F. C., Fort Atkinson, small fruits.
- Edwards, J. M., & Son, nursery and small fruits.
- Hatch, C. A., Ithaca, bee-keeper and fruit grower.
- Hatch, A. L., Ithaca, Hill Crest fruit farm.
- Hirschinger, Chas., Baraboo, orchardist and nursery stock of all kinds.
- Houser, John, Onalaska, small fruits and vegetables.
- Jewett, Z. K., Sparta nurseries.
- Kellogg, L. G., Ripon, small fruit a specialty.
- Kellogg, Geo. J., & Sons, Janesville, Belle Cottage fruit farm.
- Loope, I. E., Eureka, orchard and small fruits.
- Louden, F. W., Janesville, originator of Jessie Strawberry and Loudon Raspberry.
- McKerrow, Geo., Sussex, importer and breeder of mutton sheep.
- Plumb, J. C., & Son, Milton nursery and dealers in nursery stock.
- Philips, A. J., West Salem, orchard and nursery; introducer of Avista and Eureka apples.
- Parsons, A. A., Eureka, orchard and small fruits.
- Perry, E. A., nursery and small fruits, Beaver Dam.
- Robbins, Mrs. Lelia, Platteville, grower of small fruits.
- Robinson, A. S., Grand Rapids, vegetable grower.

- Springer, Wm. A., Fremont, the Fremont nurseries; originator of Wolf River apple.
- Seymour, A. N., Mazomanie, small fruits.
- Spry, John, Fort Atkinson, grower of small fruits and plants.
- Stammer, Wm., South Osborn, Columbian experimental nursery and fruit farm.
- Tuttle, A. G., Baraboo, small fruits.
- Thayer, M. A., Sparta, small fruits.
- Tobey, C. E., Sparta, Thayer fruit farm.
- Yahr, Solon, West Bend, grower of small fruits.
- Wilcox, W. A., box 335, La Crosse, nursery and fruit farm.
- Hanchet & Son, Sparta, small fruit growers.
- Scofield, E. J., Hanover, small fruit grower.
- Richardson, E. A., Sparta, small fruit grower.
- Freeman, G. A., Sparta, small fruit grower.
- Herbst, J. L., Sparta, seed potato grower.
- Bingham, D. E., Sturgeon Bay, nursery and small fruits.
- Hardin, F. A., Weyauwega, nursery and small fruits.
- Case, J. F., Eau Claire, small fruits, plants for sale.
- Searles, J. D., Sparta, small fruit grower.
- Johnson, Franklin, Baraboo, small fruits.
- Toole, Wm., Baraboo, Pansy specialist.
- Convey, Thomas, Ridgeway, Poland China hogs.

FRUIT LIST.

PEARS. *

Flemish Beauty, Bessimianki, Early Bergamot, Keifer.

PLUMS.

American varieties—De Soto, Cheney, Wolf, Rockford, Miner [if top grafted].

European varieties for lake region—Abundance, Green Gage, Lombard, Field, Hudson River, Purple Egg, Moore's Arctic.

CHERRIES.

Hardest—Early Richmond.

Kentish—English Morello.

For trial—Wragg, Bessarabian.

STRAWBERRIES.†

For shipment—*Warfield, *Crescent, Enhance, Wilson, Parker, Earle, Van Deman, Sandoval, Splendid.

For near markets—*Bubach, *Haverland, Greenville, *Crescent, *Warfield, Wood, Enhance, Jessie [on certain soils].

For home use—Jessie, *Bubach, *Warfield, *Crescent, Parker Earle.

For furnishing pollen to imperfect flowering kinds—Parker Earle, Jessie, Wilson, Wood, Enhance, Van Deman, Saunders, Capt. Jack, Rio, Wolverton.

Late—Eureka, Gandy, Parker Earle.

Early—Wood, *Crescent, Van Deman, Warfield, Rio.

For trial—Sparta.

* Note.—The best sites for apples, cherries, plums, pears and grapes in Wisconsin, are elevated limestone soils, not too rich, and free from untimely spring frosts, or places under the influence of bodies of water. Plant those kind that are succeeding best on soils and sites similar to the one to be used; plant but few kinds with different kinds near each other, rather than in large blocks, and thus secure better fertilization of bloom; to prevent injury by insects and parasitic fungi spray and give good cultivation before July 1st each season.

† Note.—Those marked with an asterisk have imperfect flowers and should be planted near those having perfect flowers.

APPLES.

NAME.	SIZE.	FORM.	SHADED SIDE.	SUNNY SIDE.	CALYX.	STEM.	CAVITY.
Antonovka.	Large.	Med. con. ribbed	Greenish yellow	Yellowish brown	Partly open	Short	Yellow russett
Avista.	Med. to large.	Roundish conical	Green	Yellow	Partly open	Medium, stout	Broad, shallow
Arabka.	Large.	Flat, conical	Dark green	Dark red	Open	Long, thin	Deep, russety
Charlamoff.	Large.	Flat, roundish	Greenish	Yellow, dark brown	Closed	Long and thin	Deep and russety
Eureka.	Medium to large.	Roundish, flat	Greenish yellow	Dark red	Open	Short, stout	Broad, shallow
Fall Orange.	Medium to large	Roundish	Pale yellow	Brownish with dots	Large and partly closed	Short	Deep and narrow
Fall Spitzenberg.	Medium to large.	Round and conical	Greenish yellow	Crimson with dots	Closed	Medium in length	Wide and very deep
Fameuse.	Medium	Round, flattened	Pale red	Deep red	Small	Short and small	Narrow, funnel like
Golden Russett.	Medium	Roundish, oblate	Golden russett	Yellowish russett	Nearly closed	Short and small	Deep
Hibernal.	Large.	Flat and round	Dull red	Striped red	Large, closed	Short, stout	Broad, deep
Longfield.	Medium	Flat, conical	Light green	Reddish yellow	Half open	Long, thin	Deep, smooth
Lusk Queen.	Medium	Model	Bright red	Shaded white	Closed	Short, stout	Deep, regular
McMahan.	Large	Round, conical	Yellowish white	Reddish blush	Large, open	Long, stout	Broad, deep
Newell.	Large	Round, flat and conical	Lemon yellow	Orange blush	Closed	Stem short	Deep
N. W. Greening.	Large	Round, conical	Green	Yellowish blush	Mostly closed	Medium	Large, russeted
Oldenburg.	Large	Round, oblate	Streaked red	Yellow and red	Large, closed	Short, stout	Broad
Patten's Greening.	Medium to large	Round, oblate	Waxen yellow	Faint blush	Large, closed	Short	Broad, deep
Pewaukee.	Medium to large	Round, conical	Greenish yellow	Reddish streaked	Closed	Short	Shallow
Plumb's Cider	Medium	Round, conical	Reddish green	Green streaked	Closed	Short	Narrow
Raspberry.	Small	Flat, conical	Greenish yellow	Carmine	Closed	Long, thin	Deep yellow

FRUIT LIST.

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BASIN.	FLESH.	USE AND VALUE—SCALE 1 TO 10.			SEASON.	TREE.	ORIGIN.
		Dessert.	Cooking.	Market.			
Deep ribbed	Greenish, white, firm	5	5	8	Early winter	Medium hardy	Russia
Broad, shallow	Very white	5	10	5	Winter	Hardy	Wisconsin
Ribbed, irregular	White and firm	5	7	5	Early winter	Medium hardy	Russia
Flat and irregular	Greenish and tender	4	6	5	Fall	Medium hardy	Russia
Broad, deep	Yellowish white	4	5	5	Winter	Hardy with age	Wisconsin
Deep and narrow	White, tender	6	8	5	Late fall	Hardy	Massachusetts
Narrow and abrupt	White and tender	7	7	6	Late fall	Medium hardy	Vermont
Narrow, small	Very white	10	4	8	Late fall	Hardy	France
Deep, round, op'n	Yellowish white	7	5	8	Winter	Hardy	Massachusetts
Broad and shallow	White	4	6	4	Late fall	Hardy	Russia
Ribbed, wavy	White, fine grained, firm	6	6	5	Winter	Medium hardy	Russia
Shallow	White, firm	6	4	6	Fall	Hardy	Russia
Small, abrupt	White, fine grain	6	10	10	Late fall	Very hardy	Wisconsin
Rather deep	White, tender	8	6	5	Winter	Hardy	Wisconsin
Small, irregular	White, tender	6	8	6	Winter	Hardy	Wisconsin
Broad, regular	Juicy, white	6	10	10	Early fall	Very hardy	Russia
Large, closed	White, firm	6	7	6	Early winter	Hardy	Wisconsin
Shallow, irregular	Yellowish, white	6	7	8	Winter	Medium hardy	Wisconsin
Broad, deep	White, firm	5	5	5	Late fall	Medium hardy	Wisconsin
Narrow ribbed	Greenish, white	8	4	7	Fall	Medium	Russia

WISCONSIN STATE HORTICULTURAL SOCIETY,

APPLES—Continued.

NAME.	SIZE.	FORM.	SHADED SIDE.	SUNNY SIDE.	CALYX.	STEM.	CAVITY.
Scott's Winter.	Small	Round, conical	Dark red, striped	Yellowish red	Closed	Short	Small, deep
Tetofski.	Medium	Oblate, conical, round	Reddish yellow	Whitish bloom	Closed	Short, stout	Narrow, deep
Walbridge.	Small	Flat, round	Whitish yellow	Pale reddish green	Small, closed	Short	Medium
Wealthy.	Medium to large	Round, oblate	Yellowish crimson	Dark red, striped	Partly closed	Short, medium, slender	Green, russett
Willow Twig.	Medium	Round, conical	Light yellow	Dull reddish	Partly closed	Short, slender	Narrow, deep
Wisconsin Russett.	Medium	Round, oblate	Yellow russett	Dark russett	Half open	Short	Broad, regular
Windsor Chief.	Medium	Round, oblate	Dull yellow	Dull red	Partly closed	Short	Regular
Wolf River.	Very large	Roundish, oblate	Reddish white	Palegreen, yellow	Open	Very short	Large, greenish
CRABS.							
Transcendent	Medium	Roundish, oblong	Yellow crimson	Red cheek	Closed	Long, slender	Open, deep
Hyslop.	Large	Roundish, oblate	Light red	Dark red	Closed	Long, slender	Open, deep
Sweet Russett	Large	Round, conical	Light yellow	Dark yellow	Small, closed	Long, slender	Broad, deep
Whitney No. 20.	Medium to large	Round, conical	Golden yellow	Reddish crimson	Partly closed	Medium, slender	Broad, deep
Gibb.	Large	Round, oblate	Light yellow	Golden yellow	A little open	Short	Deep
Martha.	Large	Round, flat	Light red	Dark, reddish	Closed	Medium	Shallow
Virginia.	Medium	Round, oblate	Light yellow	Reddish yellow	Closed	Long	Shallow

BASIN.	FLESH.	USE AND VALUE—SCALE 1 TO 10.			SEASON.	TREE.	ORIGIN.
		Dessert.	Cooking.	Market.			
Broad, deep	White, firm	6	5	5	Winter	Hardy	Vermont
Small, corrugated	White, juicy	5	7	6	Summer	Very hardy	Russia
Small, plaited	White, fine, tender, juicy	1	7	5	Winter	Hardy	Illinois
Deep, uneven	Reddish white, fine grained	10	10	10	Early winter	Hardy	Minnesota
Broad, shallow	Yellowish green, hard	5	5	7	Winter	Medium hardy	Unknown
Irregular	Yellowish white, firm	4	5	5	Winter	Medium	Wisconsin
Regular, broad	White, half tender	5	6	8	Winter	Medium	Wisconsin
Large, very deep	White, coarse	6	6	8	Late fall	Hardy	Wisconsin
Shallow	Creamy yellow	6	5	5	Summer	Hardy	
Broad, shallow	Yellowish white	4	5	8	Early winter	Hardy	
None	Mellow, tender	8	5	5	Autumn	Hardy	Wisconsin
Deep	Tender, white, juicy	10	7	7	Autumn	Hardy	Illinois
Broad, shallow	Rich, yellow	5	5	5	Autumn	Hardy	Peffer, Wis
Broad, shallow	White, firm	5	7	6	Late autumn	Hardy	Minnesota
Shallow	White, juicy	5	6	5	Late autumn	Very hardy, best for top worki'g	Russian wild crab Budd

GRAPES.

For market vineyards—Moore's Early, Worden, Concord, Brighton, Delaware.

For home use—Moore's Early, Worden, Brighton, Delaware, Massasoit, Moore's Diamond, Lindley.

Late keepers—Wilder, Lindley, Vergennes, Merrimac, Agawam.

Early—Moore's Early, Early Victor.

White grapes—Pocklington, Niagara, Green Mountain.

BLACK RASPBERRIES.

Nemaha, Gregg, Ohio, Older, Kansas.

Early—Palmer.

RED RASPBERRIES.

Marlboro, Cuthbert, Shaeffer.

For trial—Columbia, Loudon.

BLACKBERRIES.

Snyder, Briton, Stone's Hardy, Badger.

DEWBERRIES.

For trial—Lucretia, Bartel.

CURRANTS.

White—White Grape, White Dutch.

Red—Prince Albert, Victoria, Holland, Red Dutch.

Black †—Lee's Black Naples.

GOOSEBERRIES.

For general cultivation—Houghton, Downing.

For trial—Red Jacket, Triumph, Columbus, Queen.

*Winter protection recommended.

Grow best in shady places; used for cooking only.

TREES AND SHRUBS RECOMMENDED.

EVERGREENS.

For screens and windbreaks.—Norway Spruce, Balsam Fir, White Pine.

For hedges and screens for shearing.—Norway Spruce, American Arbor Vitae, Red Cedar.

For lawns and cemeteries.—Norway Spruce for backgrounds. For groups—American Arbor Vitae, Hovey's Golden, Arbor Vitae Pyramidalis, Arbor Vitae Siberian, Arbor Vitae, Juniper Excelsa.

For small lawn decoration.—Juniper Sucica, Arbor Vitae, Hovey's Golden Arbor Vitae, Arbor Vitae Pyramidalis.

DECIDUOUS TREES.

For cemeteries.—Cut-leaved Birch, Wisconsin Weeping Willow, Weeping Poplar.

For lawns.—All named above, and, in addition, Laurel-leaved Willow, Mountain Ash Oak-leaved, Mountain Ash American, Mountain Ash European, Maple Cut-leaved, Maple Norway, Kentucky Coffee Tree, Catalpa, Spiciosa, Elm American, Elm Scotch, Elm Weeping, European White Birch.

SHRUBS FOR CEMETERIES.

Hydrangea, Paniculata, Cornus Philadelphus, Tree Lilac, Spirea Japonica, Spirea Van Houtii, Wahoo (American Strawberry Tree), Exchordia Grandiflora.

For lawns.—All named above and, in addition, Purple Barberry, Purple Fringe, Upright Honeysuckle, Wigelia Rosea.

For screens and hedges.—Upright Honeysuckle, Barberry Red Fruiting.

ROSES.

Twelve best varieties Hybrid Perpetual.—Paul Neyron, Mrs. J. H. Laing, Gen. Jacqueminot, Dinsmore, Marshall P. Wilder, Coquette des Blanches, Earl of Dufferin, Jules de Margottin, Vick's Caprice, Magna Charta, Prince Camille de Rohan, American Beauty.

Moss, four best varieties.—Perpetual White, Salet, Paul Fontine, Henry Martin.

Climbers, five best varieties.—Prairie Queen, Russell's Cottage, Seven Sisters, Gem of the Prairie, Victor Verdier.

Hybrid China.—Madam Plantier, Madam Hardy.

Brier Roses.—Persian, Harrison.

REPORT OF THE TRANSACTIONS

OF THE

TWENTY-SIXTH ANNUAL MEETING

OF THE

Wisconsin State Horticultural Society

Held in Madison February 4, 5, 6, 7, 1896.

HORTICULTURAL ROOMS,
Tuesday Evening, Feb. 4.

Convention called to order by President L. G. Kellogg.
Prayer was offered by Rev. J. D. Searles, Sparta.

President—It gives me great pleasure to see so many present at our first meeting. It augurs well for an interesting session and a good attendance throughout.

REPORT OF CORRESPONDING SECRETARY ON PLANT
DISTRIBUTION FOR 1895.

J. L. Herbst, Sparta.

With the new suggestion offered by members of our Society at our meeting here last winter and by the gifts made by six more of our members for the season of '95, the number of applicants have reached to over 4,000.

Heretofore but two donations were made to the school children, strawberry plants by Thayer Fruit Farms and spruce trees by W. D. Boynton. This year the scholars were made another donation which included red raspberries.

The offers this year were made to the scholars as follows: The Wisconsin State Horticultural Society would give to all children of this state who would apply and send five cents, either six strawberry plants, three red raspberry plants or two spruce trees. If all three offers were wanted fifteen cents must be sent. The application must be made by the teacher and the scholars must agree to report on their plants in the fall on blanks which will be sent them.

Mr. J. Q. Emery, our state superintendent, aided us this year by distributing the offers of the society on slips to all the county superintendents, and requesting them that they distribute the offers to schools under their respective jurisdictions; by this method we were able to reach very nearly all the schools of the state so that but very few were left out. The offers were also printed in the leading papers of our state.

The parties giving plants this year were as follows:

Thayer Fruit Farms, Sparta; Geo. J. Kellogg & Sons, Janesville; Coe & Converse, Ft. Atkinson; J. D. Searles, Sparta; all gave strawberry plants.

L. G. Kellogg, Ripon; Parson & Loope, Eureka; Hanchett & Son, Sparta; all gave red raspberry plants.

W. D. Boynton, of Shiocton, gave spruce trees.

The packages contained either six strawberry plants, three red raspberry plants, or two spruce trees, and were sent out by the donors.

Heretofore the donors used their own shipping tag to place upon the packages. This year Society tags were printed in the following manner: From the Wisconsin State Horticultural Society. Grown by—whoever the donor was.

As you all know the question arose last year as to whether the donors derived any advertising out of the gifts, and the above plan has been resorted to to the satisfaction of all.

Another plan which has been adopted is the directing of the tag. Years previous to this the donor directed his own tags from a list which was sent him from the corresponding secretary. This necessitated the writing of all these names twice. This year the tags were directed by myself and sent to the donor with the money (less the amount deducted for sending

report blanks). Less work was made for the donors and fewer mistakes.

At a meeting of the executive committee the distributing of plants was left entirely to me, and I adopted the above methods which I think satisfactory to both Society and donors.

I divided the applications for strawberry plants equally among Thayer Fruit Farms, J. D. Searles, Coe & Converse and Geo. J. Kellogg & Sons.

The applications for red rasyberry plants were divided equally between L. G. Kellogg, Parson & Loope and Hanchett & Son.

Applications for spruce trees were all sent to Mr. Boynton.

Number of applicants for strawberry plants.....	1,756
Number of applicants for red raspberry plants.....	1,288
Number of applicants for spruce trees.....	1,072
Total number of applicants.....	4,116
Sending fees to amounts of.....	\$205.80
First year the Society gave plants the number of applicants was.....	1,443
This past year.....	4,116
Second year the Society gave plants.....	1,507
This past year.....	4,116
Third year the Society gave plants.....	3,036
This year	4,116

an increase of 2,673 over the number of applicants the first year and an increase of 1,080 over last year.

Thayer Fruit Farms, J. D. Searles, Coe & Converse and Geo. J. Kellogg & Sons each received 439 applicants for strawberries.

L. G. Kellogg, Parsons & Loop, and Hanchett & Son each received 429 applications for red raspberries, and W. D. Boynton received 1,072 for trees.

Allowing six strawberry plants for each scholar that applied for strawberries, the number of strawberry plants sent out was 10,536, or about enough for two acres. Allowing three red raspberry plants for each red raspberry applicant the number of raspberry plants sent out was 3,864, or enough for about 1 1-2 acres. Number of spruce trees sent out was 2,144.

Total number of plants, strawberry, raspberry and trees, was	16,544
Total number reporting on strawberries.....	193
Total number reporting on raspberries.....	153
Total number reporting on trees.....	153
<hr/>	
Total reporting.....	519

or 12 1-2 per cent. of applicants reported, a decrease of 2 per cent. under that of the previous year.

The following figures are taken from the 519 who have reported:

Total number of strawberry plants living.....	691
Total number of new strawberry plants living.....	4,427
Total number of red raspberries plants living.....	178
making new growth of 176 ft., 3 in.	
Number of trees living.....	208
making a new growth of 43 ft. 1 in.	

Years previous to this I have simply deducted enough from the fees sent to pay the cost of sending back to the applicant blanks on which they were to report. This year I have deducted more. I have deducted enough to pay all the expenses necessary to carry on this work, and still the donors had enough to pay for mailing the packages.

If the Society continues this plant distribution I have one suggestion to make, which, if adopted by the Society, I think will aid the donors, the corresponding secretary and the applicant. I would suggest that the donors send their plants to the corresponding secretary in one package, and that the corresponding secretary send these packages out. The donor can be advised when to send the plants to the corresponding secretary. This plant distribution is gaining, and if it continues your corresponding secretary must have some compensation for his work.

Many of you are not aware of the amount of work connected with this plant distribution. Think of the 4,116 applications coming to the corresponding secretary in about two weeks' time! Letters of all denominations containing post office money orders, express money orders, checks, stamps and coins, from five cents to silver dollars, dollar bills and registered

letters. These must all be looked over, the names recorded and tags directed, then report blanks sent to them, money orders and checks cashed. And this is not all; be careful how you write to the lady school teacher! I have had enough experience in that line. When you make any promises to them be sure they hold good. I received an application for plants from a certain teacher after the time had expired, and I returned the letter and money. I need not tell you what happened. Suffice it to say, she got the plants.

Still there are some pleasures connected with the work. It is a pleasure to read the reports as they come in, and note the different experiences the children have in growing their plants. Many of them are very interesting and so many of them wish to try another year. Some write to find out the best ways of protecting their plants for the winter and I try to tell them.

I believe the Society is doing a good thing in this work and think it should be carried on.

DISCUSSION.

Wm. Toole—I think we are all strongly impressed with this work and the benefit it confers. We have also gained an idea of the amount of work our corresponding secretary does. I would like to make the motion, if motions are in order, that Mr. Herbst make out an estimate of his expenses, and the Society allow them.

President—By vote of the executive committee, last year, Mr. Herbst was allowed his expenses.

Secretary—I was at Mr. Herbst's when he had over one hundred letters to open and answer. A girl wrote, saying: "I saw your offer and would like to have you send me some trees. I do not think we can grow small fruit here but I know we can grow evergreens because there are evergreens in the woods. I wish you would send me two trees and I will take care of them." On another sheet of paper a boy wrote, saying he was nine years old, and said, "If you send my sister two trees I wish you would send me some, and I will take care of them." There was also another letter from a boy who said he was seven years old. I guess he wrote it himself. These

letters were all from one family living near Medford. I went to Medford last fall and I inquired for the family, and I walked three-fourths of a mile to see them; they were a German family. I found the trees had been planted out and had been taken care of as well as Hirschinger could take care of them. They had mulched them and had put pebbles around to hold the mulching. Those people have an interest in our Horticultural Society, and it may be the means of making horticulturists of them.

J. L. Herbst—I have the reports from the children who have received plants and trees, and I do not know what to do with them.

B. S. Hoxie—I think they should be put in a bundle and preserved in our library for future reference. Some one may want to write up this matter some time. I think that we do not want another salaried officer. I think the action of the executive committee last winter, in allowing Mr. Herbst enough to pay his expenses, is the best way for us to do in this matter.

Geo. J. Kellogg—I think the plan last year was the most satisfactory to every one except the corresponding secretary. It made a good deal more work for him than it had before. I believe our Society is able to compensate the corresponding secretary for his work. The objection to the plant distribution heretofore has been that the donors did not receive anything by way of advertising, but they did this year by the use of the tags.

Mr. Perry—It seems to me that Mr. Herbst should not take the work of the five donors. I think it is quite a responsibility for him to take the work of five more men. I think the better way is for the donors to ship directly to the applicants, because plants like the strawberry plant is, as you know, better not to be handled over.

Wm. Toole—I have a great deal of experience, each year, in packing and sending plants by express. We all know those who receive plants will receive them in better condition if they are shipped direct from the growers.

President—I agree with Mr. Toole and Mr. Perry. I would

not like to be responsible for the condition of my plants if they were to be repacked.

N. E. France—I see no reason why this matter should not be left with the executive committee the same as last year. Let it arrange for compensating the corresponding secretary, and let the plants be sent out direct from the growers.

Chas. Hirschinger—I move that the further consideration of this question be deferred until Wednesday at 2 p. m.

Motion prevailed.

President—If any members have offers to make in the direction of plants for distribution I wish they would hand them to the secretary tomorrow afternoon in writing.

REPORT OF A. J. PHILIPS ON THE LOCATING OF THE NEW TRIAL ORCHARD.

April 20th, 1895, at a meeting of trial station committee, called by President Kellogg, at Madison, Wis., Prof. E. S. Goff and myself were appointed a committee to locate the new trial orchard in northern Wisconsin somewhere near the latitude of Antigo, or near the 45th parallel. We started the 24th and spent the balance or four days of that week at Antigo and vicinity, also Merrill and vicinity. We found some good sites at both places, especially the latter on the farm of Hon. David Finn who we found much interested in the work, but unexpectedly we found the season so far advanced that we did not deem it advisable to try to plant any trees before the spring of 1896. So we concluded to take another trip later on in the growing season. We set a time to go again in July, but a few days prior to starting Prof. Goff was suddenly sent to Colorado. I was somewhat disappointed but started on the trip alone. I first visited Marshfield, where I found the citizens very anxious for the new station; found some good locations both north and south of the city, but they were farther south than we had thought of locating. Went from there to Price county; found some good sites near Phillips, but found it new and rather farther north than we had contemplated locating. From there I went to Medford, which is almost ex-

actly the same latitude as Antigo and Merrill. Here I found some good sites, and found some young trees grown from grafts, and found a skilled young man that was anxious to do the work; found a fair site near him but the parties wanted to sell the land rather than lease it. From here I went to Wausau, and found sites both east and west of the city on the high lands that seemed well suited, but I selected nothing definite as I wanted to have Prof. Goff's opinion on these different locations. So later on in October President Kellogg consented to go with us, and I notified Prof. Goff where we would meet him, but he was away from home and we went alone. We looked over the sites near Wausau for two days and finally settled on a site on the farm of Mr. Ed Single, about three miles from the city, providing the same suited Prof. Goff. I waited for him to visit it and the one at Medford, but when November arrived the Professor was so busy arranging for his winter school that Prof. Henry told me I had better go ahead and locate it, which I have done with President Kellogg's approval of the site and the man we have engaged to do the work. I will say that we are under obligations to Mr. Finn of Merrill, to the Business Men's Association of Marshfield, to Mr. A. J. Perkins of Medford, M. A. Thayer of Phillips, to J. M. Smith, Robt. Parcher and W. C. Silverthorn of Wausau, for their kindness and interest shown, and we hope that the work will be so conducted in this orchard that these other locations may also have a similar one in the future. The main drawback at Mr. Finn's was the distance from the city—seven miles. Judging from the trees that have been bearing from one to ten years near this new orchard, I am of the opinion that if it is set and managed properly that it can be made self-supporting in five to seven years. I deem this matter of sufficient importance that I have appropriated one session wholly to the discussion of the best plans for planting the same. Of the \$500.00 appropriated, it has cost about one hundred dollars to get it located, which is not really an easy thing to do and should not be done in a hurry, as we feel that if successful it will be a valuable object lesson to all of Wisconsin south of township number 29, where it is located.

All of which is submitted.

DISCUSSION.

Q. How far is this site from Wausau?

Secretary—Three miles.

F. L. Barney—I think the location is all right for that section and further south, but for further north I do not think it is quite so good.

Prof. Goff—I felt quite willing to submit the location to Mr. Philips' judgment. We had traveled somewhat together, and I think he has made as good a location as I could have done.

Secretary—I will read the lease, and I would like to have it approved by the Society. (Reads.)

Geo. J. Kellogg—I move that the Society approve the lease as now made.

Chas. Hirschinger—I move it be deferred until tomorrow.

Secretary—I would rather it be settled tonight. A lawyer has examined it and pronounced it all right.

Geo. J. Kellogg—I have listened very intently to the reading of the lease and the only thing I see to object to is, I think we ought to have the control of that piece of land.

Chas. Hirschinger—I think we never gain anything by going too fast. I do not think the lease covers ground enough.

Secretary—Last winter we decided at our meeting if the legislature would make us the appropriation that we would take ten acres for a trial orchard. Ten acres for an experimental orchard is quite a piece of ground, and so we made the bargain with the man to fence in the whole ten acres and we are to use all of it that we want.

Chas. Hirschinger—We in the legislature expected that the ten acres should be owned by the state. I do not approve of a lease. I think we should own the land for the trial orchard. When you ask for an appropriation you expect to come before that committee and make a report. Now you would have to crawl out of the room, you could not make a report. You are to have \$500 per year for experimental work and you cannot use any of it for your expenses.

Secretary—We talked this matter over carefully, with regard to owning this land. We talked with Mr. Casson and others, and they decided that we could not hold any land, or-

ganized as we are. They advised us to rent it for a term of years and we acted accordingly.

B. S. Hoxie—I move to amend the motion that whenever this lease be accepted that it shall be recorded in the recorder of deeds' office in the county where the land is situated.

Motion of Mr. Hirschinger to defer the question until Wednesday was carried.

Geo. McKerrow—I think it would be well for a committee of three to be appointed by the chair to take this matter to the attorney general and get his opinion and report it to the convention. I will make it as a motion.

Motion prevailed, and the chair appointed Chas. Hirschinger, N. E. France, J. D. Searles, as such a committee.

STRAWBERRY LESSONS OF 1895.

Geo. J. Kellogg, Janesville.

Mr. President, Ladies and Gentlemen:—

If there are any ways by which we can obviate the difficulties resulting from frost and drouth, as in 1895, and secure a crop of small fruits, that is what we would like to know; and these suggestions are made, hoping that closer observations may be continued and better ways devised, whereby greater success may be achieved.

We do not think that covering can protect when ice forms; we believe altitude and large bodies of water the only safe locations; we have confidence in removing the mulch between the rows and lightly cultivating the ground from early spring to blooming time, to retain the moisture below, dry out and warm the surface which will in a measure prevent frost settling as it does on mulched ground; protecting by covering with the winter mulch after bloom may pay if the mulch is handy by and the thermometer does not go too low; in this case I believe there is more hope in a cold water spray before thawing commences; this I believe the most effectual of anything when plants are frozen. The application may begin at midnight but the best time is from day light till sun rise. The smudge pro-

tection will succeed only when the atmosphere will cause the smoke to settle and remain over the plantation.

Protection from drouth, except by irrigation, is best secured by cultivation from the very earliest time in spring when the ground will work, continued weekly throughout the season, aided by heavy manure mulch in the rows, between the plants, after the first hoeing in early spring.

Irrigation "a la Prof. Goff" when water supply and the gentle slope of the plantation will permit, or by flowing wells, applying the water between the rows at all hours day or night as needed, is best. To irrigate on level ground the water must be carried in pipes and hose, and if not applied between the rows, the application by spraying should not be made upon the foliage except in cloudy weather, or until after 4 p. m. and stop at 9 a. m. The immense amount of water needed in irrigation will be seen when we realize that an inch of rainfall means 1,000 barrels per acre. No feeble effort in irrigation will be a success. Water applied on the foliage when the sun is shining is a damage. Now what varieties of strawberries will best recover from frost and best stand drouth?

Of 47 varieties in one plantation the 1st of June, '95, Timbrell showed best of all. Next in order were Bissel, Splendid, Warfield, Earle, Lovett, Haverland, Enhance, Crescent, Muskingum, Greenville, Tenn. Prolific, No Name, Woolverton, Saunders, Shuster's Gem and Standard. Next in order were Beverly, Jessie, Princeton Chief, Ivanhoe Guick, Louise, Cyclone, Bubach, Wood, Robinson, Shuckless and Capt. Jack. Of the seventeen kinds that proved worthless in '95 were Wilson, Marshall, Van Deman, Rio, Dew, Roe, Beebe, etc.

These notes may prove nothing unless corroborated on other plantations and different soils by different growers.

Of those kinds utterly failing, we expect good things of Marshall, Van Deman and Rio. Timbrell that made the best showing we consider an amateur berry and may prove worthy planting for home use on certain soils. Of the varieties we had in other plantations, not classified above, which we shall not discard, I will mention Eureka, Stayman No. I, Gandy, Princess, Barton's Eclipse, and Edgar Queen.

This array of varieties may seem confusing, but to the large

grower it may give comparison of notes that are valuable. For the farmer I will mention as best four perfect blossoming kinds, Wood, Lovett, Splendid and Enhance. Best four pistillate: Warfield, Crescent, Haverland and Bubach, or Eureka for late. I have not mentioned Jessie for on certain soils it is a failure. Where it does succeed it is a splendid family and near market berry. We hope Marshall may prove a success; the foliage and vigor of plant is very promising, but we fear it will need extra care and culture like the Earle.

SMALL FRUIT GROWING FOR A YOUNG MAN WITH SMALL CAPITAL.

By G. A. Freeman, Sparta.

Mr. President, Ladies and Gentlemen:—

I do not know why it is that my name should have been placed upon the program for a paper on "Small Fruit Growing for a Young Man With Small Capital," unless it is for the simple reason that I realize and appreciate the meaning of the expression more fully than any one else of same experience as myself, upon whom the task might devolve.

I am a firm believer in the doctrine that in order to make a success in life, one must be more or less self-reliant; if we depend too much upon our neighbor's management, as a model after which to manage our affairs, we are quite apt to be defeated in the end. Again, if we would be successful in any undertaking, we must be thoughtful students in the line of work which we have selected. One farmer may be successful in stock raising, while another chooses instead to raise grass seeds, hay and corn for the market; but either may be successful if he be thoughtful and prudent in his management. So I believe there may be different means of successfully accomplishing the same ends. I know of no occupation more suitable for a young man with small capital than that of small fruit growing.

Why? I believe it is the duty of every man, while yet in the morning of life, to prepare for a cloudy future, for we know not when the rain will come,

“For into each life some rain must fall,
Some days must be dark and dreary.”

Small fruit growing necessarily implies an investment in real estate, which is better than a savings bank account.

Right here let me say to the young man, do not be led to believe that an eighty acres of sand at one hundred and fifty dollars would be a better investment than good land at fifty or one hundred dollars an acre. It is not so. I will sell more dollars' worth of small fruit annually from one acre of my land than many a so-called sand farmer has realized from his quarter section. The young man who invests in real estate is quite likely to add to it by way of improvement, and thus save the small earnings, and by so doing he will erect a monument to his credit, and a sure defense in time of physical disability.

As a matter of income, judging from the experience of those with whom I have been associated, as well as my own experience as a small fruit grower, I think that small fruit growing as an occupation will compare very favorably with that of the farmer, mechanic, merchant, or perhaps a score of others which might be named. To be sure, the fruit grower has many drawbacks as well as his farmer friend; frosts may injure his crop this year, and a protracted drought reduce it to one-half next year, but let us not be discouraged by trifles, but renew our faith, zeal and courage, and remember that our destiny lies in reaching the top of the ladder step by step instead of by a single bound, and suddenly acquired wealth is often transient.

Methinks I hear some one interrogate after this wise: Young man, if the conditions are the same, and fruit growers meet with the same disadvantages during the next three years that they have for three years past, where will you be, financially, at the end of that period? To such a one I would say emphatically: Making a good living and accumulating property. The same unseen hand that causes the frost to fall upon the strawberry blossoms, will also point out to the thoughtful, painstaking horticulturist the way to meet and overcome adverse circumstances, so that he may come out more than conqueror in the end. But I am fully convinced that the time

has already come when the brain as well as the muscle must play an active part in order to insure success in any occupation; and in every case let us try and content ourselves, if need be, with little beginnings, bearing in mind the words of the poet:

“The heights by great men gained and kept,
Were not attained by sudden flight;
But they, while their companions slept,
Were toiling upward in the night.”

It is a solemn fact that there are many young men in our cities, as well as those whom I might mention as dear to me during the latter part of my school life, who were not satisfied with small beginnings, but feeling capable of filling almost any position within reach of the ordinary intellect, have waited for a so-called “snap” at forty, sixty or one hundred dollars.

Perhaps one in a thousand found the “snap” and the rest are waiting yet, and they have waited so long that it has become their business and no one cares to speculate in the matter of their conversion to habits of usefulness.

I will not attempt to discuss this subject at length from a business standpoint, but it is evident that the fruit grower becomes a part of the business world, and although in many instances he finds himself in the midst of a multitude of problems, perhaps minute in detail, but in the solution of which may be found just the very experience that he may need in time to come in solving other and greater problems. Strict business principles tend to mental improvement as well as moral uplift.

How many men there are today, who, if they could turn the pages of a daybook or ledger and see where perhaps hundreds or even thousands of dollars have been worse than squandered by their individual foolishness, would blush with shame, whereas if they had started out on strictly business-like principles and formed the habit of registering systematically all receipts and expenditures, they might have been justly proud to place before the world's gaze the figures that speak aloud of a life of economy and usefulness.

The occupation in question affords abundant source for such habits; in fact, they are almost compulsory—as indispensable

in the case of the small fruit grower as with the grocer or the druggist. When once the habit is formed, if properly nourished, it soon becomes second nature.

We love our upright, energetic business men, but for these the world would soon degenerate. Who but they start any noble project? They build our cities and rear our manufactories; they till the soil; they grow small fruit; they draw treasures from the mines. Blessings on them! There is in the character of nearly every young person, except perhaps the experienced school teacher, the lack of a self-discipline so necessary in order to properly fit him for association with the great variety of natural dispositions, which he will certainly come in contact with in his every day life, and I find in the occupation of which I speak, an opportunity to acquire to some extent this much needed experience. While we are all ambitious of our personal interests, I doubt if there is a young man present who cares to live entirely to himself; but all wish the world to be better for our having lived in it, and here lies the golden opportunity for us to exert a kindly influence on the homes and in the home life of our respective communities; for we must acknowledge the home as the true foundation of society, and whatever of general refinement we add to our home life, will certainly tend to the uplifting of society and the advancement of our country. It has been well said that if we would be remembered after we are dead, we must write something worth reading or do something worth writing about, and while so many of us lack faith of being able to accomplish the former, our only hope is in the latter.

Last of all, but not by any means least, is the subject of health to be considered. Why is it that now a family of two or three will consume more small fruit annually than would a family of ten or twelve ten years ago? It is because they have learned from actual experiment that health is wealth, and as long as good home grown fruit is within their reach they will not do without it. How often we hear such expressions as these: "Those raspberries seem to be just what my system needs." "Oh! if I could only have all the strawberries I want!" "It seemed as if those strawberries you sent me when I was sick tasted the best of anything that I ever ate." I believe it to be a fact without doubt that the free use of good

wholesome fruit has saved, and will save, many dollars' worth of medical advice, and make many a life longer and happier. And while we believe this to be true, we know of no conditions that will be so sure to produce the reality, as for the young man to become a grower of this small fruit.

We also find on the fruit farm a system of manual labor coincident with good bodily exercise and muscular activity. Again we find an abundance of indoor employment during the winter months and bad weather in summer, Taking into consideration the many opportunities offered us, shall not we press forward in the paths of right, encourage those who have started in the good work, and thus do justice to ourselves, and become public benefactors in the communities in which we live?

Secretary—One of the aims of this society has been to interest the young men. Now we have just heard a paper from a young man and I want to hear from Mr. Stickney about the paper.

J. S. Stickney—I want to say that I have not listened to a paper for a long time that I have been so much interested in as this paper we have just listened to.

Mrs. Treleven—As I was listening to that young man's paper I was reminded of our local societies and I felt that we make a mistake in not making more effort to try to get the young people in.

M. E. Hinkley—We have heard from two young men this afternoon and we do not want to give them too much taffy, but if they are the right kind of young men it will not hurt them. If their practice is as good as their theory they will be heard from in the future.

THE FUTURE OF THE STATE HORTICULTURAL SOCIETY.

Wm. Toole, Baraboo.

These few remarks in regard to the future work of our society are not offered with the expectation of wisely directing its plans, but rather hoping that suggestions may bring out

discussions which shall definitely shape its work for a more prosperous and useful future.

You older members, who have in the past, and to the present time, striven together to promote the interests of horticulture in our state, can look with pride over the good which has been accomplished, and from our vista of present knowledge, view hopefully the future, feeling that through wisely directed efforts, our society may do more than ever to help add to the wealth of the people, and also add comfort and beauty to their homes.

While much has been done, and much more will be done, solely for the love of doing good, yet a great deal of service is required which must be paid for. If our secretary is well paid we have a right to ask good service in return, but if our widening sphere of usefulness increases our demands on him, then his remuneration should equal our requirements. So, too, if our society does missionary work by carrying the gospel of horticulture into new fields, or increases its work through trial stations, we have increased expenses to be provided for.

We have but two sources of revenue to depend upon, individual membership fees and appropriations from the legislature. If we are proud of our society, then, to promote its aims and ability for doing good, we should each strive to add to its membership, not only for the dollars brought in, but, still more, for the working strength which an active membership gives. That we are entitled to state aid is fully recognized, but if we ask for any definite sum we must necessarily show good reason why it should be given.

Some of you will remember being called upon last winter to explain to the legislative committee why we needed the sum asked for. As the appropriation was made, we may feel that good reasons were given. It would be well if the aims and plans of this Society were so well defined that active members could, at any time, show good reasons for trying to secure appropriations or memberships.

To make a clear showing of the affairs of the society we should adopt a systematic plan of accounting for expenditure of its funds. We have been favored in the past with the integrity of those who have handled the moneys of the society

and we may be equally fortunate in the future, but we should have opportunity at any time to study the items that we may know where to economize when necessary. Thanks to those in our state who have done pioneer horticultural work in experimenting for themselves and others. The knowledge they have given us has been a nucleus which, added to by the many excellent papers on kindred subjects and the discussions of our meetings, has created a fund of horticultural literature, which, preserved by our horticultural reports, is of incalculable value, not only to our own state, but also to a large portion of the United States. Yet much as we value them we have not been fully satisfied with these reports. It has seemed as if the editing had not been well done. Those who have had much to do with printers know that letting to the lowest bidder does not secure good service, and the legislature should grant us relief from being obliged to accept whatever the printers choose to furnish.

Probably the greatest disappointment comes from the reports of discussions, and with all due regard to the necessity for condensing a mass of records which could not possibly all appear in the printed report, we feel that we, many times, miss the intention of the speakers and that which should have been the best preserved has often been lost.

We believe that a typewritten report, in full, of the discussions should be furnished the secretary and from this he could carefully select what would be most valuable for future reference.

We should not overlook our relations to local horticultural and kindred societies. We would like to know how many horticultural societies have been organized through the help of the state society; how many of these are still in existence; to what extent they have been helpful to the state society, and if in any case we pay the expenses of delegates from societies which do not keep up an active organization.

There is no doubt that sending delegates to and receiving the like from sister state societies has been in the interests of horticultural knowledge, yet we wish to know if such intercourse with all has been equally profitable.

Our relations with the State Agricultural Society of late

years has been peaceful and friendly, yet, in our desire to strengthen cordiality between the two societies, we should not forget that the dignity of our Society is equal to theirs.

Our Trial Stations have been continued long enough to furnish data from which to judge if they pay or if any one of them cannot profitably be continued. Should their number be increased or plan of management be changed? Madison being the state capital, as well as more central than any other large city, we may naturally continue to look on it as the home of our society. It seems as if there should be more local interest shown in our work. To bring that about perhaps we need to feel more interest in the horticultural wants of such cities as Madison and Milwaukee. In decorative horticulture we have gone over the ground very broadly, touching lightly. While not desirable to go to extremes in any direction there is much we might profitably learn from the Massachusetts and Pennsylvania Horticultural Societies.

While strengthening home ties we should not forget our abiding place. To have no place in the capitol building would seem like being robbed of our birthright, yet we must not shut our eyes to the fact that during legislative winters the room we occupy is very much needed for other purposes and it would be well to plan for the use of some hall if necessary. I think I might add another point and that is, do we do all we can, or ought to do, by the way of advertising?

DISCUSSION.

B. S. Hoxie—I think perhaps Mr. Toole does not understand that all the financial expenses are not published because it would take too much valuable space in our reports. The items of expenditure all go before the auditing committee and are acted upon. All of the bills go before that committee. With regard to getting a shorthand reporter and putting the report in typewriting, I found while I was compiling the reports that it took more work to go over the reports and cut out what was unnecessary, and that it would cost more than our society could afford to pay. A shorthand reporter takes down everything that is said and there is a great deal of repetition, which, of course, must be cut out. I do not know how we can prevent

mistakes in our printed reports unless the state will give us a sufficient appropriation so we can engage our own printers. I often found that my corrections in the proof were not noticed by the printers.

Wm. Toole—I have had printing done for three years by the Democrat Company and I find trouble in the same way. I very carefully correct and still there are errors when the work comes out. I cannot but feel that in the reporting of the discussions much that is valuable is lost sight of, and, in looking over what I have said and others, it would seem to me much better if we could have a shorthand reporter. I think we should always have an itemized report of expenses.

Secretary—I do not know that it is possible, as Mr. Hoxie says, to get out a report with no mistakes. I know that the Society in Minnesota employs a shorthand reporter and I notice that their volume contains more mistakes than ours. There is occasionally an error that creeps in that we cannot seem to avoid however much we may wish to do so. With regard to itemized accounts, I always send in an itemized bill to President Kellogg to look over. I have always had great confidence in his ability to do those things. This year our reports were so long that we overrun our allowance thirty pages. I try to get out as good a book as I know how. We all make mistakes. With regard to advertising our meetings in the newspapers, I sent the program to thirty-five papers in the state, and it was published in a number of them. This year I sent 200 programs to families in the city of Madison, and I think you will see a larger audience here this year than ever before.

Chas. Hirschinger—You either pitch into the editors or the legislature, and there are some of them in the room tonight. The law is all right, and the printing is let to the lowest bidder. I think our work costs us about fourteen cents. Now if you get the legislature to give you a larger appropriation and you hire your own printer it will cost you about twenty-five cents a copy. If they do not do their work right you must take the books back to them. The Secretary is not obliged to accept them unless they are as they should be. The officers should take more interest in the society. When the matter came up in the legislature I asked for 300 pages and your Secretary

said he could get along with what he had, and so they said to me, "You are asking for more pages than your people want." The secretary has overrun thirty pages this year, so you see I am about right after all. I would not have come out publicly on the secretary if he had not hurt my feelings in there.

Secretary—Well, you are about right, and you are almost always right, if no one talks after you. I was asked if I would rather have more pages or more bound volumes, and I said I would rather have more bound volumes. Every one prefers a bound volume to one in paper. It is easy enough to stand here and find fault but when you take all those papers, some of them written finely, it is pretty hard to estimate how many pages you will need; it's not easy to plan them and not overrun the number of pages. I would rather have 5,000 bound in cloth than to have 7,000 bound in paper. The Secretary of State has been liberal with us and has given us a few more pages.

Chas. Hirschinger—I did not expect there would be any feeling on this subject. No one has any chance unless he talks after Mr. Philips.

B. S. Hoxie—I did not wish to find any fault with the law. I think it is all right. I have heard so much said about mistakes here. I know it is almost impossible to prevent them. I have ceased looking to find perfect things, but I wish to state that it is not always the fault of the reporter or of the secretary who edits the volume. If the time ever comes when we can get an appropriation and hire our printing done we may, perhaps, be able to get it done as we want it. Mr. McKerrow who has some 40,000 Institute Bulletins printed has some chance to dictate to the printers.

Mr. Marslem—If you want to make these meetings a success you must advertise them. We do not want Wisconsin to get in the rear. I came into the country fifty years ago and I do not expect to stay in it for the next fifty. We must look to the young people to take our places, and so we must get them interested.

REPORT OF E. J. SCOFIELD, HANOVER.

Delegate to Northern Illinois Horticultural Society.

Through the courtesy of this Society it was my pleasure to represent you at the meeting of the Northern Illinois society, which convened December 3d and 4th, at Sterling, Ill. Meeting was held in the City Hall, in the room of the Illinois Firemen's Association. Your delegate was cordially received and royally treated, which seems to be a trait of the fraternity, and our northern Illinois brethren seem to have inherited an extra portion.

I will now endeavor to give you an outline of the proceedings of this meeting, opening with prayer and followed by president's address, which was very short, humorous and to the point.

First subject taken up was "Raspberries and Blackberries," and was ably handled by H. R. Cotta, Freeport. Mr. Cotta believes in constant, thorough cultivation, but not deep (and in this I think all successful small fruit growers will agree lies the key note of success). He is very highly pleased with the Z. Breed weeder, as the main implement. Although he is a friend to the Planet Jr, with its attachments, his methods of handling both raspberries and blackberries are similar to those practiced with our successful growers. Blackberries are given winter protection in same manner as practiced by our extensive growers at Sparta, Ripon and Baraboo.

At the close of this paper there was quite a lively discussion followed, question being asked as to which one variety of black cap was best for home and family use. C. R. Powell answered, "Ohio." Several others seemed to be of the same opinion. Question being asked H. R. Cotta as to best market varieties. He named Palmer, Older and Kansas for black; Turner and Cuthbert for reds, but thinks "Columbian and Loudon" are the coming reds, from what he knows of them so far.

Balance of forenoon was spent in discussion and report of treasurer.

Afternoon Session.

First in order was secretary's report, which was like the president's, brief and business. This was followed by appointment of committees, when the subject of "The Home Flower Garden" was called for. This had been assigned to C. R. Powell, of Sterling, who being absent in another state at the time notice was sent him, did not receive it in time to prepare an article for the occasion. Nevertheless, he being present got out of the scrape in the same way as "Adam in the garden of Eden," he turned the subject over to his wife, who gave a very good list of annuals, bulbs, and tubers. Several other members present mentioned fine varieties, while President Miller, who I judge is a great lover of the rose, gave a very interesting talk on this flower as to varieties, mode of treatment, etc., one of which was to induce the family of June roses to bloom in September, by not allowing them to bloom in June, by simply removing the flower buds.

Next in order was Potato Culture, by A. J. Sweezy, of Rockford. He prefers a clover sod, uses stable manure two years old, cold cellar for seed, makes the soil very mellow and fine before planting, and keeps it so by thorough culture, seed not cut, no matter how large, but prefers medium sized seed; rows one way, plants 4 inches deep, harrows them until 6 inches high; implements mostly used in culture, Z. Breed Weeder, Planet Jr. Cultivator, and Aspinwall Planter. To destroy beetles, uses paris green dissolved in water, and applied with barrel cart. Potatoes when dug are picked into boxes holding one and one-fifth bushels, loaded on planks, to be taken from field, stored in dark, cool cellar. Two important points: Get after the beetles in season, and be careful in handling the potatoes not to bruise them.

One of the humorous features of this session was a German dialect reading by President Miller, telling of Kathrina and the bees. It was greatly relished by the audience, for Mr. Miller is an excellent reader and the piece was laughable.

Evening Session.

Obituary of S. G. Minkler, of Specie Grove, Kendall Co., written by Edward Seely, of Yorkville. That gentleman not being present it was read by Arthur Bryant, of Princeton. Mr. Minkler was an old and valued member, an authority on orchard culture in northern Illinois, and his memory will be long perpetuated in the Minkler apple, which he first produced.

Next came the address of welcome, delivered by Judge H. C. Ward. In a jovial manner the judge explained that the welcome had been withheld until the middle of the convention in order to give the city a chance to see what kind of fellows these horticulturists were anyway, and as they were found to be pretty decent kind of people he took great pleasure in behalf of the mayor and city in extending to them a cordial greeting, and closed with an invitation for them to come again.

Roots, by J. V. Cotta, of Nursery, was next taken up. His paper was valuable in information on the subject of underground vegetable life. He gave the various dictionary definitions of the word root as distinguished from the tuber, bulb, etc. The principal part of his paper treated on piece root or whole root grafting, in which he claims one no better than the other, but the coming tree must be top worked, or better still, double top worked.

A paper on Subsoiling, How Done, Its Benefits, etc., written by the managing editor of the "Orange Judd Farmer," and read by Secretary Hartwell, in which the writer gave his views on the subject, thinks it of great value as the upper layer of soil is broken up and placed in a condition to hold a maximum amount of water, this moisture is held there for use in a dry season, heat and air are allowed to penetrate the soil, better plant roots are given a better opportunity for development, and many roots develop more completely, thereby resulting in a higher grade vegetable.

Plumbs and Cherries. This paper was prepared by C. W. Prescott, of Marengo, who, it is claimed, owns one of the finest cherry orchards in the state. This paper was read by President Miller. The writer claims to be successful. Care

should be taken as to selection of varieties, and preparation of the soil. The ground to be prepared the year before, keep it well pulverized and level, well drained, dirt ridge, because cherry and plum trees need all surface moisture that would naturally come to them. Plant trees 16 feet apart, use mulch if required to enrich, keep orchard cultivated, and stir up mulch. Select trees one year old, with Mahalab roots (for Marengo locality). This paper brought out an animated discussion of the relative values of the Mahalab and Mazzard roots. The majority testified to the merits of the Early Richmond on Mahalab roots. In some localities the Mazzard was claimed to be doing well. Secretary Hartwell said cherries planted in his grassy lawn had soon died, while those planted in a properly cultivated cherry orchard were flourishing. One or two satisfactory reports of Morello, but not generally well regarded.

"Effects of Horticulture on Character" was the next topic by Dwight Herrick, of Rochelle. It is well known, he said, to those who have come in contact with horticulturists, that their calling exerts a wonderful influence in the growth and development of "character." There is something about it that awakens man to the great possibilities of life, that leads him on to a broader plane of living, its effects being noticeable in the young, every child having an appetite for fruit and a natural love for flowers. Once the child becomes deeply interested, there is no danger of his becoming a drunkard or a lazy vagabond. He mentioned the deplorable condition of a northern Illinois town of 2,000 population with eight saloons and no fruit grown. He considers the chances ten to one in favor of the boy among his strawberries than the boy with his pockets full of marbles.

The next essay was by Mrs. Emma Groh, of Franklin Grove, "Horticulture from a Woman's Standpoint." This was a most excellent paper. She treated of the beauties and ennobling influence of horticulture as an occupation, how well it was adapted for women, of the general good health of those who are engaged in it, of its aid to women in her chief occupation, that of home making. She believes health is not gotten from a pork barrel, that people are more irritable and quarrelsome on a diet of meat than on fruits and vegetables.

Second Day—Morning Session.

First topic taken up, What to Do with an Old Orchard, by Geo. Deland, of Dixon, and read by the secretary. He said the thing to do with an old orchard was to clean out the dead trees and prune the living ones when in bloom. Prepare the ground for potatoes or corn. Draw from the compost heap liberally, spread under each tree remaining, apply wood or hard coal ashes about the trunks of the trees, scrape them, wash them with lye, and kill the lice and other vermin. He gave some very good advice on the care of young orchards. Discussion followed in which many persons gave their experience.

Next subject was Strawberries, which was read by your delegate, and brought out quite a discussion as to modes of culture, etc., and occupied most of the balance of this session.

Afternoon Session.

First on the docket was the election of officers, which resulted as follows: President, Arthur Bryant, Princeton; secretary, Justin L. Hartwell, Dixon; re-elected Treasurer L. Woodward, Marengo. Polo was selected as the next place of meeting.

Next came the reading by the secretary of a paper on Varieties, from the Scientist's Standpoint, by Prof. G. W. McClure, of Champaign.

"Varieties, from the Grower's Standpoint," was the subject of a paper read by Arthur Bryant, of Princeton. The balance of this session was spent in discussing these papers and asking questions.

On the question being asked, "Are there any apples grown in northern Illinois this year?" Arthur Bryant reported 100 barrels of Willow Twig grown by his brother. On making inquiry among the members present, J. L. Hartwell tells me he had 25 barrels from 25 trees. His trees are young. A. F. Moore, of Polo, tells me he had 2,000 bushels this year, 1,000 bushels of them Duchess. Said he had apples every year, does not profess to be a horticulturist. As his chief occupa-

tion is breeding "Morgan" horses, he is president of the Illinois Morgan Horse Breeders' Association. Has 100 head on hand, but anticipates putting out 100 acres of apples on his 600 acre farm.

On the question being asked as to what varieties of fruit to plant in northern Illinois, the replies were as follows: Summer apples, Yellow Transparent, Duchess, Benonia; fall apples, Wealthy, Snow; for winter, Ben Davis, Salome, Willow Twig, N. W. Greening; cherries, Early Richmond, Mt. Morency; plums, De Soto, Lombard; pears, Flemish Beauty, Keiffer; gooseberries, Downing, Houghton; currants, Red Duch, Victoria, and for white, White Duch; grapes, Moore's Early, Worden, Concord, Brighton, Niagara; strawberries, Warfield, Haverland, Crescent, Capt. Jack, Bisel, and Splendid, well spoken of.

Evening Session.

First paper read was by A. J. Sweezy, of Rockford, "Plant Life and Its Uses," which was very interesting and instructive.

Next in order came, What the Amateur Wants to Know About Horticulture, by Allen Joiner, of Polo. The writer thinks there should be some occupation for retired men of all occupations, something to keep them employed and out of mischief, where their minds and hands are both employed so they will not be peevish, fretful, finding fault with everything and everybody around them. He suggests amateur horticulture as the remedy. In this I think many of us will agree with him.

"Prize Essay" was the last topic of the meeting. There was a prize of \$5.00, offered by Mr. Dwight Herrick, of Rochelle, for the best essay, "Horticulture on the Farm," and was awarded to C. R. Powell, of Sterling. His essay was a good one.

One thing in particular surprised me, there was no fruit of any kind on exhibition from Illinois. Nineteen varieties of potatoes were shown by Powell & Hartman, of Sterling. These were fair specimens, but no comparison to what is generally shown on our tables.

There were no premiums offered by the society on fruits or vegetables, which probably was the chief reason of no display, but I must mention the exhibit of Oregon fruit, by the Eastern Oregon Colonizing & Fruit Land Co., of Union, Union Co., Oregon. The exhibit consisted of 25 plates of apples, of as many varieties, all very large, high colored, and the most perfect specimens I ever saw, not a blemish on one of them. In addition to these there were about 60 glass jars and cylinders filled with all kinds of fruit grown in that county. The collection contained all fruits that can be grown in California, except oranges and lemons. Fruit was preserved in salt brine, and the whole exhibit was magnificent, and shows what eastern Oregon can do for horticulture.

H. R. Cotta, of Freeport, had on exhibition a one-year-old Downing gooseberry plant, grown this season from a cutting; entire length of plant and roots, 49 inches; spread of top, 25 inches, with 70 branches from one to sixteen inches in length. The plant had 116 roots, over 12 inches in length, the longest root being 32 inches. He also exhibited a Warfield strawberry plant grown in hill, with roots in proportion to the gooseberry. He showed these as an object lesson to prove what can be done in a dry season by preparing the soil 10 inches deep, and keeping up constant shallow cultivation.

Take it upon the whole, there was much interest manifested all through the meeting. Large attendance at every session.

Paid up membership of 53. In regard to varieties and methods, I think perhaps we are a little in advance, especially in small fruits. But they are wide awake and on the alert, and we must keep stirring to keep in the lead. I like the manner of conducting their meetings. Plenty of time is given for discussion, which I think is of the utmost value. Also the question box is a very valuable adjunct to any horticultural meeting. In addition to the regular business, the evening sessions were enlivened by recitations, vocal and instrumental music, Sterling furnishing the talent Tuesday evening, and Rock Falls Wednesday evening.

REPORT OF C. E. TOBEY,

Delegate from Wis. State Hort. Society to Ill. State Hort. Society, at Kankakee, Dec. 10th, 11th and 12th, 1895.

The 40th annual meeting of the Illinois State Horticultural Society was held in G. A. R. Hall, at Kankakee, December 10th, 11th and 12th, 1895, and was very well attended during each session.

The papers presented were carefully prepared, and discussion was free and interesting. Officers and members were very cordial and did their best to make it pleasant for the visiting delegates from Missouri, Michigan and Wisconsin.

The program included "Care and Cultivation of Apple Orchards," by Chas. G. Winn; "Noxious Weeds," by L. R. Bryant; "Distribution of Plants," by Prof. Burrill, of University of Illinois; "Ornamental Trees," by Jabez Webster; "Small Fruits," by H. L. Doan; "Home Made Fertilizers and Green Manuring," by Prof. Eugene Davenport, Professor of Agriculture, University of Illinois; "Thorough and Clean Cultivation," by G. W. McCluer; "The Marketing of Orchard Fruits," by President R. Morrill, of Michigan State Horticultural Society; "Supplemental Irrigation of Illinois Eastern Insane Asylum," by Dr. Clark Gapen, the superintendent; "Grapes, Varieties and Cultivation," by Wm. Gould; "Late Spring Frosts and How to Protect from Them," by H. M. Dunlap.

I did not find the interest I expected to find in the small fruit discussions, although the acreage of them in Illinois is immense. Varieties are about the same as we advise in Wisconsin, especially the varieties advised for northern Illinois, but those grown in southern part are so different as to be hardly recognized by name by our average Wisconsin grower.

I listened with pleasure to the discussion on apples—the talks on spraying—and got in a word on friend Philips' tree protector.

We were invited and accepted the invitation of Dr. Gapen, superintendent of the Illinois Insane Asylum at Kankakee, to spend a few hours in buildings and on the grounds of the asylum, and were shown over the 90 acres that were irrigated

the past season. Vegetables were grown to a large extent and furnished to the 2,000 patients and 500 employes.

Water is furnished for the irrigation by the pumping works of the institution and from the Kankakee river, which also furnishes water necessary for the hospital and watering of almost 200 acres of lawn.

REPORT OF L. G. KELLOGG,

Delegate to Annual Meeting of Iowa State Horticultural Society.

The annual meeting of the Iowa State Horticultural Society convened December 10th, 1895, at the state capitol in the city of Des Moines. As a delegate from our Society I did not arrive until 11 o'clock of the first forenoon and at once proceeded to the state capitol.

The first thing that particularly attracted my attention upon entering the state house was a magnificent display of apples coming from nearly all sections of the state, especially the central and southern counties, the northern counties having a light crop on account of late spring frosts. You can only anticipate the magnitude of this grand exhibit of apples by a brief description of the space they occupied. There were 16 tables 4x12 feet, arranged in a circular form in the rotunda of the capitol, and all the available space on these tables occupied by about 2,000 plates of the choicest apples Iowa produced in 1895.

It would be useless to even attempt a brief description of the different county exhibits and the varieties comprising these exhibits as the varieties grown in Iowa are somewhat different from those in Wisconsin. Among the exhibits we noticed several plates of very fine Wolf River, Fameuse, Tallman Sweet, and Northwestern Greening, which are standard in Wisconsin.

The following varieties are receiving the attention of fruit growers as standards in Iowa: Ben Davis, Jonathan, Grimes Golden, Benoni, Cole's Quince, Fulton Wine Sap, Fall Orange, Janet, Winkler, Maiden's Blush, Fameuse, Hass, Kaump,

Iowa Blush, Duchess, Red Romanite, Wagner, Utter, Wealthy, Malinda and others. We were next ushered into the assembly room, where we found the subject of top working the apple under the white heat of discussion. Through the courtesy of the Society we were at once placed on the honorary roll of membership for the coming year, which we briefly responded to in a few words of acknowledgment. The assembly room was tastefully decorated with smilax and evergreens, and on the president's table was banked a pyramid of apples six feet in height, and the balance of the available space occupied by beautiful cut flowers, such as roses, carnations and chrysanthemums.

The program was a lengthy and interesting one, treating on nearly all subjects that pertain to horticulture, and spirited discussions followed every topic that was presented. In scientific investigations all along the line of horticultural work Iowa horticulturists are keeping abreast of the times. The subject of cross fertilization and the production of new seedlings are receiving a great share of attention, and the new and promising varieties of trees, fruits and flowers are sent to the different trial stations (which are 16 in number) with a view of determining the varieties that will succeed best in Iowa climate and soil. I cannot do justice in a brief outline of the many valuable and interesting papers that were presented, but will say that Iowa horticulturists are thoroughly awake in their own interests and in advance of Wisconsin in the production and testing of new seedlings and in the line of scientific investigations.

It is true that Iowa can boast of her apple, plum and cherry orchards, but Wisconsin yet stands in the front rank in the variety and production of small fruits. I shall ever cherish a pleasant recollection of the many new acquaintances I formed and the many courtesies that were extended while in attendance of the Iowa State Horticultural convention in December, 1895.

OBSERVATIONS IN OUTAGAMIE COUNTY.

Mrs. D. Huntley.

The weather in the month of March, 1895, was remarkably pleasant; there were some cloudy, windy days but not one storm of rain or snow in this locality during the entire month. The bright, sunny days dried the surface of the ploughed fields, and some farmers did their seeding the last week of March while the ground was frozen two feet or more in depth.

April was a continuation of the same pleasant weather, the roads dry and dusty and no rain until the 7th, when there was a light shower. After this date, the weather was delightful the entire month with no rain till the 3d of May, when there was a severe wind storm, which fortunately did no damage in this locality. A heavy rain succeeded the wind, followed by frequent showers and fine weather. All vegetation advanced rapidly. Plum trees blossomed on 5th of May, and apple trees were in bloom three days later. On the 8th we sprayed for apple scab with "Ease Celeste," and on the 9th sprayed grapes with Bordeaux mixture. The weather was warm as summer. On the 10th of May the thermometer registered 90, on the 11th it was much colder, with rain and slight hail storm; at night there was severe frost, with slight formation of ice in exposed places. The morning of the 12th was very cold, with wind, which continued all day; thermometer only 8 degrees above freezing. During the night two inches of snow fell, and at 10 o'clock a. m. on the 13th, icicles 6 inches long hung from the eaves on the south side of buildings. Apple trees were in full bloom, their pink and white blossoms covered with snow and ice; grapes also were in blossom but frozen on the trellise; strawberries were much injured also, and all our hopes of an abundant crop of fruit were blasted in a night. The weather continued cold for two days, freezing hard every night, till it seemed that all vegetation had succumbed to the frost.

During the week the weather moderated, the snow and ice disappeared, and then the leaves began to fall from the trees as they do in autumn, every grape leaf was killed and for three weeks the vines were as bare as in mid-winter. After

this, as the weather became warm, the grapes put forth new leaves and blossoms, and gave promise of a small crop of fruit.

The summer was very pleasant, all vegetation advanced rapidly, although the weather was very dry. We had no good rains until September. The weather in that month was very hot. A small crop of grapes ripened, and on many trees there were a few apples. Strawberries were a light crop, raspberries were much injured, and currants were a total failure. Prices for such fruit as we had in this locality were higher than usual. Strawberries brought 16 cents a quart the first of the season, and very few if any gardeners sold for less than 10 cents.

The varieties of strawberries, considered best for this locality, are the Wilson, Warfield, and some gardeners say the Crescent. Of grapes we prefer the Worden for flesh, the Brighton for red, and Niagara and Martha for white.

We have had no experience with top worked trees. Our best apples are the Wealthy and Utter and Whitney No. 20. Apples sold readily at \$1.00 per bushel last season, and Whitneys always bring that price in this locality.

There was no serious trouble with insects last season. Our local Horticultural Society was organized over 20 years since and is doing good work.

OBSERVATIONS IN MONROE COUNTY IN 1895.

J. J. Menn, Norwalk, Wis.

The season of 1895 was a disappointment to many fruit growers at Norwalk and vicinity. The winter of 1894 and '95 injured strawberry plants, and was very severe on the blackberry and raspberry canes. Trees of the larger fruits were not injured. Seeding commenced early; grain was sown before the frost was all out. The ground was unusually mellow, and by the fifteenth of April small grain was nearly all in and farmers were ready for planting corn, which was about completed the first week in May. When small fruits were uncovered it was plain to be seen that the crop would be small,

owing to the fact that so many canes were dead, caused by the drought of 1894 and the cold, dry winter that followed, but owing to the very favorable growing weather in April, by the first week in May all crops looked well. Apple and plum trees were in full bloom and bid fair for a bountiful crop. We, in this locality, hardly ever escape spring frosts on low lands, and the second week in May it came. Ice formed half an inch in thickness. Oats, clover and grasses were badly frozen, which injured them very much. Strawberries were badly stunted, more especially on clay soil, and what fruit we picked was from blossoms that came out after the frost. Mr. V. G. Hargove, of Wilton, had an average crop of both black, and strawberries. Many thousand strawberry plants were set in this county last spring, mostly Warfield, Van Deman and Enhance. They made a fine growth through the summer, and the prospect is good for a crop next season. Black and red raspberries and blackberries were a light crop and sold readily for ten cents per quart. The prospects for next season's crop are quite good. The buds are well developed and there was no late growth of canes. Through this section we had plenty of rain in the growing season, but after harvest very little rain fell, and in the fall many wells and some springs had dried up, but we had good rains in December. Apple trees came through the winter uninjured, but the frosts of May killed all the blossoms on low lands and some on land that was quite elevated. On my high location I had a good crop of apples. About eight miles north of Norwalk there is an orchard of 800 trees, owned by F. Willencamp. His trees were not damaged by frost, owing to the elevation. He sprays to prevent scab and blight, nothing else. He has tried top working without success (presume he has used poor stocks—Secretary). Mr. L. Boring has the oldest orchard in this county. He began planting in 1860. He has raised many thousand bushels of apples, but lost many trees in the winter of 1884 and 5. In company with A. J. Philips I visited this orchard last August. We saw one Transcendent tree that Mr. Philips said was the largest of its kind he had seen. It was five feet in circumference and stands 36 feet high. A row of same variety are used for posts on the east side of his orchard and they have grown six

inches over the wire. On most of the trees he has had good success top working, using the Transcendent for a stock. Some of the Russian varieties are bearing full crops so top worked. The fruit is handsome but of poor quality, and only fit for the hogs. A strange thing is, on his high location he has never made a success of growing the Wealthy. He had several plum trees loaded with fruit which Mr. Philips pronounced No. 1 in quality. Through this section the apples doing the best are Duchess, Tetofski, Transparent, Wealthy, Haas, Walbridge, Pewaukee, Whitney No. 20, Transcendent and Hyslop, with McMahan, Longfield, N. W. Greening, Newell, Wolf River, just coming into bearing. The price was 50 cents to \$1.00 for early and a little more for later kinds, but the home demand took them all. No blight and wood in good shape for the coming winter. More apple trees sold here in 1894 than formerly and mostly Wisconsin grown trees. I like to see trees sold at a fair price, but I do not like to see the farmer robbed of his dollars by smooth-tongued agents who never pay a dollar to join our state Society, as I do not see their names in the directory in our report. I would like to see our Society fix a fair price on trees raised, and the people advised to buy only of Wisconsin nurserymen. We surely can raise our own trees in the nurseries in Wisconsin. I hope this will be talked up at the annual meeting in February. Grapes were a total failure, cherries about the same, garden products good, especially tomatoes.

OBSERVATIONS AT WEYAUWEGA.

F. A. Harden.

The winter of 1894-5 was a very hard one for trees and plants in our county. Last spring we had several thousand one and two-year-old trees root killed. Strawberries, raspberries and blackberries were also badly hurt. It was quite dry during the spring and all through the season, and there was a heavy loss of all newly set trees and plants.

Nearly all trees blossomed full, but a heavy frost came at that time and killed nearly all the blossoms. A few trees in favorable localities produced some fruit.

Cherries and currants were very scarce. Strawberries were a failure. Raspberries and blackberries were about one-half crop, where they had good cultivation. All berries sold for \$1.60 to \$2.00 per case of 16 quarts.

Apples and crabs were scarce; sold at \$1.00 a bushel.

The only insect pest that we had during the season were borers. In August they destroyed hundreds of apple trees. Can some one give us a remedy?

To let you know what we are doing in our county in the fruit business, I have taken a few figures from the certified statement to our county board last November by the deputy clerk.

For the year of 1894, number of bushels raised in the county:

Of Apples..	7,970 bu.
Of Strawberries	552 bu.
Of Blackberries	400 bu.
Of Raspberries	219 bu.
Of Currants	60 bu.
Number of acres in apple orchard in the spring of 1895	318
Number of bearing trees.	11,966
Number of acres of strawberries.	22
Number of acres of raspberries.	16 1-4
Number of acres of blackberries.	12

Several towns did not report any fruit in them. So we know these figures are too small, as some of the towns not reported raised from five to eight hundred bushels of apples in one season, also a large quantity of small fruit.

REPORT OF J. F. CASE, EAU CLAIRE, WIS.

It has been a very good season with us, take it all through. We had some frosts, but they did not affect us much. In this section we did not have a very large crop of small fruit, but it was of good quality and nice, brought big prices; we

think here that the hot, dry weather of the summer of '94 hurt it more than anything else. We had a nice crop of plums and grapes, the best we have ever had. Everything in the fruit line has made a splendid growth and gone into winter in good shape. I have been experimenting some with raspberries lately, setting them out mixed up more. I set a row of Marlboroughs and then a row of Cuthberts, and then a row of Brandywines. Set them alternate and I find they do a great deal better than they do set in plots by themselves. The fruit is larger and nicer. And I also find that by setting the coarse lobed varieties that are inclined to crumble with the Cuthberts in alternate rows, that the fruit is larger and finer and not inclined to crumble but very little. It improves them very much. Strawberries have made a grand growth and we are looking forward for big crops next season.

On raspberries I have been trying some experiments. I would remove all the new canes but four, but I would not remove the bearing canes until they are done bearing. I have tried on the Gladstone, removed the old canes in the fall soon as second crop is done and also in the spring early, but can't see that the new canes were any larger than they were where the old canes were left, but it pays to thin out the new canes as soon as they start, all but about four, and pinch them off when 16 or 18 inches high. Then they will put out some long laterals, but if you wait until they are 2 1-2 to 3 feet high there will be two or three short laterals on the top. I have heard some complain that they could not lay the canes down for winter protection. They grew so large and stocky, they would break every time. I use a large 2 tined fork and spade. I stick the spade in the ground on the side of the hill towards me and straddle the hill with the fork, then pry with the spade at the same time, push the hill gently over with fork and stick the fork in the ground. That will hold it down until you put on the dirt to cover it. I don't break one cane in a hundred, and then you have got a stout bush that will stand up itself without any protection. I have tried wood ashes on strawberries; can't see any improvement, will try again this season, may report different next time.

Wednesday Morning, Feb. 5,
Senate Chamber.

The president appointed the following committees: On program, B. S. Hoxie, J. L. Herbst, D. E. Bingham; on awards, J. C. Plumb, E. A. Perry, Fred A. Harden.

Secretary—We have delegates here with us this morning from other state societies, and I move that we make them annual honorary members of our society. They are Mr. Dartt from Minnesota, Mr. Hinkley from Iowa, Mr. Sweezy from Illinois, and Mr. Patten from Iowa.

Motion prevailed and the president introduced the delegate from Iowa State Society, M. E. Hinkley, who responded as follows: I am very much pleased to meet with you in your annual convention. My home was once in Wisconsin, in Portage county.

E. H. S. Dartt, delegate from Minnesota—Mr. President, I have a sort of claim here, a sort of a pre-emption. I was here in your state in 1844. I came in and stopped for a time, and I planted by first apple tree in 1846. I attended a horticultural meeting here. I remember the naming of an apple. The committee that was appointed to recommend a fruit list wanted to recommend five varieties against which no member could raise an objection. The Red Astrachan was one of the apples they wanted to recommend. I had had it and I did not consider it quite hardy enough for Wisconsin; there was one objector, and of course they could not recommend it if there was one. They coaxed me until I finally withdrew my objection and they recommended it.

I finally drifted away from the state and I suppose some one has "jumped the claim," sometimes when such a thing happens the one who left the claim has trouble and sometimes the other fellow has trouble.

I am glad to be with you once more and I think I shall get enjoyment enough while I am here to pay me for coming. I

hope to do the satisfactory thing for myself and I hope it will not be unprofitable or unpleasant to you. I take great pleasure in my Tree Station; it has always been a pleasure for me. I have over 800 varieties grafted, and a great many of them are in a promising condition. I have about one or two thousand seedlings.

There is one hint I want to throw out with regard to delegates. I think the greatest benefit to these delegates is, you benefit the one you send; it is an education for them, and so I would say, send young men so that when you get them educated they will be a benefit to you. I hope you will send a delegate to Minnesota.

A. J. Sweezy—Mr. Chairman, when the secretary of our society told me I was elected to come up here to attend your meeting I was pleased over it. I live only fifteen miles from the line in your state. I have attended your Farmers' Institutes and I find them the best of any I have ever attended in any part of the country. We, in Illinois, have met with losses which all in your state have met with, the loss by frosts. We did not raise apples and I am buying the apples I eat this winter. I think it is an advantage to send delegates to these meetings. The delegate you sent to us in Sterling gave us good and practical ideas. I do not expect to do you as much good as he did us.

Chas. G. Patten—I am here as a layman, and like my friends, Dartt and Hinkley, I do not feel that I am an entire stranger in this state. I began my first apple planting in Wisconsin, and I always look forward, with pleasure, to meeting with you in your conventions.

Geo. J. Kellogg—Knowing something of Mr. Patten's work, and the great value it is to horticulture, I move that we make him a delegate from northern Iowa. Carried.

Wm. Toole—I wish to refer to the idea advanced by Brother Hinkley, that these delegates have come here to be benefited. I hope they will also be able to benefit us. We are coming to the time when all industries and all interests in the state will be called for to make a showing of their advancement. I refer to the fiftieth anniversary that will be celebrated two years hence, and I would suggest that we make the effort, while we

are here together and while we have our friends from other states with us, to prepare something of the history of the Society for use at that time, and looking to this I would like to move that the president appoint a committee of three, of which J. C. Plumb shall be one, and that committee shall gather material, confer and prepare a history of our Society.

B. S. Hoxie—In support of such a motion I will say that a few years ago I asked B. F. Adams to prepare a paper which should be a history of our Society; he waited two or three weeks and then replied that he thought it too soon, that we ought to wait a few years. I think it would be a good idea to have such a history prepared and read before our Society.

J. C. Plumb—I would be in favor of that motion if Mr. Adams' name is substituted for mine.

B. F. Adams—In my opinion no more suitable person could be selected than J. C. Plumb to prepare such a history.

Mr. Toole withdrew his motion, and Mr. Adams moved that Mr. Plumb be appointed a committee of one to prepare such a history of our Society.

Geo. J. Kellogg—Would it not be better to have this committee go back of the history of our Society and gather facts concerning horticulture in the state before the Society was organized? I planted apples ten years before the organization of this Society.

Prof. Goff—I think this is a timely suggestion for a history of horticulture in this state while we have some of our oldest members with us. Such a history would be very helpful. Such a history was prepared in Michigan and I have found it very helpful to me in my work. I find that the earlier volumes published by our Society are very meager. By all means, let us have the early history.

B. F. Adams—I think the scope of the work should include the looking into the early history of horticulture in the state. I know of no one so competent to do that work as Mr. Plumb.

B. S. Hoxie—I think we might find it necessary to restrict the length of this history to a certain number of words. I suggest that we set apart, as a partial compensation for doing the work, ten dollars. It must be largely a labor of love, we could hardly expect to compensate any one for doing it.

When we hold our semi-centennial celebration we shall want to use it.

Prof. Goff—I hope we will not limit this work. We need a full and complete history. Michigan went on and made such a history and the state did the printing. I hope we will have so large and complete a report that the legislature will have to take hold of it and print it for us.

B. S. Hoxie—I think, as Mr. Hirschinger said last night, "We had better go a little slow." There are several other interests in the state besides horticulture and we may not be able to get the legislature to take hold of it.

Chas. Hirschinger—I want to go slow but I do not believe in going slow in all cases. I think if we do this work we had better do it about right.

Motion to appoint Mr. Plumb was adopted.

B. S. Hoxie—I move that we appropriate ten dollars for the work, as there will be some expense attending it.

Prof. Goff—It seems to me that that motion makes the matter in the line of a farce, when you think of appropriating ten dollars for preparing a history of horticulture in Wisconsin. I think it should be a full report. If we find it necessary to cut it down we can do so, but let us have the report first.

A. S. Robinson—I am not in favor of restricting the matter in any amount.

J. C. Plumb—I would not wish to have the motion pass because it speaks of a recompense. I would not want any recompense except a reimbursement of necessary expense, postage and the correspondence necessary. I have kept a complete history of everything in Wisconsin that has come under my observation. Mr. Searles speaks of planting in 1842 and Mr. Kellogg also; that is earlier data than I have, and as the work advances we will no doubt find others.

Geo. J. Kellogg—I am in favor of Mr. Hoxie's motion with this proviso: that we set aside ten dollars for the expenses connected with gaining the history. The history of horticulture in this state has not been well looked up. I know of trees in Kenosha county that I can take you to that were set in '35 and '40.

Motion amended, and carried as amended, to leave the matter in the hands of the executive committee.

Wm. Toole—I would suggest that any one who has any knowledge of this kind shall send it to Mr. Plumb. I shall do so. He will of course accept what is of real value to him.

Mr. Perry—My father began to attend these horticultural meetings years ago and used to be very much interested. He was always asked to come and he stopped coming because of this one thing, a committee would make recommendations and no one could bring in an objection. A fruit list would be voted right through, and he said it did not do him much good to come. I think, if there is a list of fruit recommended, that any one should object to anything on the list that he cannot endorse after he has had experience with it.

Geo. J. Kellogg—I believe we did not coax Mr. Perry to withdraw his objections, we convinced him. I remember that I wanted a list of the best five varieties recorded and it was the best one we ever had; there is not a better list of five varieties today than that list.

J. C. Plumb—Back of the day of the Duchess, the time that Brother Dartt spoke of, that list was recommended and not one of that five are now on our list, those that we then recorded. It takes time to prove these things. We did the best we could, we have kept on doing that, and that is the reason why we are where we are today.

President—The subject of the lease for the new Trial Orchard was laid over and would properly come up at this time.

Chas. Hirschinger—Wouldn't it be well for the Society to know how much money we have before we proceed to the consideration of this question?

E. H. S. Dartt—I may perhaps be excusable in offering a word or two on this question. It seems to me if you could find a piece of state land where you could locate this orchard it would be the wisest thing to do. It needs to be a continuous work and one not liable to be cut off at the expiration of a term of years, as might be the case if it was put on leased land. It would be better to have it on land owned by the state than to be hindered in your experiments as you are liable to

be if you locate your Trial Orchard on a piece of land which you lease for a term of years.

Mr. Perry—I think a proviso might be added to the lease so that the land could be bought, if desired, at the expiration of twenty years. This work has been talked of for a long time. We have \$500.00 and I think we ought to go on with it while some of the older members who are so much interested in it are alive to see some of the experiments connected with it.

Secretary—I move that a committee be appointed by the chair, composed of two of our older members, to look into the plans that are recommended, and that they may associate with them some of our visiting members if they wish to do so, and report to us the best plan they know of for a Trial Orchard.

Geo. J. Kellogg—I believe in an open presentation of plans from this body.

Secretary—I think this question of planting this Trial Orchard is one of the most interesting things that we have ever had before us. I am glad to see so many of our younger members here. I think that it is better for us to have plans presented by a committee that can take time to look the subject up, and, from the knowledge they will gain, bring them before us for our approval.

Motion prevailed, and the chair appointed Geo. J. Kellogg and J. C. Plumb as such a committee.

Prof. Goff—As I understand it we are to use this piece of ground just as long as we want it for experimental purposes.

President—Yes, it is an indefinite lease.

J. D. Searles—My trees are thirty-two feet apart each way. I set in blackberries and think it is a good plan, the trees shade the blackberries and the blackberries shade the trees. I am inclined to think that the outcome of it will be good. We have this natural advantage in our location; it has a horse-shoe protection in the hills. The north, west and south winds cannot come in. If my plan works well I shall put in 1,000 trees.

E. H. S. Dartt—I have been doing it, as the old saying is, and you are getting ready to do it. I have used what brains I had to try to do the work I have done in my Tree Station right, and perhaps if I tell you the difficulties I have met you can

overcome them. A real system with me has been a fixture. I started in to set root grafts. I tried the plan of planting each kind together so they could be easily found. I tried that the first year, and the second year I could not find any better plan than to continue in the same way. I had a record of it so I could go to any part of the Station and find any variety. My record shows where the different rows are and where the varieties are in the rows. I started my orchard in the same way. I could not do any better, as I had several varieties. The varieties in the Station and also in the orchard are all mixed up, but my record shows me exactly where they are. I do not see how you can work it in any other way than to mix them all up. If you get fifty trees of a grower you will have to set them out in a row; then you will go on with other varieties to finish out the row. One variety would not have a better position than the other variety. You will find that the more intricate the machinery you have to do with the more difficult it will be to get some one to carry out your plans, the more simple it is, the easier it is to get some one who can attend to it.

The most discouraging thing I see in the way of experimenting is these mild winters we are having. You set out a lot of trees and in such winters everything does well. We must have the extremely cold winters to test, to make experiments with. Perhaps you can adopt some system in your experiment station and try all varieties, but my opinion is, when your experimenter gets there he will find he cannot do it. I think the plan of putting out a tree and if it dies of putting in another just as it comes, is the best thing you can do.

Prof. Goff—It's no harder to keep the accounts of an orchard than it is to keep them in any expensive business. I have a system by which I keep a record and it is not a difficult matter to find my trees. I do not always have the time to write up the notes as I wish to. I have a very simple system and it is not difficult for me to find a tree, no matter if I have re-set with different varieties. Some things which I decided upon years ago, putting trees in alphabetical order, for instance, I have decided is not at all necessary.

J. D. Searles—I do not know why a mild winter needs to be called “against us.” The climate of Wisconsin is being modified. The Lord sees that we are trying to raise fruit and he wants to help us. The climate is being modified, I am sure, and if you will pray a little for a better climate we may get it.

Chas. G. Patten—This is a very interesting and a very broad question. If the experiments are carried out, as they should be, it will be very far reaching and will be beneficial. It seems to me that you are not going back far enough, not considering conditions enough. I want to suggest this: You are about starting an experimental orchard up in the vicinity of Wausau, that is in the timbered portion of the state. After the timber has been cut off the climate will be very different. In the case of the denudation of the forests of northern New York, we find that those varieties that they succeeded very well indeed with before the forests were cut off were not a success afterwards, and that they needed different varieties. These conditions must be carefully considered. Then, to my mind, it will not do, in only an indifferent manner, to take up these hap-hazard seedlings and plant them. You will find that the hardier varieties will be demanded in that section and further north. I do not speak in a criticising way of what Wisconsin is doing, or what any other state is doing. I have come to this conclusion from facts developed by my own experiments, and they were made with seeds I took from your university farm. You may take the seeds of the Hiberna, or any variety, and you will find a large proportion of them will be worthless. By the combination of two varieties you will demonstrate what is possible for you to do in the direction of cross fertilization. I am confident that I have trees, that will come into bearing now, from the Perry Russet, that will prove twenty per cent. hardier than the Perry Russet. We must select seed, but not from the varieties in Rock and Walworth counties. I have tested seedlings from those counties and they have not gone through our test winters. It is almost absolutely certain that you will find it so if you undertake using the seeds from fruits that are not west of Wausau.

Secretary—In order to get this good location, the best we could find, we had to take a young farmer and teach him the

business; we found one young man who understood it but we could not find the land. We do not expect him to experiment because he is not qualified to do it. We expect those who do know how to experiment to make the experiments and then send the trees up to him to plant.

Geo. J. Kellogg—The object of the Trial Orchard is to prove to the farmers up there that they can raise fruit. You cannot get at many of the facts in five years, you want the next five years to prove it. If the farmers up there can grow ten varieties they will be satisfied. I would call it the North Central Station. We have the Central Station right here, conducted by Prof. Goff.

E. H. S. Dartt—Mr. Patten claimed that we need not look for any hardy seedlings from the eastern part of Wisconsin. I think the proper cross brings about the proper tree. One of the most promising seedlings I have is a seedling from the Baldwin. I know that the Wisconsin seedlings from this portion of the state are most likely to fail, but I still think there is such a thing as getting good, hardy trees from this locality.

Chas. G. Patten—I think Mr. Dartt misunderstood me. It is not that a hardy seedling cannot be originated in southeastern Wisconsin for southeastern Wisconsin, but I think it a rare exception that a hardy seedling for a northeastern section could be originated here, and I think all who are interested in a hardier race of seedlings had better take note.

B. S. Hoxie—I move that we accept the report of the committee and adopt the lease. Carried.

Wm. Toole—Mr. President, I desire to present the following memorial for your adoption:

To the Officers and Members of the Wisconsin State Agricultural Society:

We, the officers and members of the Wisconsin State Horticultural Society, in annual convention assembled, do hereby memorialize your honorable body that you will not permit the sale of any intoxicants upon your grounds at the time of your fairs.

Unanimously carried and the secretary was designated to present it to the Agricultural Society.

Adjourned.

ANNUAL ADDRESS.

L. G. Kellogg, President Wisconsin State Horticultural Society, Ripon.

Time in its onward march has brought us as a society to the end of the first quarter of a quadri-centennial. This meeting marks an era in the existence of our Society. The first quarter century of its life has passed into history, and we have met once more, as is our annual custom, to inaugurate the beginning of its second quarter.

Many, if not the majority, of the members who assisted in the organization of this Society, who passed through the trials and tribulations of the pioneer days of fruit growing, are at rest from their labors. But those who are yet with us have reason to feel proud of the part you have taken in the promotion of a cause so full of interest to us all. You have every reason to rejoice in the progress and prosperity which have crowned your efforts from the commencement down to the present time.

At this time let us cast a retrospective glance into the past, and briefly review the lessons taught by the successes and failures, the hopes and disappointments, we have passed through, in order, if possible, to profit by these experiences, avoid mistakes, and adopt only such methods as are indicated by our successes in former years.

There is a great work before us. We are yet in the experimental stage. The frosts, drouth, soils, varieties, insects, fungi and many other kindred subjects are the great questions before us. Let us improve our opportunities. Let us work as we have never worked before. With a competent corps of professors at the university, each applying his mind to the investigation of a special subject; with such rare opportunities for research and scientific investigation all along horticultural

lines, we should keep pace with the other great enterprises of the day.

We are called upon to work out new problems that are constantly recurring to us through the various branches of horticulture science and we find other branches so intimately connected with this science that it cannot be studied alone. The microscope must be brought to our assistance that we may determine the structure of plants. Chemistry must be consulted that we may know the elements which enter into the composition of plants and soils, the chemical changes which are necessary to transform these elements into plant and tree growth; by it also we are enabled to determine what fertilizers will be of most value to plant growth on different soils and under different conditions. I believe we, as members of this Society, have been too uncertain and superficial in our investigations, and are too apt to follow in the old beaten track that our forefathers have trodden before us. We are all apt to follow in the groove of some fine spun theory. We rely too much upon the experience of others. We need more practical experimentors in the ranks of horticulture.

Our Mr. A. L. Hatch took the initiative at our first annual meeting in the line of experiments and scientific investigations, which I trust will be renewed and continued the coming season with an increased enthusiasm and a determination to work out results which will not only benefit us as individuals but every fruit grower in the northwest. As we investigate, experiment and learn, we can discriminate as to the value of varieties, soils and conditions. It is true that many varieties of apples will thrive and continue to be fruitful for many years along the shores of Lake Michigan that will utterly fail in other portions of the state. Yet small fruits can be successfully produced in all sections, and varieties of seedling apples are being selected and produced that will ultimately furnish at least a home supply in the less favored locations.

Our Trial Stations, of which we need a greater number, and the individual effort now being put forth in the development and testing of new seedlings will ultimately demonstrate that certain varieties of the apple, pear, plum and cherry can be planted in certain portions of the state with as much confi-

dence as the farmer has who now sows and harvests a crop of corn or grain. We have arrived at a period in our work when we must trust less to chance. With the recurring frosts and drouth, the close competition in all lines, all producing the effect of reducing the margin of profit, it is not only necessary that we secure the best adapted varieties, but employ only the best and most economical methods of care and cultivation.

We are making experiments, we are studying soils and climatic conditions, and making a careful record year after year of these experiments, which are printed in our annual reports, and should be guides to successful work in the future. With the continual accumulation of our stock of information, we are better enabled to present our work to our members as well as the horticultural public.

TRIAL STATIONS.

At the last general assembly of our state legislature the sum of \$500.00 was appropriated to the Wisconsin State Horticultural Society for the purpose of establishing and stocking an experimental station in the north central portion of our state. In accordance with this law I am pleased to inform you that ten (10) acres of land have been leased for a term of years near the city of Wausau, in the county of Marathon, and I trust that arrangements will at once be made for the stocking and successful management of this station.

Our trial or experimental station committee at present consists of five members who are appointed by the president. This is becoming one of our most important committees upon whom rests a responsibility for the work they are expected to superintend. In order to eliminate all personality in the appointment of this committee on trial stations, I would suggest and recommend that this committee consist of five members, three of whom shall be elected by this Society, and the president and secretary shall be members *ex officio*. One member shall be elected for one year, one for two years, one for three years, and thereafter one member annually. By this arrangement no great change can be made in this committee in any one year, which would necessarily affect the carrying to a success-

ful completion of the experiments which were already in progress. I would also recommend that our Society establish at least one trial station the coming season.

FREE PLANT DISTRIBUTION.

Under the head of "Free Plant Distribution" the number of school children applying for trees and plants in 1894 was 3,036; in 1895 it reached 4,116 applications, an increase over 1894 of 1,080. With the increasing number of applications for trees and plants from year to year it is evident there is an increasing interest in horticulture among the schools and school children of Wisconsin, and worthy of a continuance by this Society.

MEMBERSHIPS.

The subject of an increased membership in our State Society has been called to my attention several times during the past season. The question naturally arises, How can we secure more members and more actual workers? This can best be accomplished by the organization of subordinate local societies and the establishment of local trial stations in different sections of the state. This would not only aid in the horticultural development of our state, but would add strength and memberships to our State Society. Horticulturally as a state we are growing very fast. Small fruit plantations are developing in nearly every hamlet and village of the state. Yes, even in the extreme northern part of the state, on the shores of Lake Superior, where it was once supposed the snows and ice of winter were wont to remain ten months in the year. There is also an increased interest in the planting of apple, plum and cherry trees. We now have an abundance of material to work with in the organization of these local societies. Let us put our shoulders to the wheel and secure at least 100 new memberships in 1896. This will not only require the personal effort of our secretary, or some other member of the Society, but will necessarily involve the expenditure of labor and money.

The salary of our secretary at present is not sufficiently large to meet these demands. It is true that our secretary receives in addition to his salary his traveling expenses, but no reimbursement for time other than salary. I would recom-

mend for your consideration that the salary of our secretary be increased to a sufficient sum that will require the major part of his entire time and energies. No man can render an efficient service as secretary of this Society as a supplemental or secondary consideration to some other business.

An unparalleled drouth has again extended over two-thirds of our state, not only affecting the growth of tree, plant and bush, but greatly diminishing the yield of fruit, and as a consequence the Wisconsin fruit grower, as a rule, has made but very little money the past season. Strawberries, raspberries, blackberries, currants and gooseberries averaged less than one-half a crop throughout the state, and the apple and grape crop was nearly ruined by the late spring frosts, except in some favored locations.

Taking these circumstances into consideration the exhibit of apples at the state fair was a commendable one. From the same cause of failure the display of grapes was not only small but inferior in quality, and not in keeping with the liberal premiums that were awarded.

There is a duty we, as members of this Society, owe the state, that publishes our reports and sustains us with an appropriation. That duty is to co-operate and work with the State Agricultural Society in making a most complete display of fruits and flowers at the state fair.

The many discouragements which are constantly recurring are but opportunities for testing our ability and our patience. Instead of complaining of the losses of the past it is our privilege and our duty to guard others against these failures and mistakes we have made, thus assisting our brother horticulturists and materially advancing the resources of the country. Aside from our love for the horticultural art, it is imperative on us to do the best we can. We should not forget that the money profit is not all, or even the highest end to be attained, but should remember the trees, shrubs and vines for the adornment and comfort of the home, mingled with the perfume of beautiful flowers.

If we labor as faithfully as did our pioneer horticulturists, success will crown our well directed efforts. All who will, may

enjoy fruits and flowers and shall have an occasion to rejoice in the horticultural advancement we are making.

Mrs. Campbell moved that the president's address be referred to the executive committee. Motion prevailed.

REPORT OF SECRETARY.

A. J. Philips, West Salem.

Mr. President and Members of the Wisconsin State Horticultural Society:—As the time has arrived for submitting this, my second, annual report, I do it with a feeling that though the past year has been notable for frosts and drought over a large portion of our state, still on the whole we have made some progress in our chosen calling and have much to be thankful for as horticulturists. The growing season started in fully ten days to two weeks earlier than usual, as plum and apple trees that showed their first blossoms May 14th to the 18th in 1894 were in full bloom from the 4th to the 10th in 1895, and as reports came in, in answer to inquiries I sent out I found that this state of things was general over a large portion of the state, and when the killing frosts of May 12th, 13th and 14th came it found the tender fruit in shape to be much damaged. This, too, was general and fully as bad in southern as in northern Wisconsin, the coldest being reported from La Fayette county, where it read mercury on the 14th down to twenty. Ground froze two inches and everything in shape of fruit killed.

First Apples.—Reports from everywhere said all are killed. I found my orchard on the high land escaped and bore 800 bushels apples of fine quality. I found Mr. J. J. Meuns on a high ridge in Monroe county the same, and the trees well loaded with fine fruit—Duchess, Wealthy, Pewaukee and Plum Cider. On this ridge I found four trees of Repka, well loaded, and the fruit of good size—the best showing of that new Russian I ever saw. I did last fall what I never expected to do. Made a show of apples at the state fair, and not one of the

old timers from Baraboo present. Hirschinger, Tuttle, Palmer and Townsend—all absent with their apples; I tell you it looked vacant and lonesome—I presume as the Irishman said, "The likes will not occur again." Springer, too, was absent, with his fine seedling show. But Barnes says, "Look out, next year I will be there to beat you all," and he has a nice lot of trees with a prospect for a good show of apples. Although I found the damage to all fruit was great, still on high lands near water or in very protected places there was quite a supply left.

Though grape vines looked sick and black in most places that morning, still the vines took a new start and considerable fruit was picked from the second blossoming. While almost the universal response when talking and writing about our summer meeting was that there would be no strawberries to show, still when the time came for the meeting at Grand Rapids, the Thayer Fruit Farm, of Sparta, and Geo. J. Kellogg, of Janesville, made a good showing on the tables, which I felt proud of until I saw the unusually large and fine show of the same varieties at Minneapolis, brought from the gardens along the Mississippi, and from that favored spot at or near Lake Minnetonka where frost was less severe. Protection in the form of a coating of marsh hay was used on several acres on the Thayer Farm. You will notice that judging from the report of your corresponding secretary there seems to be a growing interest in horticulture over the state. I have felt ever since our last annual meeting under great obligations to all who took part and assisted in making the meeting a success. Every person who had a place in the program was on hand when their names were called, and we worked right to it all the while. The discussions were both interesting and profitable. Our report though not out as early as I had hoped, has been eagerly sought after and so far I have sent out many more to people in Wisconsin and to other states than I did in a corresponding time last year, and have received numerous compliments as to its value which you members have given it. It comes near to an horticultural album for our members, as it contains pictures of three of our true and staunch old workers, to-wit: Peffer, Wilcox and Freeborn, the two former being

life members also of the Minnesota society. That society still holds its large membership and the value of their monthly magazine is on the increase, owing to the interest of their members and the efficient work of their able secretary, A. W. Latham, through the kindness of whom I was enabled to furnish their magazine to our members at the reasonable sum of fifty cents per year, and all who reported to me about it expressed themselves well satisfied. Mr. Latham again offers it to us at the same rate, and is willing to publish any communications of our Society or from our members until such times as we have an organ of our own. I suggest a resolution of thanks to our Minnesota brethren for their kindness. Such things help increase the fraternal feeling between our societies. The time of holding their annual meeting was changed to December, and Mr. Coe, our delegate, there will give you an account of the same. I will only say I told them the only place I saw where we could brag over them was in our large attendance of young men.

I have but little new to offer about our trial stations more than I said last year. Will say I have visited all of them this year, and find many good trees growing both at Weyauwega and at Ithaca, which will be useful object lessons to people in either locality and I think both will prove valuable acres to the owners of the farms where they are located; and here will say that I was notified early in the season that I was appointed a committee to visit the experimental orchard of the late S. I. Freeborn and report on the same, but on writing to Mr. C. A. Hatch as to when would be best to come, he said wait until the trees are bearing which would not be this season. But I found Prof. Goff intended to spend his fourth of July on the Richland County Hills, and being in Madison I concluded to accompany him, which I did. We took it for granted that A. L. Hatch's interest in horticulture would enable him to carry two horticulturists to his home as easily as one. It was a great treat to me to visit the four orchards of A. L. and C. A. Hatch, Mrs. Freeborn and Mr. S. I. Freeborn's son. Messrs. Freeborn and Hatch have demonstrated to the people in that locality that on their highlands apple growing will succeed and pay as well or better than other farming, and

I am free to say while it may help the fruit growers of Sturgeon Bay and vicinity to have Messrs. Hatch, Bingham and Goff locate there, it will be a great loss to southwest Wisconsin if Mr. Hatch discontinues his nursery and orchard there; for while the planters may have not appreciated it as they should I do think that no trees are grown in the world better adapted for orchards on those highlands than those grown there. Mr. Hatch's grand old trees of Duchess and McMahans fully demonstrate that to my mind. I have already reported on our new trial orchard which I recommended in my last report. Will say that in addition to the work of looking up new fruits and new members and organizing new local societies and attending meetings of old ones, I have visited the widows and families of two of our former members who did much work and spent much time to place our society where it now stands. I refer to Mrs. J. M. Smith and Mrs. Geo. P. Peffer. They spent several hours inquiring about and talking of our Society and our members, and both seemed glad to feel that we still remembered them and their husbands. I hereby recommend that we should not be in a hurry forgetting the work of our pioneer members and their companions in their chosen work. I spent one day last spring after receiving several inquiries looking up the Bismark apple which was being sold in our state. I found the stories big and the trees small and damaged, evidently being heat in the hold of the steamer while crossing the Atlantic. I wrote that up, also answered inquiries about a novelty called the Minnetonka apple, which was being sold at a high price in our state. I found it was not known by any one that I knew at Lake Minnetonka, but the papers declined to publish my article, saying that though it might prevent the farmers being imposed on or swindled the men selling those trees were good advertisers and they could publish nothing that would displease them. I had to give it up, and only said what I deemed it my duty as secretary of the state Society to do. So you see to protect our members and others we need a paper of our own. As to our reports I can report some progress, as the legislature kindly gave us an additional fifty pages and gave us four thousand bound copies instead of two, as formerly. But as they have given the State Agricul-

tural Society their entire lot bound, I would be in favor of asking the next legislature to give us ours all bound even if we have to take one or two thousand less. I find people prize them higher, read them better and care for them better, as last year after supplying our members and our local societies I have turned over a number to Mr. McKerrow who kindly distributed them at the various institutes.

New local societies have been organized at Dousman, Wausau, Retreat and Sturgeon Bay, and meetings held at Trempealeau and Galesville. I had the pleasure of attending local meetings and speaking at Campbell, South Wayne, Janesville, Appleton, Waupaca and the magnificent chrysanthemum show of the local society at Omro. President Kellogg also attended the latter meeting.

Will say in conclusion that the duties of this office are increasing. Last year from the best accounts I could keep I spent one hundred and twenty days working for the society, and looking up new fruits, and all this year including twenty-two days in the interest of the new trial orchard, and it foots up one hundred and ninety, and I have not done as much as was called for or needed. You will notice that miscellaneous expenses—express, printing and postage—are all higher than last year. I find I do as many hours' work as my friend Latham, only his is nearly all office work which requires much care and attention, and mine has been much of it out door work among trees, plants and people, trying to give out and at the same time gain information of value to our members, and by exchanging reports and papers with them we can be of mutual benefit to each other. I have been honored during the past year with visits by Prof. Goff and President Kellogg of our state, and F. G. Gould and C. W. Sampson of the Minnesota society. Prof. Goff's account of what he saw will be published in our next volume if space permits. Will here say, visitors in quest of horticultural knowledge are always welcome.

NEW FRUITS.

No decisive action was taken at our summer meeting, owing to the small attendance of old members, in regard to appropriating any money for this purpose as was done last year. But

as I found inquiries coming in about both the Loudon and the Columbian raspberry, I deemed it advisable to do about as I did last year. So with the approval of President Kellogg I appointed a meeting and notified several experienced fruit growers from Minnesota and Wisconsin to be present at Janesville July 12th, as I wanted their opinions on the Loudon before answering any more letters. We found it bearing very heavy and fruit fine, although they were complaining of drought. We found Mr. Loudon lying on his back suffering from a broken hip, the result of a recent accident, and although over three score and ten, we found him as enthusiastic as of old on producing new fruits, the history of this one being very interesting. As to what the committee said about it I refer you to page 313 of last year's report, as I deemed it of importance to publish it for the good of all concerned. The Columbian is still warmly endorsed, and if it bears next season we will have a chance to test it and whoever is secretary should look it up so as to answer questions understandingly. I have taken pains to furnish to the Wisconsin Agriculturalist all new things I found out for the reason I find that that paper, owing to its low price, has more readers than any farm paper in the state, and have told its readers I would answer any questions I could in its columns.

I have been watching a seedling pear on the grounds of the late G. P. Peffer for several years. I visited him a few weeks before his death and he said he would send me some of the young trees he had grafted from it the next spring, as he wanted it propagated so that our Society could have the benefit of it if it proved valuable. He showed me the trees and I wrote to his son telling him where the trees stood that I was to have as near as I could remember. He kindly sent me seven of them last spring, and it was dry but I succeeded in making three of them live, but fearing the winter might kill them or that I had not the right ones, I visited the old tree in November last and cut some cions I know are genuine and will top work them in the spring. I found the seedling that is worked on apple stock bearing again this year, and though Prof. Goff says trees so worked are short lived, I intend to give it a thorough trial on the Virginia and will report later if life is

spared. I found an old seedling pear that has borne an annual crop at Rosendale for many years. Mr. Geo. C. Hill set it forty years ago. Mr. Hill has also a young seedling tree that bears beautiful fruit growing in his home orchard. I secured cions of both of these, and they are worthy of a trial in our new experimental orchard. I have secured also some trees of the Mankato plum. It was highly spoken of at the Minnesota meeting in December last. I also visited several new varieties of apples at Omro. I found a fine seedling tree near the village and secured some cions. If it proves as valuable as the neighbors there think it will, it will be fully tested in the new trial orchard. I visited also in Waupaca county the Ruth again for which I have a strong liking. Mr. Springer thinks it the Wrightman Russet, the old tree of which was destroyed years ago while fighting grasshoppers or caterpillars. We will watch it and know as soon as a sprout which has come up from the old tree bears fruit. This is the best we can do as Mr. Wrightman is deceased. The Ruth is valuable as it keeps all winter. This, too, will be tested at Wausau. I also visited in the same county the noted tree Ratsburg. It is the last survivor of the orchard. It is a seedling of the grand old Duchess, seems entirely hardy and free from blight, and as Uncle Springer says, "What do you want better than that?" The tree is large and the first crop was 23 apples that weighed 25 pounds, so the owner, Mr. Ratsburg, informed me. This, too, will be tested. The Rushford, the tree on the farm of Mr. Beaulin, near Eureka, which we gave a premium in '94 as a seedling, I am informed is the Bailey Sweet, but of that I am not sure as our committee on nomenclature should have known that old variety. I found last March the seedling that was put out as the Windsor Chief, now called Windsor, keeping nicely. It is a handsome apple and the tree pronounced good in southern Wisconsin. The old tree still stands near Waunakee in Dane county. I intended to visit it last season had it fruited. I also found a choice winter seedling at the Minnesota meeting. I fell in love with it as the introducer said it was hardy as an oak, which if true makes it valuable. On my return home I soon wrote for cions for our new trial orchard, but was informed that an enterprising nurseryman of their own state

had the start of me and secured the sole right to propagate it, but he has kindly offered to exchange for some of our new seedlings, to be grown of course under restrictions for a while. Last but not least it was my good fortune to visit the great orchard of Mr. Zettel of Sturgeon Bay. I found the old man out in the orchard. I had never met him but when he came up and gave me a genuine horticultural hand shake, he said, "You must be that La Crosse apple man." It would make a long report to tell all I saw here, for when I saw his beautiful apples at our last state fair I said our state must know more about these new trees that have the proud pedigree of having the Duchess for a parent. As Mr. Zettel trusts to his memory and says his health is not good and like the rest of us is growing old, I thought it proper that some of the best of which I secured cions be named, which I have done with his approval, and ask that our Society also approve the names so they can be tested and grown by names instead of numbers. No. 2, that he said at state fair 10 acres would be a fortune, he names for his daughter Lillie; the large apple he called monster tree, the Door; the red apple I have here, grows near the house, the Bay; one he calls his own and choice tree, the Sevastapol. One fine tree he said bore good crops and never was affected with worms, he names the Minnie, another daughter; another choice tree, the Zettel No. 1. Another choice winter seedling, that he was careful of the cions, he wants called Zettel's Winter. No. 10, he says, is hardy enough for the north pole; would call it the North Pole or Pole apple. The foregoing are all handsome apples and good trees, late fall or winter; some are seedlings of Duchess seedlings, which insures great hardiness if planted on good soil. They grow on the finest fruit soil in the state and Mr. Zettel says every one is more hardy than the Duchess, and they look like it. He was selling a load of apples every day for 85 cents per bushel and his neighbors selling potatoes for 10 cents a bushel.

I would state further that when we take into consideration the careful manner in which the late Mr. Freeborn of Richland county saved his seeds for years and the large number of seedlings coming into bearing each year, I think a competent person should examine them every year for several years, providing

Mr. Freeborn's legal representatives will allow us to do so, and make an annual report to our Society.

B. S. Hoxie moved that the financial part of the secretary's report be referred to the committee on finance and the rest to the executive committee. Carried.

Referred to committee on finance.

REPORT OF TREASURER.

R. J. Coe, Fort Atkinson

Wisconsin State Horticultural Society in account with R. J. Coe, Treas.

1895.	<i>Cr.</i>	<i>Amount.</i>
Feb. 7. Balance on hand		\$636 51
Feb. 7. Received from state treasurer.....		750 00
Feb. 7. Received for memberships		68 00
April 2. Received from G. B. Smith, membership dues.....		1 00
June 19. Received membership dues at Grand Rapids.....		25 00
June 19. Received Wood County Horticultural Society		25 00
June 20. Received from state treasurer.....		750 00
June 20. Order No. 44 transferred to trial station account		26 32
		\$2,281 83
		1,438 76
Balance on hand Feb. 6, 1896.....		\$843 07

<i>No. of order.</i>	<i>Dr.</i>	<i>Amount.</i>
1.	Mrs. V. H. Campbell, for badges	\$4 00
2.	A. L. Hatch, paper	2 38
3.	D. E. Bingham, paper	2 38
4.	Mrs. V. H. Campbell, paper	95
5.	B. S. Hoxie, expense winter meeting	5 40
6.	A. D. Barnes, " " " paper.....	4 23
7.	Mrs. W. A. Tripp, " " " "	8 00
8.	L. L. Olds, " " " "	1 55
9.	A. L. Hatch, premiums.....	20 00
10.	F. H. Chappell, "	16 00
11.	Geo. J. Kellogg, "	1 00
12.	Henry Tarrant, "	1 00
13.	Wm. Stammer, "	3 00
14.	L. L. Olds, " on potatoes.....	5 00
17.	Thayer Farm, trial station.....	8 50
17½.	A. L. Hatch, " "	13 15
18.	W. H. Hanchett, expense delegate	8 58
19.	J. L. Herbst, stationery, etc.....	20 22
20.	Mrs. E. W. Fisher, paper.....	1 60
21.	E. F. Babcock, expenses delegate	4 32
22.	Franklin Johnson, paper.....	1 48
22½.	W. E. Thrall, "	8 25
23.	Geo. J. Kellogg, expenses Minn. meeting.....	2 78
24.	Wm. Toole, paper, R. R. and board.....	4 35
25.	D. C. Converse, paper	1 61
26.	A. A. Parsons, expenses delegate.....	4 45

<i>No. of order.</i>	<i>Dr.</i>	<i>Amount.</i>
27.	F. M. Benedict, expenses delegate.....	\$8 22
27½.	A. D. Barnes, premiums	1 00
28.	Mrs. Levi Cranch, "	5 00
29.	F. A. Hardin, trial station.....	37 29
30.	A. J. Philips, looking up new fruits.....	50 00
31.	R. J. McVail, janitor service	3 25
32.	L. G. Kellogg, expenses winter meeting	4 05
33.	W. H. Huppeler, board bill	127 25
34.	Janet B. Day, entertainment.....	10 00
35.	J. F. Case, paper.....	13 33
36.	Mrs. L. W. Heindel, paper.....	3 00
37.	J. H. Finkler, expenses delegate	15 00
38.	A. J. Philips, secretary's office.....	35 18
39.	Mrs. V. H. Campbell, expenses Baraboo meeting	5 26
40.	" " reporting and trans. winter meeting	50 00
43.	A. J. Philips, salary.....	75 00
44.	" " transfer to trial station account.....	26 32
45.	" " secretary's office.....	25 47
46.	J. W. Gough, expenses delegate summer meeting	4 66
47.	Mrs. V. H. Campbell, expenses " " paper..	9 46
48.	Miss Lulu Philips, expenses summer meet., paper.....	6 16
49.	W. D. Boynton, " " " "	4 40
50.	F. A. Hardin, " " " "	3 00
51.	A. D. Barnes, " " " "	3 38
52.	Fannie Perry, " " " delegate.....	17 74
53.	Mrs. Townsend, premium.....	3 50
54.	Mrs. W. T. Jones, "	1 00
55.	A. S. Robinson, "	10 00
56.	W. Scott, "	8 50
57.	Geo. J. Kellogg, paper and premium	26 50
59.	A. D. Tarrant, premium	1 00
60.	L. G. Kellogg, expenses Madison and summer meet.....	22 57
61.	Joseph Croteau, board bill.....	20 50
62.	A. J. Phillips, ex. secretary's office.....	42 98
1.	R. J. Coe, cash paid at Grand Rapids	3 00
2.	R. J. Coe, ex. to date.....	19 89
3.	A. J. Philips, ex. secretary's office	56 18
5.	Mrs. V. H. Campbell, reporting summer meeting	12 00
6.	A. J. Philips, secretary's salary	75 00
4.	J. L. Herbst, ex. summer meet.....	4 28
58.	Thayer fruit farms, premiums	18 00
8.	Madison Democrat Pub. Co., electros.....	13 20
9.	L. G. Kellogg, ex. to West Salem	11 76
12.	A. J. Philips, secretary's salary	75 00
13.	A. J. Philips, ex. secretary's office.....	53 48
15.	A. J. Philips, "	59 08
16.	L. G. Kellogg, ex. delegate Iowa meet.....	30 00
17.	L. G. Kellogg, ex. president's office	25 00
18.	R. J. Coe, ex. Portage and ex. and delegate to Minnesota.	4 14
19.	A. J. Philips, ex. secretary's office, \$69.60; one quarter's salary, \$75.00	144 60
		\$1,438 76

REPORT OF FINANCE COMMITTEE.

We, the undersigned finance committee of the Wisconsin State Horticultural Society, have carefully examined the reports of the secretary, corresponding secretary and treasurer of said Society for the past year; we have compared the same with the bills, accounts and vouchers and find them correct.

Respectfully submitted,

Franklin Johnson.

F. C. Edwards.

F. L. Barney.

Adopted.

The election of officers resulted as follows:

President—L. G. Kellogg, Ripon.

Vice President—Chas. Hirschinger, Baraboo.

Secretary—A. J. Philips, West Salem.

Treasurer—R. J. Coe, Ft. Atkinson.

Corresponding Secretary—J. L. Herbst, Sparta.

PLANTING NEW TRIAL ORCHARD.

At a meeting of the trial orchard committee the undersigned was chosen to superintend the buying and planting of the experimental orchard. In selecting the different varieties I adopted the plan of buying for the commercial orchard, where about forty trees of a kind were used, ten trees in four different localities and on four different soils, which growing in the same row would show after a term of years the best soil to grow trees for northern Wisconsin or at least Marathon county. This was done in every instance except in case of the Repka, where all had to be bought in same nursery. It will be marked and platted so that all who visit it can readily find where the trees were grown. Another plan was to take the leading varieties of nine kinds. Plant six of each as follows: First, a Virginia crab to be top worked; second, some root grafts, one of which will be left to grow and bear without being trans-

planted, and third, a tree three years old on its own roots, the same as the grafts, and the cions used for top working. This to be followed the same each year for three or five, when it will show plainly at a glance the best way to grow each variety. This same plan is exemplified in my own orchard in La Crosse county, which all are invited to inspect; and third, something like one hundred and fifty trees are set, one or two of a kind, mostly donated to test their ability to stand the climate of the forty-fifth parallel. These trees, some seven hundred, were planted, staked, tied and mulched the week in April, commencing the 27th, and being a wet, lowery time was just suited to the work. One thing was noticeable—that trees dug this spring in localities where drought prevailed for one or two years, showed quite a damage to the roots. That it was in the roots was plain, as attested by the fact that some of the hardiest was plain, as attested by the fact that some of the hardiest were injured the same as some of the most tender. The coming year will test them. Where the root was tender it made no difference whether the top was Duchess, Hibernial, Newell or Wealthy, the roots were discolored the same. Five hundred protectors are on the ground to be used soon. The trees are already starting and it promises to be a fine orchard. Will say in main orchard the varieties used were Duchess, Hibernial, McMahan, Northwestern Greening, Wealthy, Newell, Repka, Patton's Greening, Longfield, with a few Peerless, Avista, Okabena, etc.; a few plums, mostly from Minnesota, and one Suduth pear tree was planted. The gentleman who owns the land and has charge of the orchard is a thorough worker, and will be pleased to show visitors through the place and invites as many as can to come on Wednesdays, as it will take less time to show all at the same time. We hope to make this orchard an object lesson for not only our own but other northern states, and of great value to all planters who will take pains to visit it and study varieties.

A. J. Philips,
Secretary.

SPRAYING FOR APPLE SCAB.

(Extract from October, '95, Bulletin of Del. Agr. Exp. Station.)

Results of Spraying Apple Trees—Upon Their General Condition.

A notable effect of the season's work was the protection which the spraying offered against diseases of the wood and foliage.

The general condition of sprayed trees was better than that of the unsprayed both as to vigor of growth and density of foliage. This favorable condition also persisted later into the season. On October 18th, I found that those apple trees which had received but a single spraying were entirely defoliated, while those treated four and five times were still clothed with leaves. A further good effect was noted in the general condition of the buds on the sprayed trees, seen on October 18th. On the sprayed trees the buds were markedly larger and more vigorous.

On October 14th, Mr. Derby wrote, "The indications are for complete success for the spraying for scab, and, further, the condition of the trees as to next year's fruit buds and 'staying on' of the leaves makes the experiment satisfactory to me, the russetting of the fruit, undoubtedly from the action of the spray, being the only drawback."

General Directions for Spraying Apples.

Regarding the cost of spraying apples, Mr. Derby has estimated it for material and labor at about ten cents per tree for five sprayings.

In spraying apples we would recommend the course pursued by Mr. Derby in this experiment. Use the Bordeaux mixture, (1-2 D) made up as follows:

Copper Sulphate	6 lbs.
Lime	9 lbs.
London purple	4 ozs.
Water	45 gals. (1 bbl.)

For the first application, which should be made as soon as the buds begin to swell, London purple need not be added to

the Bordeaux mixture, but for the second, third and fourth application it should be included. The second application is to be made just before the bloom opens, the third when the petals are nearly all shed, the fourth when the fruit is about the size of peas and the fifth about two weeks later.

The profitableness of spraying apples, so far as the control of the scab is concerned, will depend upon the susceptibility of the variety and the likelihood of the appearance of the disease without treatment. Trees affected as little as either the Early Harvest or the Wine Sap would hardly pay the cost of spraying, so far as this one disease goes.

But upon general principles we firmly believe that it will pay to spray all apple trees with a combined fungicide and insecticide, inasmuch as there are other foes than the scab fungus to be combatted by the treatment. Of these we have the various fruit rots, leaf blight and that very formidable enemy, the codling moth.

Furthermore, there is reason to believe that the general health of the tree will be so greatly improved that this alone will make the spraying of apple orchards a profitable expenditure.

REPORT OF D. C. CONVERSE, FORT ATKINSON.

The past season has been anything but satisfactory to the small fruit grower. Although the early spring was quite favorable for planting and strawberry plants started out with a fair prospect for making a vigorous growth, the late frosts followed by the extremely dry weather and hot winds had a disastrous effect, and in our locality good beds are the exception rather than the rule.

The same might be said of raspberries and blackberries.

As to time of planting, my observations the past season on early and late planted fruits confirm the theory that the earlier the planting can be done the greater will be the degree of success.

The strawberry crop was very light owing, as above, to late frost and dry weather. The berries were, however, in good

demand and brought a fair price. Raspberries yielded a fair crop, but not as heavy as was expected from the growth of canes. This was due probably to the unripened condition of the wood in the previous fall. The blackberry crop was a practical failure, and I am fully convinced that unless we are favored with a series of more favorable seasons, some system of irrigation must be devised in order to insure paying crops.

Currants and gooseberries, although injured considerably by frosts, yielded a fine crop, and I am happy to think that these fine fruits can be as easily grown as any farm crop and with as full an assurance of success.

To the practical, wide-awake fruit grower who can say but that the borer and currant worm are blessings in disguise? To such a one these pests are easily controlled and the careless indifferent grower will have bushes destroyed and no fruit to market.

While in many cases during the past season the fruit grower has barely held his own and has been filled with many discouragements, still it seems to me that there has not been a better time to embark in the business than the present. And to the grower already established only loss will result from shifting to something else.

D. C. Converse presented the following resolution: Recognizing the value to horticulture of the work done by F. W. Loudon, Janesville, therefore be it resolved, that the Wisconsin State Horticultural Society now assembled do hereby instruct the secretary to send greetings to Mr. Loudon. Adopted.

OBSERVATIONS FOR SEASON OF 1895.

J. L. Herbst, Sparta, Wis.

On account of the dry condition in which the small fruits went into winter quarters and the thin stand of strawberry plants to bear fruit the season of 1895, many of the fruit growers' hopes, in Sparta and vicinity, were blasted. But with a

favorable spring and plenty of rain and warm days the outlook was much better. Everything was in the best of condition up to the 12th of June.

Plum trees blossomed as they never blossomed before, but heavy frosts killed the blossoms and no plums. New setting of strawberries made growth very rapidly and new plants began to set the 13th of June—plant beds. First strawberry blossoms the 30th of April, quite a few on the 5th of May, and good share the 11th and 12th. Light frosts at this time but very little damage done. Thermometer fell to 24 degrees the night of the 13th and did the damage. Raspberry and blackberry blossoms hurt in the bud and strawberries considerably damaged.

Some plantations covered with marsh hay did not suffer as much as plantations that were smudged. Smudges did no good when thermometer went 8 degrees below, while covering helped to a considerable extent currants on outside of bushes frozen solid.

Gooseberries were heavily loaded before frosts. Did not suffer as much as other fruits from frost and a good fair crop was secured.

Queen, Red Jacket and Columbus prove all that is said of them. It would be injustice to the plant and originator if we discarded any of the newer varieties of strawberries, from their actions the previous year, and they will have another trial before we do so.

. There is a very good outlook at Sparta and vicinity for the ensuing year. With plenty of moisture at the right time, a fine stand of strawberry vines was secured. New growth of raspberry and blackberry cane is as good as ever.

While our plantations went into winter quarters with not as much moisture as we would like, still with plenty of spring rain most of our growers think things will come out all right.

PROTECTION OF EVERGREENS FROM DROUTH.

J. C. Plumb, Milton.

The premature death of so many of our evergreens in lawn and hedges, in southern Wisconsin, is truly alarming. In my home village are many trees which have hitherto flourished and attained their ten to thirty feet, without any show of weakness, but which in the last year have lost their foliage never to return, and the evergreen hedges, miles of which we have planted and furnished in that vicinity, are now many of them dying out in spots, or show a weakness that precludes death, and I am looking for a larger death rate to show among the evergreen trees than ever, with the coming spring and summer.

With a view to avert further losses in this line I have been looking up the facts, and seeking a remedy. It is plain enough, that the primary cause of this death is the want of rainfall during summer and autumn, as has been the case during the last two years. Copious and seasonable watering would have saved most of them without doubt. But prevention is better than cure. Artificial watering is generally costly and often a difficult process. So we find it best to avoid the cause by conditions of planting and growth. Our annual rainfall is all sufficient for our needs in this direction, if it can be conserved, or reserved, for time of need. In this line we find three ways available, namely: 1st, culture; 2nd, mulching; 3d, protection from robber plants.

The first two methods named we all understand and practice with all successful cultivations, but the last remedy we have failed to appreciate. Our evergreens are being robbed of the last vestige of water in the soil by deciduous trees, of which the white soft maple is most destructive, the butternut and European larch following close. In fact any tree the roots of which feed on the surface will rob the evergreens.

We find the hemlock and balsam fir most sensitive to the robber roots, and the arbor vitae least so; so that under the same conditions the latter is holding its own with little show of weakness from the drouth.

Now since no surface mulch or culture will answer fully in our case, we have found it necessary to cut down, or severely root prune, these deciduous trees where they encroached upon the evergreens. In one case where a beautiful hemlock hedge was showing the first symptoms of death, we took up the intervening plank walk, and cut off the maple roots by digging a two foot trench between the hedge and the trees. Again we have dug a similar trench around single trees to cut off the robber roots. In every case the effect was soon shown by the renewed vigor of our evergreens.

But as this must be repeated every few years, it is a question why not put in a permanent concrete wall between, or dispense altogether with the fast growing deciduous trees? I am of the opinion that we have too many of these rapid growing maples, and the sooner they are dispensed with the better for our beautiful evergreens.

I have for many years been in the practice of cutting the surface roots of grass and shrubs around our lawn trees by shoving the spade its full depth in a circular cut as far from the base of the tree as its branches project, and the same treatment for the rose bed, or any of the choice plants which are bordered by grass, and in all cases with excellent and immediate effect. Of the miles of evergreen hedges we have planted but few will be left at the end of another series of dry years, unless protection is afforded same from robber roots of more vigorous trees.

Wednesday Afternoon,
Senate Chamber.

REPORT OF COMMITTEE ON OBSERVATION.

Mr. Bonnell, delegate from the local society at Eau Claire, was asked to add to the report of J. F. Case, and said: I did not expect to be a delegate to this convention until last Monday. The man who was elected delegate was taken sick and died, and I was notified on Monday that I was expected to be here to take his place.

I lost my strawberries from the dry weather. The raspberries came out all right but the fruit dried up and the bushes died, so I have but very few left. Currants were a very poor crop, but gooseberries I never saw so fine. I never saw such a crop in my life. Plum trees blossomed out nicely but we got no fruit. We had a frost in June. I account for the loss of the strawberry bed from two causes; first, the dry weather in the summer of '94 which kept them back, then the rains came on in the fall, in September, and they made so great a growth and were so tender, that they froze when the cold weather came on.

Q. What saved your gooseberries from the frost?

Mr. Bonnell—The frost did not affect them at all, but the currants were hurt. I thought the frost hurt them as they seemed to turn color. I told my wife I thought we would lose the crop, but ten days after I noticed them, they seemed to be turned again and were all right.

C. E. Tobey—Did not those gooseberries fall off that had turned?

Mr. Bonnell—Yes, I think they did.

Q. What kind do you raise?

A. Houghton's Seedling and the Agriculturist.

Mr. Bonnell—Mr. Case writes about the Ever-bearing Gladstone. I believe he and I are the only ones that have them. He says he does not break any of the vines in putting them down. I do not think he ever will because they do not grow. They are named after a grand old man, but I am going to dig mine all up and put out cabbage in their place.

R. J. Coe—Cannot we have a report from Sturgeon Bay by Mr. Bingham?

D. E. Bingham—I haven't a written report from there. When you had the frost here we had a snow storm there that lasted from Sunday night to Thursday. Our strawberries were all in full bloom. We had a good crop of strawberries, and we had quite a large crop of apples. The only orchard we have there is Mr. Zettle's. We had a large crop of plums. There were some plum trees four years of age that had one bushel of plums on them.

C. E. Tobey—Isn't it true that the season at Sturgeon Bay is

about two weeks later, and perhaps the strawberries were not in full bloom at that time?

D. E. Bingham—Our strawberries were all in full bloom; they were uncovered and it froze so hard that it would hold a man up on the bay. Our strawberries were injured some but we had quite a fine crop after all.

J. C. Plumb—In 1894 I had an immense crop of apples and I predicted that we would not have an average crop of apples last year, and so sparsely was the bloom that we did not spray. I am sorry now that I did not do it because it would have helped us the next season. I ran a cultivator through the orchard off and on, and I have never seen so large a show of fruit buds, so I am looking for a good crop of apples this year. I do not think the frost, last season, had the least possible effect on my orchard; I do not know why it was so. It killed the strawberries and currants but I did not find that it injured the apples. We are in for a big crop of fruit for 1896.

OBSERVATIONS IN SAUK COUNTY.

Wm. Toole, Baraboo.

I have not written out a report because it seemed to me there was so little to report. The drouths and the severe frosts left us very little. Red raspberries seemed to stand the drouth and the winter better than anything else, and there were some very fine red raspberries raised in our vicinity. Blackberries amounted to almost nothing. Apples were almost a failure. Grapes amounted to a little more than apples, but still were very disappointing. Gooseberries seemed to bear considerably better. Currants amounted to but little. Houghton, Chas. Downing and Switzer gooseberries are the varieties I have. It might have been supposed that strawberries would have done better if it had not been for the dry season, but I do not think they would. I do not think if the weather had been favorable that we would have had anything of a crop because the vines were injured by the freezing and that injured the fruit.

YEARLY REPORT OF EUREKA SOCIETY.

This Society is yet young, hardly three years old, but has reached the stature of societies of the growth of several decades. The idea of our organization was popular from its conception, and having a territory tributary to this place well supplied with material congenial to draw from the interests of whom were in the line of our work, our efforts were assured success from the start.

Our meetings are held the first Saturday of each month in a hall in the village of Eureka, being nearly central with our membership, consequently the general convenience is apparent, which we deem a most desirable thing for the perpetuity of such institutions. The meetings are well attended. Various topics of special import in the line of horticulture, floriculture and agriculture are duly and methodically discussed. In addition we have entertainment committees who provide matter for the society of an interesting and practical nature. Our most prominent workers in the varied lines of entertainment are the lady members. Their efforts are always decidedly well done.

Our sessions the past year were fraught with operations of a character that proved interesting not only to our own members but to the entire community, who attested their appreciation by very largely attending our public demonstrations.

Our last year's work was inaugurated by having in January a Farmers' Institute. We gave much publicity to the matter, and were rewarded with a great attendance of our intelligent and enterprising people. Many came from long distances. Over one-half day was devoted to horticulture.

Although the time was diligently employed in our sessions for the year in discussions of a timely and practical nature, the society early inaugurated a plan to have a "chrysanthemum show" in due season. This idea was further elaborated by adding an exhibit of the flora world as obtainable, and all varieties of the vegetable kingdom. This proved a success in all respects and attributed mainly to organized efforts. Another of the same character is in progress.

The copies of State Horticultural Society's transactions are

duly distributed to all members. Supt. Geo. McKerrow, on request, furnished us this winter with 100 volumes Farmers' Bulletin No. 9, which are, like the transactions, greatly appreciated by this community.

One result apparent since our organization is the greater intelligence evinced by our people regarding matters essential in fruit raising, and we are certain we are performing an educational work needful to all localities.

Regarding fruit crops the past year, the early days of spring were of a propitious character. The snowclad hills and vales of this almost hyperborean region are today not more beautiful in their pure white mantle than was the area here devoted to strawberries, but like the apples of Sodom the gratification consisted in first views. The late frosts destroyed most of the primary bloom and all of the intermediate, and a drought mercilessly pounced upon and wound up the balance. The only strawberry to withstand the griefs of the season was the Glendale.

Of raspberries the Turner and Cuthbert did fairly, but of all the reds the Thwack proved a great success. The Marlboro developed enough vermin to almost cause their extinction. Of all the black raspberries the Nemaha did the best, bringing up the rear in splendid order.

Blackberries proved much of a failure right here where they have always been successfully raised. The gooseberry crop of some varieties was light. The best cropper here was the Whitesmith, the yield of which here was most remarkable. In size the Triumph was prodigious.

Our best crop of fruit of any kind was the currant. The White Grape never were so white and altogether lovely. The Victorias were superb and Fays and Cherry too, but not good croppers. The Versailles and North Starr did fairly well and polished up handsomely, but of all the varieties for profit the big red Dutch takes the lead. Currants were not particularly injured by frost, but a northeast wind of seven days' duration after the berries had formed switched the bushes in a disastrous manner. As it was, there was a larger crop raised than at any time since the fell destroying worms commenced their direful ravages.

As for prices we individually realized more profits from half our usual picking area than the year before, which was accomplished mostly through red raspberries and currants.

At an early day we had plenty of fine orchards of Rochester, N. Y., fruit. Apples, pears, plums and cherries were in abundance, with some peaches. An over glutted market stared the producer in the face, with consequent discouragement. Neglect followed; trees died by thousands and were not replaced by suitable varieties, and now we are using foreign fruit again as we did forty or fifty years since. Some tender varieties are set out yearly. Of course they succumb about as fast at set. There are very few apple trees in prime condition. Pears, plums and peaches have teetotally disappeared, and none but the fittest variety of cherry survives and they only fruit to disappear into the rapacious crops of the feathered tribes.

Our officers this year are:

President—Dr. T. E. Loope.

Vice President—L. W. Sowles.

Recording Secretary—H. H. G. Bradt.

Treasurer—Mrs. M. E. Penniman.

Executive Committee—C. E. Floyd, P. M. Beaulin, and A. A. Parsons.

Delegate—L. W. Sowles.

H. H. G. BRADT,
Secretary.

REPORT OF OMRO HORTICULTURAL SOCIETY.

The annual meeting of this society was held January 11, 1896. The officers elected for the ensuing year are as follows:

President—S. O. Pingry.

Vice President—L. F. Laiten.

Secretary—Mrs. Jos. D. Treleven.

Treasurer—Mrs. L. Laiten.

Executive Committee—J. L. Fisk, J. V. Bartow, Mrs. F. Barnett, Mrs. R. T. Darrow.

Delegate to state meeting—Mrs. Jos. D. Treleven.

This society has 60 members, and we have very interesting meetings which are held the second Friday of each month.

MRS. JOS D. TRELEVEN,

Omro, Wis.

Secretary.

Platteville, Wis., Horticultural Society of 30 members meets monthly at the residences of the members.

Upon return last summer of our delegate to the State Horticultural Society, we formulated a library of 50 volumes and subscribed for several papers. At our meetings every member is on duty to prepare information on topic assigned them. This winter we have had the following topics:

Strawberries—1st. Fitting ground and setting. 2nd. Varieties. 3d. Shall we raise or buy our plants? 4th. Young plants, removing bloom and runners. 5. Cost to raise and market. 6th. Picking stands, boxes, etc. 7. Pickers, who, age, how to manage them. 8th. Marketing. 9th. Yield. 10th. Irrigation. 11th. Covering.

Other topics subdivided, such as blackberries, asparagus, fertilizers, implements.

Our present officers are:

N. E. France, president.

A. Hale, vice president.

H. Gilmore, secretary.

Mrs. T. J. Colburn, treasurer.

H. GILMORE,

Secretary.

The Vernon County Horticultural Society met at Dr. Barney's office on Tuesday, January 7, '96. Elected officers and delegates:

President—Dr. F. S. Barney.

Vice President—M. V. B. Richards.

Secretary—J. R. Hall.

Treasurer—N. H. Nelson.

Delegate—F. L. Barney.

Alternate delegate—J. R. Hall.

Number of members, eighteen.

J. R. HALL, Secretary.

The Calumet County Horticultural Society at its January meeting elected the following officers:

President—E. Schumaker.

Vice President—Merrett Blanchard.

Secretary—G. A. Cressy.

Treasurer—J. S. Dixon.

Delegate to winter meeting of State Society—G. A. Cressy. We have a membership of twenty-four. Hold our meetings during the winter the last Tuesday of each month.

Very little small fruit grown in this vicinity. The apple orchards are generally receiving more care and attention, and more and larger ones are being planted.

The fruit crop last year was almost a total failure. The pear orchard of W. R. Bishop of about four hundred 13-year-old trees which bid fair for a large crop only produced somewhere from twelve to fifteen bushels, owing to the severe weather the 12, 13 and 14 of May. Raspberries, where protected during the winter, yielded about half a crop. Blackberries very little and strawberries scarcely any.

Hilbert, Wis.

G. A. CRESSY,
Secretary.

REPORT OF THE LA CROSSE COUNTY HORTICULTURAL, AGRICULTURAL AND DAIRY ASSOCIATION.

This society held during the past year six all-day sessions, the Town Hall in Campbell being crowded at every meeting. The ladies and young people take great interest. The officers elected for the present year are:

W. J. Dawson, president.

A. G. Moss, secretary.

W. A. Tripp, treasurer.

Executive Committee—W. L. Osborne, John Dawson, E. C. Dixon, Mrs. W. A. Tripp and Mrs. W. J. Showers.

The membership is about fifty.

La Crosse, Wis.

A. G. MOSS,
Secretary.

THE ANNUAL REPORT OF GRAND CHUTE HORTICULTURAL SOCIETY, APPLETON, WIS.

Interest in horticulture is certainly not on the wane in this vicinity, notwithstanding the many discouragements that have been experienced. Our quarterly meetings are largely attended and the annual meeting held on January 2, 1896, called together a large company.

The snow storm of May 13th, followed by the killing frosts of the 14th and 16th of the same month, caused a period of gloom which will long be remembered. Of course, in common with most localities of the state, and, indeed, with the northwest, immense damage was done to the horticultural industries in this section. The home grown fruit of nearly every kind was very meager during the season, but "Hope on, hope ever," accompanied by corresponding action, is our motto.

We were entertained and instructed by the remarks of our state secretary, Mr. A. J. Philips, who was happily with us at our annual strawberry festival held on the 2nd of July last.

He dwelt largely upon the culture and care of apple orchards and spoke very feelingly to the young people, urging them to prepare by self-improvement to be able to take the place of the aged horticulturists who are rapidly passing away.

While partial failure is written so eligibly upon so many products of the horticulturists, there are notable exceptions. Onions and cabbages produced well and the prices ruled comparatively low. Mr. G. C. Finkle, of Grand Chute, claims to have raised about fifteen tons of cabbage on a little less than an acre of land, and he sold \$240 worth of onions from one acre. In another department we were most happily surprised. At one time the grape yield was thought to be a thing of naught, but at our October meeting at the city residence of Mr. J. P. Buck, of Appleton, the exhibit of this fruit was very fine. There were about fifteen varieties, all of which were tempting to look upon. The Brighton was held most in favor upon test.

Delegates to both state societies are sent and good reports read before our society.

At our last meeting held at Mr. J. Cough's the election of offi-

cers resulted in the choice of C. A. Abbott, president; M. B. Johnston, vice president; J. P. Buck, treasurer; Mrs. C. E. Bushnell, secretary.

MRS. C. E. BUSHNELL,
Secretary.

REPORT OF RIPON HORTICULTURAL SOCIETY.

The annual meeting of this society was held January 15, 1896. The society now has a membership of 48. Nearly all horticulturists of this place are growers of small fruits. Our Fruit Growers' Association last season handled eleven thousand dollars worth of berries despite the drouth. People are planting more apples of late years. Duchess of Oldenburg, McMahan and Longfield are the favorites.

Following is a list of officers for 1896:

President—W. T. Innis.

Vice President—B. F. Conant.

Treasurer—E. Woodruff.

Secretary—A. S. Crooker.

Charles Hamilton was selected to represent our society at the annual meeting of the State Horticultural Society.

A. S. CROOKER,
Secretary.

REPORT OF WAUPACA COUNTY HORTICULTURAL SOCIETY.

The Waupaca County Horticultural Society, at its annual meeting January 31st, 1896, elected the following officers:

President—Hon. E. W. Brown.

Vice President—R. F. Taggart.

Secretary—F. A. Harden.

Treasurer—A. Smith.

Executive Committee—J. Jenney, A. V. Balch and Wm. Springer.

F. A. Harden was elected delegate to State Horticultural Society.

We are to have a meeting some time in February at which a program will be rendered, consisting of music, recitations, and papers, each paper to be followed by a discussion. We shall try and have several of these meetings during the year, and hope to receive much benefit from them.

FRED A. HARDEN,
Secretary.

Weyauwega, Wis.

FREMONT HORTICULTURAL SOCIETY.

Fremont, February 11, 1896.

The society met at the house of Paul Scheisser for the election of officers and its annual picnic. The following officers were elected for the coming year:

President—C. F. Eaton.

Vice President—Paul Scheisser.

Secretary—J. Wakefield.

Treasurer—Jacob Steiger.

Executive Committee—A. Randle, Dr. Stanton, John Ratsburg.

Voted to hold a summer meeting during the month of June, the time and place to be fixed by the executive committee.

J. WAKEFIELD,
Secretary.

REPORT OF WOOD COUNTY HORTICULTURAL SOCIETY.

This society was formed in November, 1892, has its regular annual meeting the last Saturday in January each year, and holds regular monthly meetings on the last Saturday of each month except during the busy seasons of harvest.

The number of members in good standing is 32. During the summer of 1894 and 1895 the society conducted a series of potato test experiments. The year 1894 was extremely dry and the test was made on a rich but rather high, quite sandy, tract. In 1895 the varieties of potatoes on which the 1894 test had been made were distributed to the members of the society, and they tested them on different soils with a con-

siderable range of variety of soils and location. Of the 68 varieties tested only six proved superior to our old standard sorts that grew beside them. Notes were taken at different times through the growing and harvesting season upon the growth and appearance of tops, the amount of disease and the weight of crops and its showing of scab, etc. The six varieties making the best showing in order of their productiveness were Sir William, Beauty of Beauties, American Wonder, Suffolk Beauty, New Queen and Polaris. Others that gave good showings were Maggie Murphy, Green Mountain, Burpee's Superior and Burpee's Extra Early.

At our regular monthly meetings we arrange to have papers prepared and read upon horticultural subjects of interest, and usually have these papers published in our local newspapers. Below I give a list of the few of these papers to show the scope of our work:

Diseases and insects injurious to potatoes.

The new onion culture—two papers.

How to raise turkeys.

What to spray and how to spray them.

Ornamental trees.

Manures, how to prepare and how to use them.

How to make muck soils productive farming lands.

Many others have been read, but the above shows the scope and variety of our work.

Shortly after we organized we began to collect a library. We now have a library of about sixty bound volumes and between six hundred and seven hundred bulletins and reports in pamphlet form. All this has cost us only the postage spent in writing for them. Most of this library is now indexed or catalogued in such a way that it is available for use at all times; scarcely a subject coming up for discussion but that a reference to the library catalogue will show something in the library bearing upon the question. Very often a few minutes' investigation in this library saves a great many dollars in the way of loss of or destroyed crops.

The present officers of this society are:

President—A. S. Robinson, Centralia.

Vice President—Peter Brown, Centralia.

Secretary—Geo. T. Rowland, Grand Rapids.

Treasurer—Mrs. K. Miller, Grand Rapids.

Librarian—B. M. Vaughn, Grand Rapids.

Respectfully,

B. M. VAUGHN,

Secretary Pro Tem.

REPORT OF JANESVILLE HORTICULTURAL SOCIETY.

Dec. 14, 1895.

Meetings have been held with about the same attendance as in former years, the interest neither increasing or decreasing. A public meeting was held in March at the All Souls Church, Janesville, with a large attendance. President Geo. J. Kellogg presided, and the evening was pleasantly passed listening to A. J. Philips, of West Salem, who spoke on "How Can We Increase Our Horticultural Membership?" Mr. Kellogg followed with a few remarks on the same subject. Mrs. E. W. Fisher read a very interesting paper on "What Can the Boys Do in Horticulture?" Other numbers on the program were, "Flowers and How to Grow Them," by Mrs. John Haviland; "Potatoes," L. L. Olds, of Clinton; "Our Roses," Geo. J. Kellogg, Janesville; "Culture of Grapes," J. S. McGowan, Janesville; "Seedling Strawberries," Frank S. Loudon, Janesville. This with good vocal and instrumental music made this one of the best meetings ever held by our society. The officers for 1895 and 1896 are Geo. J. Kellogg, president; J. B. Whiting, treasurer, and E. B. Heimstreet, secretary. Geo. G. Kellogg was appointed a delegate to attend the meeting of the State Society.

E. B. HEIMSTREET,

Secretary.

ORCHARDS IN HARD PLACES.

Geo. J. Kellogg, Janesville.

Mr. President, Ladies and Gentlemen: In recommending the best plan most likely to succeed on low situations and poor orchard soil, I would go back to the foundation and plant four

seeds of the most hardy apple or crab known, such as Duchess and Hibernial or Virginia crab, plant these in a well prepared spot where the future orchard tree is to stand, protect by a bit of fence board on the southwest side, and so staked and cultivated that a good growth may be secured; the first fall remove all but two of the most vigorous seedlings, bank up for winter and if the size is sufficient to carry a cion, the following spring graft two inches below the crown with Duchess, Hibernial, Charlamoff and Virginia crab for those kinds less hardy. If the seedlings are too small at one year then continue the growth another season and graft at two years.

The advantage of grafting the seedling without transplanting is to get the benefit of the whole root and in no other way can the full benefit be obtained; grafting two inches below ground will insure the rooting of the cion; using Virginia crab as a stock upon which at two to three feet to graft, or bud in the limbs, varieties which are less hardy. Such varieties as Duchess, Hibernial, Glass Green and a few others may be grafted at the ground. The grafts should be shaded by a bit of board till large enough to be protected by the lath shield. Graft two seedlings, then remove one later on.

Second plan. Set two root grafts of short roots and long cions where the future orchard tree is to stand, protect the same as before, take up the weakest if both grafts grow, always prune the growing tree when the bud can be removed with the thumb, have one central trunk and side branches at right angles six to twelve inches apart.

Stimulate the tree to early growth but do not cultivate after July, or cause more than a moderate growth of wood each year; after trees come to bearing do not let them overbear, or starve to death, a tree should be fed in proportion to its fruitage. Most old orchards are starved to death. The best fertilizer for fruit is hard wood ashes sowed broadcast at the rate of 100 bushels per acre annually.

I would recommend for hard places only Duchess, Hibernial, Glass Green, Charlamoff, McMahan, Wealthy, Repka Malenka, Longfield and Patton's Greening of apples. and all but the first four top worked on Virginia crab. Whitney, Virginia, Martha and Sweet Russet for crabs.

Apple seed must be planted fresh from the apple in the fall, or if dry, soaked till it is plump, then frozen, mixed with sand and planted in spring.

Third plan. Procure trees of these varieties from the nearest reliable nursery, but never from a traveling agent. Trees not more than four or five feet, properly shape the tops at planting, plant well, thoroughly mulch, and protect them and there from sunscald and borers by rye straw, marsh hay, brown building paper, or what is better, eight lath woven wire copper wire surrounding the tree from the ground to the branches; this will also keep off the mice, rabbits and the whiffletree. Only cause a moderate growth and give such protection as good common sense would dictate, and in time of drouth barrels of water should be given heavy bearing trees in July.

DISCUSSION.

J. C. Plumb—I do not know as I am at all surprised that my friend Kellogg starts off on a new venture, but I do not know what he means by recommending people to do things that are impractical. When he recommends to a farmer to plant a seed, I do not know what he means. The best thing for a farmer to plant is a root graft; who knows when he plants a seed what that seed will be? It may be a crab, too tender for any one in Wisconsin to grow. Plant a root graft in the garden, or in the nursery, wherever you want it, and the third year when that tree is ready to transplant if you dig down you will not find your old root, it has been absorbed. Farmers should buy three-year-old trees. Give the average farmer a hardy root-grafted tree and let him top work it as a farmer. The quicker the farmers get into that system the better it will be for them, and then you will also have trees for hard places. We, in southern Wisconsin, do not know anything about hard places, but the people in Trempealeau valley, Chippewa valley and Black River Falls valley are really in hard places. The hills are the easy places. Our secretary used to bring year after year specimens of Herefordshire Pearmain. We know that is a tender variety, but yet he used to bring them and place them on our tables for exhibition. It may be those

trees are all gone now. It is not latitude but it is locality that makes the difference.

Geo. J. Kellogg—I recommend planting the seed because it is “first principles.” You plant the seed and you will have the hardy root for all purposes.

B. S. Hoxie—I think Mr. Plumb misunderstood Mr. Kellogg. I think Mr. Kellogg recommends planting the seeds of the Duchess and seeds from hardy trees. You will remember that Mr. Pfeffer recommended planting the seed where the tree was to stand. I know of farmers that have paid seventy-five cents for trees from tree peddlers, and I do not think the farmers object to the price if they know they are getting something that will stand. Some people come here and advocate things that are not practical. Some come here and advocate setting trees sixteen feet apart for a means of protection; now we know that is not practical.

Mr. Perry—I want to take the part of the tree agent. The farmers want the Fameuse, the Duchess and those varieties, and the tree agent is not to blame that the farmers order those trees. We told our agents not to take orders for the Fameuse, but the farmers ordered them and one of our agents took orders for 200 trees and sent to New York for them. So it seems to me that the thing to do is to educate the farmers to think they do not want those trees.

M. E. Hinkley—It is advised in Iowa, in our meetings, to plant something to shade the trees. We are advised to plant currant bushes. I have not gone far enough to say how far it is practical. A gentleman told me if we would plant seeds and never remove the trees but collar graft them, we could raise tender varieties.

Secretary—I tried protecting with evergreens and I found that instead of a protection they were an injury. I had to cut the evergreens out to save the apples. The lath protection beats them all to pieces.

Chas. G. Patton—I have in mind a gentleman in Minnesota, west of Minneapolis, who has planted the seed of the Leiby and he tells me the seedlings are of a very inferior character. We need to test the varieties before we recommend a trial of which we know but very little of. I have been trying the

Shields crab and it has shown a superiority over the Virginia. The Shields is fully as hardy as the Virginia and it takes varieties quite freely so far as I have noticed. I think it should have a good deal of consideration in the direction of top working.

B. S. Hoxie—Would they produce a hardy seedling?

Chas. G. Patton—Yes, they would produce a uniformly hardy number of seedlings. Whitney's No. 20 has been experimented with enough so we know that it gives us uniformly hardy varieties, and I would use Whitney's No. 20 in preference to the seeds of the Duchess. I would suggest a crab apple for hard places, one originating in your own state, the Sweet Russet.

J. C. Plumb—I wish to correct my friend about the Sweet Russet originating in Wisconsin. I brought the seed from Vermont.

Chas. G. Patton—I should take the common method of using the short root and the long cion. I regard it as impractical for the farmer to plant out the seed where he expects the tree to stand. The Virginia crab in St. Paul and Minneapolis is regarded as very profitable.

G. A. Freeman—What manner of protection would you consider the best for apple trees that stand on a southeast slope? I would like to ask Mr. Dartt if it would be any injury to the trees to nail boards right on the trees, and would you protect any more than two sides, the east and the west?

E. H. S. Dartt—No, it will not injure your trees. Nail the boards right on, if the trees are hardy it will not hurt them and if they are tender they ought to be killed anyway.

Chas. Hirschinger—I have gathered, from different sources, fifty different seedlings from people that thought they were the very best, and of my experience with all that I have tried, that were originated in Wisconsin, there are not hardly a half dozen that are profitable.

You want a long cion and a short root. Have your tree hardy all the way through. A gentleman said here that we ought to pray to the Lord to make our climate easy, but I think we better pray to the Lord to send us something hardy.

J. C. Plumb—I want to convince my friend Hoxie that it

is practical to plant trees closely enough so they can protect each other from the mid-winter sun. The lowest mid-winter sun is about 45 degrees. The branches, themselves, afford a partial shade, and the tree that is on the south of it shades the rest of it. The ultimate success of "orchards in hard places" lies in just that principle of shading the trees. I think it is about thick enough to have the trees set forty-five feet apart east and west, and thickly the other way, sixteen feet apart. Now you may say it don't amount to much, but if you can protect trees and give them immunity from the sun you will succeed with them.

F. L. Barney—I suppose you shade to protect from sun scald, and it seems to me that two sticks set up there sixteen feet apart would not shade each other very much.

N. N. Palmer—I have lost all of my enthusiasm about growing fruit in Wisconsin, but I do not want the bulk of this evidence to go into our report, where the farmers will read it, about one tree shading another. When you shade with lath it is all right. You will kill more trees by shading than you will help, and I hope the farmers will look into this matter thoroughly before they try any such experiments.

Mrs. Treleven—My husband set 120 trees and planted corn between the trees; they all lived except one, and that the borers got in and killed. We think the protection that the corn afforded the trees was beneficial to them.

J. D. Searles—I am glad the sisters will speak in the meeting. I believe that shading the trees even by blackberries between them will be an advantage; the trees shade the blackberries and the blackberries shade the trees; it's a mutual advantage and I hope it will be tried by others.

Chas. Hirschinger—More than twenty years ago I did the same thing, and I soon found that the blackberries, and the red raspberries in particular, used up the tree food and the apples were just twice as small as they would have been if the trees could have had all of the food in the ground to perfect the fruit. The point I want to make is, you will use up all the plant food to the expense of the trees.

N. N. Palmer—With regard to that corn crop—any crop that tends to make you cultivate the soil will surely benefit your

trees. I would plant trees thirty feet apart. When I started in I started as a novice. I put out my trees twenty feet apart each way; they did well at first but they soon became too crowded. I would plant potatoes, or something that must be cultivated, but do not plant them too near the trees. I have a peach orchard in Florida. The people there would tell you not to put in any other crop, but cultivate your orchard.

E. H. S. Dartt—I want to talk a little about seedlings and a little about protection. You may plant your seeds and you will get some that are hardy and some that are not hardy. Now if you plant Tetofsky you will get a great many very hardy seedlings, a great many more than if you plant the Duchess. I have wondered if the Tetofsky was not a seedling of the crab. I have at my Station twenty-five seedlings of the seedlings of the Tetofsky.

I think the orchard needs protection and the ground needs protection to keep the sun from drying it out. Shading on the south side of the tree, I believe, has a tendency to prevent the sun scald. If you shade on the south side you give your trees the best possible conditions. If you do not do it there will be a feeble growth on that side and the tree will soon die out on that side, and that is why there will be a larger growth on the north side. Nurserymen will tell you that they always cut out more limbs on the north side than on the south side of their trees. Anything that robs the tree on that side hurts the tree, and so if you have corn in the orchard, it shades the tree and is a benefit to it.

J. D. Searles—I want to say to Brother Hirschinger that there is a great deal of force in what he says about blackberries and other berries taking the plant food from the soil. I believe it does, but can we not put it back again?

J. S. Stickney—Any tree, no matter how hardy, no matter how healthy, the year it is transplanted it is weakened and it is more liable to burn or sunscald. The best thing I know of to protect that tree is rye straw put on the tree just thick enough to protect it.

N. E. France—I have tried blackberries in an orchard. I have now put out a new orchard, and I have taken out the

blackberries. I agree with Mr. Hirschinger, it does take the plant food from the soil.

Geo. Jeffrey—I am sorry that Brother Palmer is losing his enthusiasm. I think we ought to keep ours until young men come to take our places. I have been working with seedlings for about twenty years. I have exhibited, and have received premiums on, some of them that will keep until the twentieth of June. I have some seedlings that I know are good; they have just stood and grown; they have never been protected and they have never had anything the matter with them. This society has never taken any notice of them nor recognized them. I suppose it is because I am not a regular horticulturist.

Mrs. Treleven—I will agree with these gentlemen that putting crops on orchards does take away the richness of the soil, but on our black soil at Omro it is better to do so.

F. H. Chappell—I think we should give our trees plenty of moisture and if we do that we shall never have them burn. Cultivation is good but if you will use sand it is better than all the rest, and they will never burn.

Secretary—I was appointed to visit Mr. Freeborn's orchard and report it to this society. I wrote to Mr. Hatch about it, and he replied, "Wait until another year." I went there and saw the orchard, and I am confident there is some valuable fruit there but I must ask further time. I understood that there was a plat of the ground at Mr. Freeborn's house in Richland Center but I did not go there.

VARIETIES AND CULTIVATION OF CHRYSANTHEMUMS.

B. W. Strong, Baraboo.

The subject given me by the management is, I think, almost too comprehensive a one; either part of it would furnish material enough for a paper such length as to tire any but a patient and interested listener.

The chrysanthemum is just now so very popular that each grower is trying his best to out-do his neighbor in producing something better, larger, or more unique than is now upon

the market. The result is that what seems new and wonderful about the flower, is today an old story, and quite common tomorrow.

Like a number of our floral favorites the chrysanthemum is divided into two quite distinct families, the annuals and the perennials. It is the large, double perennial varieties that are attracting so much attention at present.

The perennials were originally of two sorts, the Japanese and the Chinese. The former had long twisted petals and the flowers presented a loose, even ragged appearance. The Chinese varieties were distinguished by the shorter, straight petals and symmetrical flowers. The two varieties are now so much hybridized and crossed that, with the exception of a few kinds, that the distinguishing features are almost lost. In each of these two varieties there are many kinds and many colors.

Each year brings on scores of new seedlings, many of which excel, in some particular point, anything previously known. I shall not attempt to start an argument by naming any few kinds and claiming them the best for general cultivation, but an amateur can well afford to try almost any of the kinds sent out by our plant dealers and greenhouse men.

Colors run from white through all shades of yellow to deepest orange and through all shades of pink to darkest red. Magentas and lavenders are well represented, as are also all shades of bronze. Some have a yellow or pink centre and reverse sides of petals bronze, or red.

In fragrance the poor 'mum is sadly lacking. It has a pungent bitter odor, to many people disagreeable. It smells not unlike our common goldenrod, but fashion has given it such a boost that its failings are readily overlooked and its good qualities only considered.

In the greenhouse specimen and exhibition flowers are grown of a very large size and under altogether different treatment from that required by pot plants for house decorations. The growing of these large exhibition flowers is an art by itself.

Soft wood cuttings should be rooted by June 15th, and as soon as ready planted from a two inch pot into four inches of prepared soil upon the greenhouse bench. This soil should be

composed of two-thirds decayed sod and one-third well composted manure. A liberal sprinkling of bone dust at this time is very beneficial. Plenty of light and air are at all times necessary and the plants must not get a check of any kind during their entire growth if the largest, finest blooms are looked for. Allowing the roots to become dry at any time will surely stunt the flowers both as to size and color.

The plants should be put in rows one foot apart but they may stand as near as six or eight inches in the row. They may be supported with stakes, but if many are planted, it is easier and much better to support them with wires running horizontally above and a little to one side of the rows.

The shorter varieties require but two wires, the taller growing varieties three or four. Care should be taken to keep the stems straight by tying up soon enough; a crooked stem spoils to a great degree the beauty, and therefore the value of the flower.

The taller growing kinds are from three and one-half to five and one-half feet in height and care should be used to plant them where there is plenty of headroom. A flower or bud growing against the glass will not be perfect and occasionally a grower is made expensively aware that either his house is too low or his 'mums too high.

If a number of plants of several different kinds are grown on the same bench, in an east and west house the taller kinds should occupy the north edge of the bench, grading the plants down to the shortest kinds on the south edge. In this manner none will be shaded. In a north and south house the taller kinds should be placed in the middle of the bench and the shortest on each edge. All lateral branches should be removed as soon as they appear and when buds are found, all but one of them should be removed. Leave the crown bud if perfect, if imperfect take the strongest side bud and cut off the stem immediately above it. From this time until the buds show color, liquid manure should be used freely, but it should not be too strong nor should it be used at all when the ground is dry. Instead of using liquid manure, one can give the plants a mulching of two or three inches of good manure. Watering through this will have the same effect.

Instead of planting in the open bench, the two-inch plants may be planted into four pots and treated the same, otherwise the pots should be half plunged in the earth and when growing nicely should be lifted carefully and a little bone meal placed directly under them. Replace the pots and the roots will soon go out through the drainage hole in search of the food. Under this treatment the plants will produce flowers much larger than seems consistent with the size of pots in which they grew, much to the wonder of people who are ignorant of the cause. Of course in exhibiting these plants, protruding roots may be removed. Now this is not a trick of the trade for no one is cheated thereby, it is simply a little way we have. What few trade tricks the professional and mercantile men left were so rapidly appropriated by our agricultural friends that the poor horticulturist was left to fight it out on a strictly honest basis.

If pot plants are wanted for indoors, the cuttings should be rooted in April or May and planted in the open ground about June first. Pinch back occasionally being careful to make the plants as symmetrical as possible. Pinch back for the last time about August 1st to 15th and pot in six inch or seven inch pots. Plunge pots to the rim in the garden and water thoroughly. If plants wilt any, spray the foliage occasionally for a few days and partially shade. Should August and September be dry months water the plants often, they will show the attention when flowering time comes. Of course they should be taken inside before hard frosts come and given the coolest, airiest place in the greenhouse, or the lightest window in the dwelling house. When the buds appear, pick off all but three or four of the strongest ones from each spray. The smaller buds would amount to little or nothing anyway and the operation will greatly improve the flowers that are left.

In the greenhouses the chrysanthemum is troubled with a number of diseases, leaf-spot being the most common. Many remedies are recommended for this, all more or less beneficial. The well known one of blue vitrol and ammonia is as reliable as any. Cloudy damp weather will tend to promote the disease, the opposite conditions to check it. Plants grown out of doors are seldom seriously troubled with this. So soon as

pot plants are brought indoors, the green-fly or rose plant louse generally takes possession. He does not wait to be invited or even imported, he seems much like the evil one himself, forever with us. Tobacco in various forms is very useful in ridding the plants of him for a time, but he has another peculiarity in common with his Satanic Majesty—he is persevering. A week or ten days will see him back again with all his friends, when the operation must be repeated. It is much easier to keep plants clear of this pest by smoking or dusting with tobacco occasionally than to rid plants of him once possession is taken.

Single specimen blooms of some of the larger varieties of chrysanthemums have been grown to an enormous size. Many flowers with a diameter of from ten to fourteen inches are shown each fall at the exhibitions. In Japan it is said they attain the almost incredible size of fourteen inches, the flowers being supported on a wire netting. Like many of our flowering plants the chrysanthemum does not come true from seed and amateurs would rarely find it profitable to try to grow new varieties in this manner. That part of it is better left with some of the older heads who make a business of it. Not more than one plant in one hundred is liable to have any especial merit over existing varieties, notwithstanding the oft-repeated assertion of seedsmen that fully eighty per cent. will be double.

The chrysanthemum has one habit which will make it stand forever in second place to roses and carnations. This habit is the time of its blooming, it certainly has very marked ideas of its own on the subject. No amount of coaxing or cultivation has been able to make it produce its showy flowers except between the first of September and Christmas. Not that this is not a good time, but we would like to have it bloom at all seasons, and this it refuses to do. However, the chrysanthemum has not many bad faults. It has more than paid for all attention given to it and has proven more than any other one flower, except the rose, what can be done by thorough cultivation.

Miss Daisy Converse was invited to give another recitation and gave, "Thanksgiving Elopement."

B. S. Hoxie moved that so much of the president's address as relates to Trial Stations be adopted. Motion prevailed.

On motion the convention proceeded to the election of a committee on Trial Orchard, which resulted as follows:

Chas. Hirschinger, Baraboo, for one year.

J. D. Searles, Sparta, for two years.

Prof. E. S. Goff, Madison, for three years.

Adjourned.

Thursday afternoon.

J. Periam, Illinois—In Illinois we used to have the bird question up every year, and every man who used to raise berries condemned the robin as an enemy. They do not do so now because the robin is gone. One thing I wish to take up because it is not generally understood is that the birds feed their young on insects and their larvae. We see the immense influence the preservation of birds has, not alone on the horticulturist but on the farmer as well. I have always been opposed to the preservation of game as simply game. I used to cross the plains where the buffalo roamed at will, now they are gone, yet the country has lost nothing from their disappearance because it is filled with that which is of more value to man, the stock.

We have an organization, in Illinois, of ladies, whose object is for the preservation of birds. If we are ever going to have the singing birds as we used to we must take pains to get them again. The singing birds are not destructive to fruit, they are friends to the farmer. I have on my little farm of eighty feet front, several families of humming birds. We find where birds are unmolested they are not afraid of man. Migrating birds will go year after year to the same place again. The average flight of migrating birds is 150 miles, the spring flight is shorter because insects are more plenty in the spring. In our great parks in Chicago where the birds are protected we have a greater per cent. of singing birds than are found elsewhere except in the forests. Fifty years ago I always protected birds in the yard and in the orchard and the only fight I ever had was with a man who came with his gun to kill birds. You cannot find any game birds at all now, there is nothing but ducks and geese. Some people think the birds destroy the fruit but

if you ever find a bird taking his dessert of fruit you will find that it is the over ripe fruit.

The English sparrow is the most beneficent bird in the country today, they are scavengers. We were troubled with the gramous that kills grass in a circle. You will find the English sparrow eating the eggs of these gramous and if there are no eggs there will be no insect. The English sparrow does not eat grain to any extent; they eat the garbage, and so I say I do not know of any more beneficent bird to the farmer than the English sparrow.

Birds come every year to their old place of nesting. In the western part of northern Illinois, for some reason or other, the eggs of insects did not hatch, the birds coming there found no insects, they stayed a few days and then left. There were no birds in that vicinity that season. If you protect the birds they will come back year after year.

Q.—How can we best prevent the birds being killed for ornaments for ladies' hats?

A.—By making it unfashionable. There is no objection to their wearing feathers, but we do not think it is right for them to use the bodies of birds.

EXPERIENCES, LESSONS LEARNED AND FUTURE PROSPECTS FOR 1896 FOR SOUTHERN WISCONSIN.

Geo. J. Kellogg, Janesville.

The fall of '95 was dry, plants failed to get a vigorous root and form fruit spurs, and, in the case of strawberries, many kinds failed to form the fruit buds or crowns; many plants, vines and trees went into winter quarters dry and froze to death, root and branch. The bloom on small-fruit plants this spring was feeble and many kinds lacked pollen for their own use, and the hot weather during bloom added cause for many imperfect berries, and gave only one-third to one-half a crop. The spring jumped into summer, and we had no frosts after the 22d of April.

The excessive heat from the 11th to the 20th of April was very much out of season and nursery work had an unpre-

cedented rush; the rains have been plentiful and had the fruit plants and bushes been in good shape, we should have had an abundant crop of small-fruits. Old raspberry and blackberry plantations were entirely winter-killed, root and branch in many places where unprotected, although the thermometer did not get but 15 below zero all winter and peach buds were uninjured; protected plantations in some places suffered most.

The tree fruits are overloaded and one-half the fruit should be immediately picked off and fed to stock. It has been impossible to form correct conclusions in regard to varieties of strawberries for four years past; frosts and drouth and untoward circumstances have surrounded the berry plantations as never before. We have kept up our faith and courage on Van Deman and Rio for they gave us two nice pickings in '94 and '95, then we laid the failure to the frosts. Now was it the drouth of '95 that ruined them, while standard varieties beside them gave a fair crop? I think they will have to step down and out. Wood which has failed by frosts and drouth for three years, this year is one of the best for early pollen, for such as Warfield, Crescent and Haverland. With this year's experience I will give for best eight perfects of the old standard varieties Splendid, Wood, Lovett, Earle, Enhance, Jessie, Woolverton and No Name. Of the most promising of the newer perfect varieties, I think, Muskingum, Marshall, Aroma, and Brandywine are ahead. Of pistillates the best eight old standards are Warfield, Haverland, Crescent, Greenville, Babach, Eclipse, Princess and Eureka. Of newer kinds Bissel and Timbrell are the most promising. Marshall, Weston and Timbrell after three years' trial do not seem worthy except for amateurs who want to put in extra care and labor; and the Shuckless we class as a humbug of the first water; we did have some hopes of this as a novelty until this fruiting. It must be a success somewhere, like all other humbugs.

We shall retain on our list as more or less valuable, Belle, Cyclone, Crawford, Leader, Middlefield, Robinson, Smith, Saunders, Gandy and Tenn. Prolific. We shall still hold in our trial bed Anna Laura, Bouncer, Belt, Beverly, Clyde, Enormous, Edith, Earliest, Glen Mary, Lady Thompson, Epping,

Mary, Marshall, P. Chief, Shuster's Gem, Timbrell, Weston and a few others.

Of gooseberries we are at a loss to know the cause of the injury by the winter. Downing, planted one and two years, killed half back, and the bearing plantations have very little fruit. Industry, which we class as a humbug, killed badly. Chautauqua, Columbian, Champion, Pearl and Red Jacket did not kill so badly but are not loaded with fruit, Houghton seems most profitable this year.

Currants are but a partial crop. Red and White Dutch, White Grape, and North Star are better loaded than Victoria, La Versailliese or Holland; while Fay is chief of Humbugs, among standard currants.

Raspberries newly planted, grown late for the sake of propagating, Loudon and Columbian killed back badly, while Loudon on Mr. Loudon's grounds is heavily loaded and no injury except in a few places on very low ground.

Old plantations of Cuthbert, Turner and Marlboro were killed to the ground and all old black caps (ten kinds) went the same way. New plantings of Kansas were killed to the ground while Older is the only black cap that escaped injury, and is heavily loaded with fruit.

Blackberries uncovered suffered equally with raspberries. Erie, Taylor, Minnewaski, Snyder, Briton and Badger, these all killed except a few Snyder on the east of, and partly under, some apple trees. Badger and Briton that were put down are fairly loaded with fruit. Grapes are a full crop either protected or left out.

Lessons learned: To succeed in any line of horticulture, choose the best of soil, location and a good market; avoid low ground and frosty places, make the best selection of varieties, give the best of preparation, care and culture. Cultivate, cultivate, cultivate from early spring to fall, from dawn till dark, and never, no, never give it up.

DISCUSSION.

M. A. Thayer—That is Mr. Kellogg's report on his own grounds is it not?

Ans.—Yes, it is for the southern part of the state.

M. A. Thayer—His experience is very different from what it is on our own grounds at Sparta.

Geo. J. Kellogg—Bubach has skipped with us about three years; on low ground it did not produce the stools that had blossom buds.

Mr. Rich—How shall we manage to keep our courage up? This morning you stabbed the Wilson. A few years ago the nurserymen advertised the Fay currant; now they announce it a humbug. How are we going to stand it?

Geo. J. Kellogg—The Fay currant is a failure. We recommended it because we had faith in it. After experience with it we find it to be a failure. The character of the bush is sprawling on the ground; the brush being tender furnishes a good place for the borer. I attended the nurserymen's convention in Chicago last week, and I asked them if they could endorse the Fay currant, the Industry gooseberry or the Shuckless strawberry and not one of them answered my question. They are all humbugs, foisted upon us by the eastern growers.

M. A. Thayer—For the past two or three years it has been very trying to the blackberry growers, but we are getting very good growth now and expect a good crop this year.

Mr. Rich—I went to Omro a few days ago, and going through the woods I noticed the wild blackberries were pretty full, but in the plantations they were not looking very well. I have this year two very nice, thrifty, young cherry trees, Early Richmond; they blossomed full last year, and also this year they blossomed full for one day, the next morning they looked as if fire had been through them. I would like to ask the cause of it?

Mr. Floyd—If Mr. Rich will dig down to the root of the trees he will find the cause of it. The root was injured by last summer's drouth and the winter following without any snow. I think the summer's drouth had more to do about injuring the ripening of the wood than the winter's frosts, without the protection of snow, had to do with it.

M. A. Thayer—I wish to commend the excellent advice given by Mr. Kellogg at the close of his paper, to "keep up courage and do not give up fruit growing." Take any kind of farming that we have had for the past ten years and where is there anything that has given us better returns than small fruit grow-

ing has given us? There are a great many things we must learn; we must learn pruning and protecting. If I were out of business today, I do not know of anything I would sooner engage in than the growing of small fruits. There is no place in the United States that is better adapted to small fruit growing than Wisconsin. I think we ought to take courage. We never used to have frosts or drouths as we have lately.

W. H. Holmes—I had two trees standing where I threw gravel and sand out of the basement. They are just as nice and green as can be, while the others that did not have any of the sand and gravel around them are dead. Perhaps there is something in this that may be a valuable suggestion to us in time of drouth.

Geo. J. Kellogg—I think Mr. Rich's observations tell us of the workings of fire blight or twig blight. The blight gets in its most deadly work when the orchard is dense and low. When an orchard is on high ground and there is a good circulation there is much less danger of blight.

Mr. Floyd—Trees will leave out and will seem to be all right in the spring; they will blossom and set fruit, and then will not get any further, because all of the nutrition stored up in the roots of the trees was exhausted.

Prof. Goff—I do not think we can get at all of the causes why trees have died. A good many of our trees at Madison have died, and it could not have been attributable to the winter, because it was the mildest winter we have had for years. I think it was because the trees were starved last summer to that extent that they could not supply sufficient nourishment to the roots. The trees would blossom but, receiving no reinforcement from the roots, would die. We have dug out 150 trees. Some of them were original trees.

Mr. Gibson—Last fall was a season unlike any we have had for fifty years. Our trees froze up in drouth, and that will always kill the roots.

G. J. Kellogg—White oaks have killed out the past year in our school grounds, but the particular death among trees that is causing great mourning is the *Arbor Vitae*; in the city where they have died I can account for it because they are near other trees that have taken the nourishment from them; but

I find they have also died where they were not near any trees. I would like to know why it is so?

Prof. Goff—We had a warm week in March, after which the thermometer went down to zero, and I think that fact had something to do with the trees dying out.

Mr. Taggart—Would enriching the ground have had anything to do with saving the trees? If the ground had been richer would we have been able to save them?

Geo. J. Kellogg—If the trees had not been starved in the last twenty years, it would have made some difference. If the trees had been kept properly mulched and nourished all the time they would not have succumbed so easily to the drouth of last year.

Q.—When shall we mulch?

Prof. Goff—I was in Milwaukee and I saw a number of trees set out that were not mulched, and I hunted up the superintendent to ask him why the trees had not been mulched. His answer made me a little ashamed that I had been so stupid as not to think of it myself. He said the ground was cold in the spring and as soon as it was a little warmer he intended to mulch them. I know that mulch put on the ground when it is cool will help to keep it cool. There is such a thing as having the ground too wet, and if there is a prospect of too much rain I would remove the mulch for a time. To the question asked by the gentleman I would say, mulch after the ground becomes warm.

STRAWBERRIES.

E. J. Scofield, Hanover.

The strawberry is the most extensively cultivated of any of the small fruits, and well it may be. Who does not relish a dish of delicious strawberries? To be successfully cultivated and be profitable to the grower there are a few points that must be complied with in the start. I will endeavor, in this short paper, to give the outline of the business as carried on with us in southern Wisconsin.

We much prefer spring planting. The soil should be rich enough to grow a good crop of corn, say fifty bushels per acre

in a good season. Plow from five to seven inches deep (depending on the nature of the soil). Harrow it well, use a heavy clod crusher and the disc pulverizer. Repeat the operation until there are no clods left; have the soil fine and mellow to a good depth; I consider this very important to have the soil in fine condition before a plant is set, especially if the season is a dry one. In planting we mark the rows three and one half feet apart for all varieties, the distance in the row being governed by the variety. Such varieties as Crescent, Warfield, Wood, Michel and Splendid set two feet apart; set moderate growers closer, from fifteen to twenty inches apart.

The next most important thing is the plants, because with poor plants we will not make a success, no matter how favorable everything else may be. These should be taken from a young plantation that was set the previous spring. Do not dig your plants from the outer edge of the row, as these are the last efforts of the fall before, and are generally weaklings, but dig the row clean and sort the plants, setting only the strong vigorous, well rooted plants. For digging plants we have found nothing to equal a five-tined manure fork, using care not to injure the roots.

As no amount of care will make up for a plantation set with poor plants we prefer to have our plants dug two or three days before we intend to set, packed closely in damp moss, tops up, in boxes five or six inches deep and set away in a cool place. To prepare the plants for setting: before they are put in the moss they are trimmed of all dead leaves, and runners. If they have made much new growth, this is all cut off, except the two youngest leaves, and the roots are shortened, with a sharp knife, to three and one half inches in length. When we are ready to plant, the plants are taken out of the moss as wanted, the roots are dipped in a pail of water and sent to the field in one-half bushel baskets lined with damp moss. We have boys drop the plants for the men who do the planting. Boys are not allowed to drop the plants faster than they are set.

Another plan that we practice considerably of late is to take up what plants we will need for our own setting, before they have made very large growth, and heel them in until we can get time to plant, the plants are trimmed the same as when we

put them in moss. Ten or twelve men will dig, trim and heel in several thousand in a day. After they are all heeled in, they are given a good watering and left alone until we are ready to plant in the field, which is frequently the last of May or the first of June. Before removing them they are given a good watering (if the ground is dry), taken up with a fork, roots dipped in water and sent to the field as wanted. Plants treated in this way will have formed a mat of new, thread-like roots and will not wilt when transplanted to the field, providing these new, white roots are not allowed to get dry; if they become dry the plant is dead.

Next in order is cultivating and hoeing. We commence this in a week after setting and keep it up (the cultivating) until the twentieth of September or the first of October, and hoe four or five times in the fore part of the season. Do not hoe or cultivate deep. There is very little hand hoeing to do. By setting the plants in a straight row and using the Planet Junior Horse Hoe, with hoe reversed, we are enabled to run very closely to the plants, which greatly reduces the hand hoeing. Shortly after the plants are set blossoms will appear on many of them. These are carefully cut off. As soon as the plants have formed a row ten or twelve inches wide we cut the runners and keep them cut the remainder of the season; for cutting the runners we use a disc sulky cultivator and drive astride the row; this does a fine job, and as fast as a team will walk.

Covering or mulching we do just as soon after November first as possible, while the foliage is fresh and green. Almost any old litter will do for this, providing it is free from grass and weed seed. We use marsh hay, as it is the cheapest covering we can get and the freest from weed seed. We use about one and a half tons per acre and are very careful to put it on even and not in wads. As soon as growth starts in the spring we remove the hay from directly over the plants, leaving it all on the field between the rows until the crop is harvested. We only open up one half of our plantations thus early, leaving the other half covered as long as we dare. As soon as the plants begin to blanch the least trifle we open them up. Our object in not uncovering all at once is, we do not run quite so

much risk of getting all of our prospective crop frosted, and we think we can prolong the ripening season a little in an ordinary season.

In harvesting the crop we employ women, and girls over twelve years of age; they are paid one and a half cents per box. We use the Hallock wine measure quart. We have one overseer for each eight or ten pickers, whose business is to see that the work is properly done, take the full stands from the pickers and give them their checks and empty stands; he also takes full stands to the packing shed (the stand holds six boxes). The berries are carefully packed in sixteen quart crates and allowed to cool from two to four hours before shipping.

The next operation after berries are all picked, is getting the plantation ready for another crop the following season. We take a mowing machine and mow them as close to the ground as possible. Let them stand about a day for the old foliage to dry, then rake them clean of foliage and mulching; stack this up near the cow-yard for bedding. Hitch a team on a double shoveled plow and go twice in a row five or six inches deep. We next hitch the team on the harrow and harrow the field all over, once each way. Treat them the balance of the season the same as a new setting.

After harvesting the second crop, plow them under, having set a new plantation the previous spring. Set a new plantation every spring; by so doing you will have one plantation bearing its first, and another its second crop every year. Some seasons one year old plantations pay the best and some seasons two year old plantations pay the best. None of them paid expenses the season of 1895. Prospects for a bountiful crop were never brighter up to the twelfth of May. The early and warm spring brought on most all varieties very fast and they were ahead of an average season by at least ten days to two weeks, when the weather suddenly took another freak and on May 12th, 13th, 14th, we were visited with heavy frost, the most severe in many years; the freeze of the 14th capped the climax, as what bloom and buds escaped the 12th and 13th were all taken with this freeze. As late in the day as 8 o'clock on the morning of the 14th the ground was frozen hard enough to hold up a team and wagon. All bloom, buds, and even the

foliage froze solid and our air castles vanished, but the Wisconsin Badgers are not discouraged by any means. We are picking away all the same, if we did get frozen out in May and dried out the balance of the season. We must take the bitter with the sweet and look for the cloud with the silver lining.

DISCUSSION.

J. D. Searles—Why do you prefer waiting a few days instead of setting your plants right out after they are dug?

E. J. Scofield—I think they start better. When I receive plants I always put them in a cool place for a while. We heel in because we can take them up early, before the rush begins, the growth is checked; then when we are ready to set they are in good condition. I cover just as soon after the first of November as I can get to it. By the first of December it will have frozen and thawed a good many times.

C. E. Tobey—I believe a strawberry plant, covered after the ground freezes, will come through and be as strong and healthy as if it was covered the first of October.

E. J. Scofield—No, I do not think so. I have had experience in that way. One fall we commenced to cover early, one of the men got sick of it and said, "let us wait." We did so and finished covering later; in the spring those covered early came out the best.

B. F. Adams—I believe Mr. Scofield is correct. I used to practice covering after the ground was frozen hard enough to hold a horse, but after a few years I tried covering early and have practiced it for twenty-five years. I am confident it is the best method. I have had thirty-two successful crops.

M. E. Hinkley—Did you have any snow on your field when you covered?

A.—No, there was no snow this year.

C. E. Tobey—We never have covered until the ground was frozen so that we could drive on with a team. Two years ago we covered some in October and the rest in February; in the spring we could see no difference.

C. G. Patten—One or two dry falls I left my strawberries uncovered and by so doing I lost the entire crop, they were so much injured by repeated freezing and thawing.

Prof. Goff—I think the different soils make the difference in results. Mr. Tobey has a very light soil which does not have much moisture, Mr. Adams has a heavier soil. Mr. Scofield says he leaves his covering between the rows; that is the best place for it. We cover with marsh hay. I wish to cultivate the whole field thoroughly so I take the covering off the field and after cultivating I put it back between the rows.

Q.—I would like to ask Mr. Scofield if one and a half tons is sufficient for protection?

A.—That depends on the season. This year I do not think three tons would have been too much.

W. J. Moyle—I think the gentlemen are all of them more or less right. We have different conditions in different parts of the state. I would say, cover your strawberries as quick as you can do it in the fall.

J. H. Bonnell—There are those in my part of the state who do not believe in covering at all; they think the snow is covering enough.

J. C. Plumb—I want to relate a little bit of experience I have had, to see if I can get any help from any one here. I prepared three patches of strawberries last spring; one of them I manured with hen manure, one with stable manure and one had no manure, the land had corn on it the previous year. The pieces of land contained about the same; one was about one-fourth of an acre, the other about one-eighth of an acre. On those patches that we manured the plants were destroyed. I thought it was on account of the drouth, but on examination I found it was root louse. The one-fourth of an acre that had corn on it the year before was not given any preparation. I just stuck the plants in. The only time I had ever seen anything of the root louse, previous to finding them on my plants, was in the garden of a neighbor. So far I have failed to find any one who could give me any light on the subject.

Chas. Hirschinger—In regard to covering strawberries I think any time is good enough, if you can yet it done before Christmas.

Gentleman in Audience—I think the sense of this meeting will bear us out in the matter that the best time to cover is before it freezes in the fall.

WHAT SOME OF OUR EASTERN NEIGHBORS, AS WELL AS OURSELVES, ARE DOING IN RAISING FRUIT.

F. C. Edwards, Ft. Atkinson.

It was to my pleasure, and perhaps profit, that I visited some of our eastern states several weeks last August and September. It is not always safe to talk of your neighbors, but in this case I will venture.

In Canada, on the south border of Lake Ontario for a distance of thirty or forty miles this side of Niagara Falls, the whole industry is fruit raising, and in a successful manner. In New York, in a beautiful valley running south of Oneida Castle, formerly the home of such earnest men as Phil. Armour, Gov. Hoard and our worthy treasurer, fruit trees were loaded with all they could hold; some Greenings and Baldwins had twelve barrels of fruit hanging upon their branches. Pear trees of all sorts did equally as well.

Near Oneida Mr. Thompson showed me over his fields of the far famed Columbian raspberry of about twenty acres. The young planting was as large as at two years, and I never saw such canes as I saw in his old fields. When asked if he used any fertilizer he replied, "wood ashes, not to exceed one ton per acre." That was all he used on any part of his land. His last season's crop was about 30,000 quarts and sold at the net price of eight cents per quart in Oneida. If this fruit will do as well on Wisconsin soil as it does on his soil it will be very valuable to us, and will stand at the head of the raspberry family.

In Massachusetts, a state made of rocks and a little soil to fill up the crevices, fruit trees were in the fence corners, in the woods, in the pastures, and sometimes in orchards, generally producing a fairly good crop. The fruit trees were nearly all old ones and no apple trees are being planted. Apple, cherry, plum and pear trees stick to life with a wonderful tenacity, some of these trees are over one hundred years old, and bid fair to live one hundred years more.

Thirty miles from Boston we saw a peach orchard of four acres with 1,500 bushels of fruit on its branches, as fine a show as the heart could wish, and here, for the first time in our lives,

we ate good peaches. A peach grower in Massachusetts is apparently satisfied with two good crops in the life of an orchard. On an average he gets a crop once in three or four years. Small fruit is cultivated to a considerable extent, but the rocky formation of the soil makes cultivation difficult, and results, in prices and yield, are no more per acre than in our own state. It was my pleasure to meet the professor of horticulture at Northboro who has a farm near that place devoted to raising small fruits, peaches, pears, cherries, plums and other fruits. In looking over this farm we found they had as many discouragements as we have along the pathway of a fruit grower.

I was very much disappointed to find that there was very little fruit of any kind near Rochester, New York. On Ellwanger and Barry's grounds we saw specimens of all tree and plant life. Among these were one hundred varieties of pears in the ripening stage, and the little Seckels were at the head on the standard of excellence; Flenish Beauty and Bartlett ranked closely with them.

We found that nursery business and fruit growing are two separate branches of business. While looking at W. S. Little's nursery and orchard he said his apple orchard did not bear, he could not attend to it, it did not pay him and he was going to cut it down. One of the farmers twelve miles north of Rochester, where there are thousands of apple trees, said their orchards had not borne to any extent for five years and he was talking of cutting his down. What does this teach us? That apple growing in New York, even for commercial purposes, belongs to sections of country especially adapted to trees and fruit production.

Small fruit in New York is raised much more extensively than in Wisconsin. They get no more yield per acre and cultivation is not as easy as with us. They get from four to six cents per quart for their product.

Fruit growers of Wisconsin, let us understand our position as representing a branch of business that deservedly is receiving the attention of thousands of our people. We point with some degree of pride to our Zettle of Sturgeon Bay, our Hatch of Ithaca, Sauk and Waupaca counties growers and many

others. We see our Hatch and Goff, our worthy president and others banking money in the commercial orchard of the future. Our secretary, not only having a commercial orchard but carrying into this business cheap insurance by the lath protector.

The commercial orchards of Wisconsin, that are a success, have their favorable locations the same as our neighboring states. Small fruit culture in Wisconsin has as many natural advantages as any other state in our union. The virgin soil of Wisconsin was producing small fruit of all sorts before the tread of the white man was heard over its borders. It grew upon its hillsides, and in the valleys, in its wild and natural state. When we take our best tame sorts and place them under cultivation we have scarcely any limit to our success in this department.

Wisconsin is rapidly becoming a state of large cities. Who shall feed them? Who shall wait upon them? Will it be Wisconsin soil that is to furnish the fruit to her citizens instead of Michigan, Illinois and our neighboring states?

The fruit product of Wisconsin, even at the present time, is worth millions of dollars annually to her people. We point with some degree of pride to the small fruit growers at Racine, Milwaukee, Dousman, Oconomowoc, Ripon, Sparta, Baraboo, Hanover, Janesville, Ft. Atkinson, and a hundred other towns where growers are raising a car load, more or less per day in the fruiting season. The rays of the sun stream down upon us with as kindly glances as upon any of our neighbors, nature has provided us with a more fertile soil and all it needs is good brain and brawn to place the work of the Wisconsin horticulturist second to no other branch of business that engages the attention of our people.

DISCUSSION.

Prof. Goff—I feel like emphasizing some of the statements made in this paper, especially some of the comparisons made on fruit growing in this state compared with New York. It is just as Mr. Edwards has said, Wisconsin is a natural place for growing small fruits. They may go ahead of us in apple growing in New York but they can not in small fruits.

J. D. Searles—I supposed they were doing better in the old Empire state than we are doing here in Wisconsin. The British provinces have sent down word they would like some of our fruit. I do not think you will ever see the day when four and five cents will be the prevailing price for fruit in Wisconsin.

Secretary—I want to say a few words in commendation of Mr. Edwards' paper in reference to what he said about our State Horticultural society. I do not know but we shall have to praise ourselves. Maybe it's like the old man when they told him self praise did not do very well; he replied, "yes, but we can have it when we want it."

When we take into consideration the fact that the future of our society depends upon the rising generation we will make greater efforts to interest them in the study of horticulture.

When we take into consideration the fact that the government sent a man to Wisconsin to investigate certain charges made about child labor in Wisconsin and that man did the work that was assigned to him and stated over his own signature that they were working the lives out of those children, they were working children in places where our stockmen would not keep their horses, and when we remember that our society is interesting over 4,000 children in becoming useful citizens, it seems to me that we ought to increase our appropriation for this work so that we can reach 10,000 instead of 4,000. When we see what we can do, and have done, we ought to feel a little encouraged.

REPORT OF TRIAL STATION AT WEYAUWEGA, WIS., 1895.

F. A. Hardin.

Take the trees on a whole they are looking nicely, but as the past season was very dry, some trees made but little growth, while others made a good growth.

In the spring of 1890 I set one Idaho pear. The whole tree was killed the past season by blight. In 1891 I set two Bessi-

menaki pears. They also were killed by blight. But there were two Wokarska pears set in 1891 which have made a good growth and have never blighted.

We have lost the following trees after one year setting:

Two Malinda; 1 No. 257 Russian; 1 No. 4 Avel; 2 President Smith, killed by rabbits after they had leaved out; two Rockford plums, killed by borers; one Wisconsin Spy, killed by blight.

Scott's Winter and Yellow Transparent blighted very badly, and a larger number of others showed some blight. About 25 per cent. of the trees blossomed last spring, but owing to the heavy frosts the most of the blossoms were killed; some were not, but there were very few perfect apples and nearly all showed frost marks and nearly dropped before they matured. There was on an average of about eight to ten apples to a tree; a few trees had twenty to twenty-five.

The following is a list that fruited:

Baraboo, Hoadley, Longfield, McMahan, Berlin, No. 44 Vor, Duchess No. 361, Duchess No. 2, Duchess No. 6, N. W. Greening, Okebena, Gideon, Raspberry, Glass Green, Wealthy, Windsor Chief, Yellow Transparent and Seedling, from Wolf River.

REPORT OF CONDITION OF TREES PLANTED ON EXPERIMENTAL STATION AT SPARTA.

By C. E. Tobey.

About 160 trees have been planted on this station and most of them have been planted five and six years.

The soil is quite sandy—a loam—and ground has a decided slope to the north.

The following apple trees are alive and in apparently healthy condition: Duchess No. 2 and No. 3, Baraboo, N. W. Greening, Long Arcade, Daisy, Simbrisk, Judson, Striped Anis, Raspberry Apple, Okabena, Hoadley, 12 M., 22 M., Delaware, Red Winter, Snow.

The following apple trees are in good condition apparently

at top, laterals growing nicely, but all show an unhealthy condition of the trunk below and sometimes in crotch, being black: 35 M., Antinovka, Bell Pippin, Duchess, Simbrisk No. 1, Scott's Winter, McMahan, Walworth Pippin, No. 46, Barsdorf, Hybrid Seedling, Peerless Maple, No. 46 and Wisconsin Spy.

The Bessarabian and Skianka cherries are in nice healthy condition.

All other trees are dead.

SUMMER MEETING.

Minutes of the summer meeting of the Wisconsin State Horticultural Society held June 16 and 17, 1896, as reported by Miss Myrtle Benedict, for which she was awarded first premium.

Early in the morning, and even the evening before, of June 16, members of the Waupaca Horticultural Society were busy arranging their exhibits of fruit, vegetables, house plants, flowers and ferns. The reception room and the library of the Dane's Home were used for the exhibits.

At nine a. m. the meeting was called to order, after which about two hours were spent in meeting friends and making acquaintances.

The meeting was again called to order for a short time at eleven a. m. Explanations as to arrangement of exhibits were made, and committees appointed to make awards. A general discussion followed on the merits of the strawberries. Michel's Early and the Belmont were discarded from the future premium list. The merits of the Wilson were also well discussed, but it was finally retained on the list.

Rev. Jolliffe opened the afternoon exercises with prayer, and was followed by an address of welcome by E. E. Browne, of Waupaca. Prof. F. E. Doty, principal of the Waupaca high school, next on the program, read a paper, "The Value of Horticulture to Young People."

A. J. Philips, secretary of the State Horticultural Society,

West Salem, responded to the address of welcome with a few well chosen remarks.

About half an hour was then devoted to discussions on the benefits derived from the local societies, ways in which memberships might be increased, and the publication of a new monthly. This was followed by a paper, "How Best to Improve Our State Society," by Prof. E. S. Goff, of Madison, in which he set forth some of the influences impeding to the progress of the society. He said, (1) that one of the first duties of the society should be to make it more interesting by raising the standard of the papers read, by paying the expenses of delegates and specialists, and by having a permanent committee on program. (2) That all public transactions should be published carefully. (3) That the society would be improved by publishing a monthly journal. (4) That the society was robbing itself by fostering local societies.

This was followed by a paper on "Experiences, Lessons Learned and Future Prospects for 1896 for Southern Wisconsin," by George J. Kellogg, Janesville, Wis., which was very interesting.

J. L. Herbst, corresponding secretary, Sparta, Wis., next on the program, read a paper on "Plant Distribution," explaining that it was the custom of nurserymen of this society to send certain plants and trees to the children of Wisconsin. By this plan a total number of 82,271 strawberry plants, raspberry plants, and trees had been sent out since 1892.

"The Farmer's Garden," by J. F. Hauser, La Crosse, Wis., made many long for one such as he described.

A very interesting program was rendered Tuesday evening. Mrs. Vie H. Campbell read a story, "The House that Jack Built," in a very pleasing manner. She showed that it is all wrong to get rich in lands and stock at the expense of a good wife's health and strength.

S. H. Marshall, Madison, Wis., read a paper on "Sweet Peas;" Mrs. Bushnell, of the Grand Chute Horticultural Society at Appleton, read a paper on "Flowers," and Mrs. Treleven, Omro, Wis., a paper on "The Benefits of Local Societies."

This session was interspersed with instrumental music and

recitations by ladies of Waupaca. The evening closed with the following report from the awarding committees:

Best collection house plants not less than ten varieties—first, Mrs. Chas. Churchill; second, Mrs. Koons.

Best collection of native ferns and wild plants—first, Myrtle Benedict; second, Mrs. Shaw.

Best show of wild flowers—first, George Dawes; second, Mrs. Barnes.

Best collection of roses in variety—first, Kellogg & Sons.

Best table bouquet of roses—first, Kellogg & Sons.

Best bouquet of roses—first, Mrs. T. Rich; second, Kellogg & Sons.

Best bouquet of white roses—first, Mrs. A. D. Barnes; second, Mrs. Chas. Churchill.

Best bouquet of roses, other than white—first, Kellogg & Sons.

Best collection of foliage plants—first, Mrs. Shaw.

Best show of pansies—first, Mrs. A. D. Barnes; second, Mrs. Chas. Churchill.

Best floral design—Myrtle Benedict, first.

Best show of cut flowers in variety—first, Mrs. Chas. Churchill.

Best collection of fuchsias—first, Mrs. Chas. Churchill.

Best bouquet of wild flowers to be gathered and placed on president's table by boy or girl under fifteen—Oscar Bendixen, first; Maurice Koons, second.

Best display of strawberries not less than ten varieties—first, Kellogg & Sons; second, Thayer Fruit Farm; third, A. D. Barnes.

Best new seedling strawberry provided it has never been previously exhibited for premium by the originator—first, Kellogg & Sons.

Best quart of strawberries for general cultivation—first, Thayer Fruit Farm; second, Kellogg & Sons.

Best quart of early strawberries—first, Kellogg & Sons; second, A. D. Barnes.

Best quart of late strawberries—first, Kellogg & Sons; second, Thayer Fruit Farm.

Best quart Warfield—Thayer Fruit Farm, first; Kellogg & Sons, second.

Best quart Jessie—first, Kellogg & Sons; second, A. D. Barnes.

Best quart Haviland—A. D. Barnes, first; Kellogg & Sons, second.

Best quart Bubach—first, Kellogg & Sons; second, Thayer Fruit Farm.

Best quart of Van Dieman—first, Thayer Fruit Farm; second, A. D. Barnes.

Best quart Enhance—first, Kellogg & Sons; second, A. D. Barnes.

Best quart of Crescent—first, Kellogg & Sons; second, Thayer Fruit Farm.

Best quart Wood—first, A. D. Barnes; second, Kellogg & Sons.

Best quart Earle—first, Kellogg & Sons; second, A. D. Barnes.

Best quart Eureka—first, A. D. Barnes; second, Kellogg & Sons.

Best quart Greenville—first, Kellogg & Sons; second, A. D. Barnes.

Best quart Wilson—first, Kellogg & Sons; second, Thayer Fruit Farm.

Best quart Mitchel—first, Thayer Fruit Farm; second, Kellogg & Sons.

Best quart Gandy—first, Kellogg & Sons; second, Thayer Fruit Farm.

Best quart Belmont—first, A. D. Barnes; second, Kellogg & Sons.

Best quart of Sparta—first, Thayer Fruit Farm.

Best field variety for farmers—first, Thayer Fruit Farm.

Best berry for distant market—first, Thayer Fruit Farm; second, Kellogg & Sons.

Best for near market—first, Kellogg & Sons; second, A. D. Barnes.

Best exhibit garden vegetable—first, Mr. Shaw; second, Mr. Bendixen.

Best peck of peas—first, Mr. Shaw; second, Chas. Churchill.

Best half dozen heads of lettuce—W. Shaw, first; G. H. Dawes, second.

Best half dozen bunches radishes—W. J. Bendixen, first; Mrs. T. Rich, second.

Best half dozen bunches onions—Mr. Shaw, first; W. J. Bendixen, second.

Best half dozen bunches asparagus—Mrs. T. Rich, first.

Best six stalks of pie plant—A. D. Barnes, first.

At ten o'clock a. m. Wednesday carriages were in waiting at the Dane's Home to convey the delegates to Grand View hotel, where they partook of a bounteous dinner, after which the meeting was called to order and all unfinished business despatched.

J. Wakefield, Fremont, Wis., gave a very pithy talk on "Waupaca County as Seen at Home," and A. J. Philips, West Salem, Wis., "As Seen from Abroad."

At three o'clock most of the delegates left for Waupaca to take the afternoon train for their homes.

A most enjoyable time was reported by all, and the people of Waupaca feel that they have received valuable help for future horticultural work in having the State Society meet with them.

301 Prospect St., Cleveland, O.

Jan. 13th, 1896.

Friend Philips:—I am here for medical treatment and expect to remain for a month or so yet. I shall be unable to attend the meeting in February or send paper, which will for once, no doubt, be a relief.

Amount due me on Experiment Station please forward to my address at home, in Ithaca. As you are aware, there will be no report to make except that the trees promise a good lot of fruit another year, and that not enough was grown this year of any kind to make any reliable report upon that has not already been made.

I hope you will have a good time at the meeting.

Cordially yours,

A. L. Hatch.

DISCUSSIONS AT THE SUMMER MEETING OF THE
WISCONSIN STATE HORTICULTURAL SOCIETY
AT WAUPACA, JUNE 16, 17, 1896.

Meeting opened with President L. G. Kellogg in the chair.
The following committees were appointed:

On Awards, Fruits and Vegetables—F. M. Benedict, Wau-
paca; R. J. Coe, Ft. Atkinson; John F. Hauser, Onalaska.

Flowers—Mrs. C. E. Bushnell, Appleton; Mrs. Joseph
Treleven, Omro; Miss Jean L. Harden, Weyauwega.

Program—Mr. Baldwin, Fred A. Harden, Weyauwega; Geo.
J. Kellogg, Janesville.

To fill vacancy on resolutions—Prof. E. S. Goff, Madison;
Mrs. D. Huntley, Appleton.

(Letter from Daniel Huntley read by secretary, and leaves
of Duchess and Peerless trees sent by him exhibited.)

Geo. J. Kellogg—I believe in that Peerless not because I
have the trees to sell, but because it is the peer of the Duch-
ess in the nursery and the orchard.

I wish to break all precedence in naming the three best
varieties of strawberries for the farmer. Do you not think
it would be better for the farmer if you should furnish him
three perfect berries? We offer a premium for "best three
varieties," and there is a great difference of opinion as to what
constitutes the best variety for a farmer to grow. The facts
are that the farmer has been fooled more in planting pistil-
lates than anything else. I think you should offer a premium
for perfect varieties.

Prof. Goff—I do not think that question should enter in. The
premium is offered for the three best varieties for the farmer
and I think it should stand that way without any restrictions.
Soil and locations differ, and the farmer will learn what suc-
ceeds best with him.

A. D. Barnes—We have always claimed that the imperfect
flowering kinds, when properly fertilized, are the most pro-
ductive and I do not think we should specify.

J. L. Herbst—We have the two kinds and I think we should
let the farmer hear about them and cultivate them, and find

out for himself which is the best for him to grow for home use or for market.

M. A. Thayer—I do not think we can examine these berries here today and determine which is the best berry for market. We have such a variety of markets. Some of you have a local market while others have a market several hundred miles away. I think we should change the premium list and offer a premium for the best shipping berry. I move that in making up the next premium list for berries, so that in offering the premium for the best market berry, that the shipping qualities be taken into consideration.

R. J. Coe—I move to amend Mr. Thayer's motion so that we shall offer a premium for the best berry for near market, and also for the best berry for shipping long distances. Mr. Thayer accepted the amendment and the motion was carried.

A. D. Barnes—I would like to inquire if there is any one here who knows anything about the Sparta?

M. A. Thayer—The Sparta is a seedling which was originated on the "Thayer Fruit Farms" by J. L. Herbst; it is a child of the Jessie and the Warfield. It is a staminate variety; it has the color of the Jessie and quality of the Warfield. The Sparta is a very heavy pollenizer. Those on exhibition here today are not good samples. The drought of two years ago left them in very bad condition. It is generally very much larger than those represented here today.

A. D. Barnes—I am glad to hear such good reports of a Wisconsin child, and I think the success of Wisconsin horticulturists lies right along this line of work. I move that the Michel be stricken from the future premium list. We have already stricken it from our recommended list.

Motion prevailed.

Moved and carried that the Belmont be also stricken from the list.

Geo. J. Kellogg—I move that the Wilson be dropped from the recommended list and also from the premium list. We are right up here in the Wilson country and if any one can show good Wilsons let them do so.

R. J. Coe—For one I should have to vote against that mo-

tion. We know that the Wilson is somewhat subject to disease, but it is one of the best berries we have for market.

A. D. Barnes—There are several good berries in this state today that are much better than the Wilson, and I think we should strike it from the list. Why should we continue to recommend one berry for forty years?

John F. Hauser—I object to having the Wilson stricken from the list. It sells for two cents more in the La Crosse market than any other berry.

Mr. Floyd—The reason the Wilson has become so unpopular is because of the abuse that has been given it. The plants have been taken from beds after they have fruited, and with such a practice it would of course naturally degenerate. J. M. Smith was always successful with the Wilson and it was always his custom to raise plants for setting from beds that had not fruited. His plants were always vigorous. If that custom had been followed by other growers the Wilson would never have run out.

Geo. J. Kellogg—No good grower has taken plants from old beds for the last ten years. I sent to J. M. Smith for Wilson plants, hoping that he had a better strain, but I did not find them any better than those I had. It succeeds locally, it was a success on Mr. Smith's grounds.

R. J. Coe—Is it not a fact that most of the growers around Racine grow the Wilson and do they not bring the best price in the market? Then why strike Wilson from the list?

John Corse—I think it is because the Wilson are so much later that they bring a better price in Racine market. The growers have not commenced shipping to any amount yet. I think it is because of their lateness that they bring more and stand so well with the growers there.

Prof. Goff—I took the report of the American Pomological Society, which gives reports for all sections of the United States. I expected to find that the Wilson had been superseded. As a rule I did not find it so. The Wilson stood first and the Crescent next. I think the plan pursued by J. M. Smith is the one that will keep up the character of the plants.

Motion to strike out was lost.

V. H. Campbell—I move that the premium list be revised and amended at this meeting. Motion prevailed.

A. D. Barnes—I move that the chair appoint a committee for that purpose. Motion carried and the president appointed the committee on awards to revise the premium list and make such changes as they deemed necessary.

Adjourned.

WAUPACA COUNTY AS SEEN FROM ABROAD.

By A. J. Philips, Secretary State Horticultural Society.

Since my first visit to your county some ten years ago and during several visits since that time, I have entertained pleasant recollections of your natural advantages, pleasant surroundings and hospitable people. Your thirteen beautiful sheets of water, making up the Chain O'Lakes that almost encircle your county seat, are not surpassed in our state for attractiveness. On the banks of these you furnished the site to build cottages for those from our state who offered their lives for the preservation of our government. It indeed looks good to see the old soldiers comfortably provided for and spending their declining years in nice quarters with such pleasant surroundings. To look from the bank of the lake across the grounds and read in large letters Governor Rusk Hall brings back remembrances of that noble man, brave soldier, good governor and efficient secretary of agriculture. If anything is found here that one from abroad covets, especially if he has to pump water three hundred feet, it is your beautiful artesian wells. I've seen as many as three on one farm and many I have seen by the road side, offering spontaneously the best drink ever furnished man or beast without money and without price. Then, too, you can boast of more good seedling apple trees than any county in Wisconsin. The one described yesterday by Mr. Hollis Gibson is a grand old landmark. I've stood under its branches and it took me back to my boyhood days among the large apple trees of the east. The Veteran tree standing less than two miles

from the beautiful spot where we now stand, is one of the most handsome apple trees in Wisconsin. It is now loaded with fruit. Prof. Goff has a picture of it. From abroad I oftentimes think of your trees with a history that I have visited—the old Wolf River, N. W. Greening, Mary, Jenny, Casey, Ratsburg, Granite Sweet, Bessie, Wisconsin Russet, Alden, Wrightman or Ruth, and many others. I am reminded of them because I have them all growing and a number of them fruiting in my own orchard at present. From abroad I am free to say, that within your borders you have a lot of good, kind and hospitable people. Why, uncle Wm. A. Springer is one of the most unselfish horticulturists that lives. He has sent free to growers from Maine to Colorado trees and cions of your best new seedlings. He collected and exhibited at New Orleans a show of seedling apples from this county that brought compliments and astonished the visitors from all over the world.

Through you and his generosity Waupaca county seedlings are seen in nearly every fruit catalogue in the northern states. A Waupaca county seedling, the seed of which he claims to have planted, took more money in premiums at the New Orleans exposition, than any seedling apple in the United States. Why, you have a man here in the sound of my voice who rode all night in a stage coach with Abraham Lincoln, an honor indeed. He became tired of Waupaca county and went to the fruit garden of the west Michigan to live, but in less than two years he became homesick and has come back to spend his days amid the attractions of Waupaca county. I refer to my friend Wakefield who is to follow me in an interesting paper on Waupaca county as seen at home. Time is passing and I close, having spoken of only a few of the many pleasant things seen in your county by a representative from abroad.

WAUPACA COUNTY AS SEEN AT HOME.

J. Wakefield, Fremont.

I have been asked to prepare a paper, to read at this meeting, giving "Waupaca County as Seen at Home." I could tell you how we "natives" see it, but you might ridicule my conclusions, and make fun of our pretensions. But you are here to see for yourselves. I am glad we have so many visitors at this time, so many intelligent men and women, for I have long noticed that horticulturists as a class are the most intelligent people we have. We want you to look the ground over, and then excuse us for being a little proud of our county.

Other counties may have equal attractions—Wisconsin is full of such. We firmly believe that no state in the union can boast of a more health-giving climate, more good land to the acre, more prospering industries according to population, no better or more industrious citizens, in short, no more of anything that tends to make a state or nation respected, great and prosperous.

A true patriot loves his country, and is ever ready to speak a good word for it, if need be brag a little about it, and, if not too cowardly, fight for it. It is his country; his home is there, and home to him is the dearest spot on earth. Other countries may have superior attractions for the average human, but not for him.

That is what ails us. We love our county. We have perhaps spent the biggest portion of our valuable lives in it, we have learned to appreciate its many advantages. Our homes have long been in it, and we expect to spend our remaining days here, and die here,—if we live long enough.

I might speak of the many great improvements made in our county within the past quarter of a century, but my time is too limited to thus tire your patience. I will say, however, that we have a profusion of shops, stores, mills, factories, half a dozen or more ably conducted newspapers, etc.

We also have three flourishing cities, and a full supply of aspiring villages, each one expecting soon to become the county seat.

I might speak of our agricultural advantages, but our fields are before you, and you can see for yourselves. One thing is sure, our people never starve—not much. We can raise nearly everything adapted to our climate, except the price of potatoes.

We can raise fruit here, nearly all kinds of small fruit, and some varieties of apples. Who has not heard of the famous “Waupaca county seedlings?” We have praised them so much that outsiders begin to more than half believe us, and we begin to believe it, too. And we had cause for boasting. Many varieties have gone back on us, but they couldn’t help it nor we either. Enough are still with us to give reasonable hopes in regard to our horticultural future.

Following is a partial list of those seedling apples that have found their way into the records of our Society: Nijota, Puritan, Balch North, Riches’ Greening, Wrightman, Addie, Mary, Waite’s Blush, Eveline, Wall, Weyauwega, Wrightman’s Blush, Martha, July Sweet, Sweet Snow, Tewabie, Bennet, Sappho, Wolf River, Albert, Waupaca, Willson’s Russet, Morse’s Sweet, Ratzburg, N. W. Greening, and goodness knows how many others, many of them having been discarded years ago.

We have three horticultural societies in our county, one at Fremont, one at Waupaca; our county society was organized July 11, 1874. It has had 65 members or more, and was at one time quite a lively and useful institution.

The first apple trees in Waupaca county were set in 1850 by Peter Meiklijohn, of Little Wolf, and John Baxter, of Weyauwega, and Allen Hubbard, of Weyauwega, in 1852 raised the first apples.

There, ladies and gentlemen, you have heard both sides of the question, or one side both ways. You have heard an able paper read by our worthy secretary giving “Waupaca county as seen from abroad,” and you have heard a less able paper read, giving “Waupaca county as seen at home.” Do

you need further enlightening? If so, please pay us another visit in the near future, and learn more of us. Our people will try to make your visit pleasant. I am not afraid to make that promise, for I know their proverbial hospitality.

WHY SOME HORTICULTURISTS BECOME DISCOURAGED

Mrs. Jos. D. Treleven, Omro.

Mr. President, Gentlemen and Ladies:—I do not know why I consented to read a paper before this gathering of experienced horticulturists, as this is the first state meeting I have attended, while others here have been receiving instructions from these gatherings for years and have had long experience in horticulture. Having lived on a farm the greater part of my life and been more particularly engaged with the care of a large family, and the work of a large farm dairy, so aside from raising enough small fruits to furnish the family throughout the year, and sometimes a few to dispose of, my experience is limited compared with that of many others. It is generally claimed that the section of country where I reside, is not as good for the growing of an orchard as some other localities in this state, but in small fruits I think we can compete with the rest, so I concluded to tell some of the discouraging features in horticulture, which have been brought before me, as an amateur, in the work.

I am led to believe that almost every one, engaged in farming, would like a bountiful supply of fruit of different varieties, if it could be had without expending much time and labor. And this I give, as the first reason why amateurs in horticulture become discouraged. No one can be successful in horticulture, without bestowing much time and labor, as very few amateurs have a bank, or a government position to supply the necessary requirements. "Eternal vigilance is the key to success." Following this, comes, lack of love for the work. It is love for the work that deepens the interest in it, and causes the grower to study to know more of the nature, growth and development of his plants, and to delve deeper into the mysteries

that surround the growth of every individual tree, shrub and vine. For example, our friend Fisk, who has met here with you several time, has quite an encyclopedia within his mind, relating to the names, habits, peculiarities, etc., of trees, shrubs and vines, which knowledge grew out of his love for horticulture. A true lover of the work is ever seeking to gain all information possible, from practical men, and careful observation, for, if he lets storms, frosts, hail, drouth, a regiment of insect pests, and many other troubles, which are beyond our control, discourage him and cause him to be disheartened, he was not cut out for a horticulturist. Instead, these things should bring him to use his brains all the more, in discovering ways and means to overcome them. In the present time, with our valuable papers on horticulture and our horticultural meetings, giving practical information and profit by the experience of others, ignorance has no excuse. There is a love in horticulture, however, which no one lacks, and that is the love for the ripened fruit when placed upon our tables, but it is a "consuming" love.

The third feature I beg to mention is the carelessness and neglect of the grower. For instance, a man sets out an apple orchard on low, black soil without any drainage or wind breaks, no protection from mice, rabbits or sun scald, and hurries the setting, any way to get them set, and then expects Providence to care for that orchard until the trees get to fruiting, or at least it looks that way. Ere long, you hear the owner say, "It is no use to set out an orchard—I am completely discouraged. I set so many trees and scarcely any of them grew. I do not see why it was." Of course the tree-agent, or nurseryman was to blame in his estimation, but, would that same man let his horse or cow have such care as he gave that orchard? The true cause of failure, you readily see, was carelessness and neglect. How true the old saying: "Heaven helps them that help themselves." Another reason has been, that we amateurs have not been particular about planting varieties adapted to our climate. Instead of buying nursery stock at home, we send our orders away, where climate and soil are very different, and it takes time to recover, (if ever), this abrupt change. The first season after the young tree has been trans-

planted from the nursery, to its permanent home in the orchard, is a critical period in its existence, and on its growth during this period depends, in a great measure, the future value of the tree.

The trees from these eastern and southern climates fail to meet the expectations, and many loose courage and will not replant. "Try, try, again," is the old saying, and in horticultural work there is certainly a place for the "try, try, again," for, to be successful, a few disappointments must not take our courage, but we must try many times before we meet with the desired results.

Still another reason why our horticulturists become discouraged, is the misrepresentations and exaggerations by some agents, and by glittering catalogues issued. I think I must say also, with dealers putting in substitutes, for I have had a little experience along this line. My husband may not have been as careful as he might in purchasing nursery supplies, but I can say, he always has been careful in setting and caring for the same, so I feel free to cite a few instances which are quite fresh in memory for some happened when we were like many new beginners, when every dollar counts. The first instance was buying thirty snow apple trees, and those that lived proved to be crab-trees with the exception of one. Another of fifty trees and when they were delivered they were all substitutes. Still another of seventy-five trees, and the few that happened to survive turned out to be Whitneys. Concluded to try plums; bought twenty-five very choice plum trees. They proved to be quite a good wild plum. My husband is an Englishman, so he concluded to try some English black currants and English gooseberries. It must have been the name he was partial to, for he was not partial to the berries when ripe. His first investment in blackberries, was claimed to be Ancient Briton, from our Prison City nursery, and I assure you they were ancient indeed, too ancient to be eaten. We have kept a sample vine to experiment on. The first 500 strawberry plants proved a failure, and although we have raised some very fine strawberries since that time, we have never raised any that attained the mammoth size that it took a wheelbarrow to place it on and the strength of a man to move the wheelbarrow.

I know of a dealer going to a neighbor who had a neglected cherry orchard and asked permission to dig up the undergrowth and he sold those trees or brush, for English cherry; of course they were sold away from home. This is no more than many others have experienced. I once heard a nurseryman ask the question, why so many times the orders were not filled out true to name from their nurseries, and he replied, that very often they had to send a Dutchman to get the trees and vines and they could not always read, but I wonder the Dutchman could not have read the labels in some instances, as these I cite, were all from different nurseries. But, these are things of the past, and now we go slow.

We are doing some experimental work, at home, in small fruits. Every fruit grower should experiment in a small way with different varieties of fruit. By doing this he may get a correct judgment, on the good and bad qualities of each variety, as well as to test the effect that climate, soil and location exert on them.

While agents and nurserymen are at fault in many instances, for some of the discouragements in horticulture, much blame rests with the buyers themselves. What is most needed to overcome these difficulties is better business sense, on the whole subject of fruit, and fruit growing and this especially among the farmers. Farmers of the right sort, are those with brains as well as muscle. They need to be better informed, and with past experience, experimental stations, horticultural conventions, and home horticultural societies, we have many opportunities for interchange of knowledge and experience, which, I think, will cover in a great measure the discouragements met with in the past.

DISCUSSION.

Chas. Hirschinger—I think Mr. Kellogg and I ought to say something about this paper, he has the wheelbarrow and I am the Dutchman.

Geo. J. Kellogg—The original of that wheelbarrow is down in Nebraska. The idea is not that the strawberry is so large but that the man is so small.

B. S. Hoxie—The gentleman who dug up those cherry trees

was not so far out of the way after all, he was an Englishman and of course they were English cherries.

J. C. Plumb—I admire that paper because it tells so many things that are true. I have been a nurseryman and those evils the writer speaks of prevail to a great extent, not only among those in our profession but in many others. I have no doubt that friend Kellogg knew people liked to be humbugged when he sent out that picture of the strawberry and the wheelbarrow. I have always said to our agents, “Now do not make any statements that are not reliable.” There is one other thing the lady brings out, and that is neglecting the work from lack of business methods. I went to look at some trees that an agent was delivering in a certain town. I looked at the trees and I said to the agent, “You have some nice stock here, where was it grown?” “St. Paul, Minnesota” he said. I said, “Do you know that?” He said, “Certainly, I saw them dug.” I looked at a cherry tree and asked him if those trees grew in St. Paul. He asked me what I knew about cherry trees, then he asked me my name. I told him I would leave him to guess. He said, “Is your name Plumb?” A friend of mine had given an order for some of those trees, he settled with my friend at about half price. I admire that paper it is full of good suggestions.

Geo. J. Kellogg—I also admire that paper, there are a great many good points in it. To further illustrate what friend Plumb says about tree agents, there is a class of men traveling through the country and imposing on those people that our reports do not reach.

Chas. Hirschinger—I made a delivery of trees in a town and about the same time there was a delivery made by a man from Minnesota. When I left the place I had about \$300, the tree agent about \$3,800. I said to him, “If I could sell trees as you do I would soon be a rich man.” He said: “Oh well, Mr. Hirschinger, you sell the trees and we sell the people.”

J. S. Stickney—I want to congratulate the lady in keeping her patience in buying the trees and her good nature in presenting the facts.

REPORT OF COMMITTEE ON AWARDS.

AT WINTER MEETING FEB., 1896.

To the officers and members of the Wisconsin State Horticultural society:

Your committee on awards would respectfully submit the following report:

Best collection of apples, Geo. Jeffrey, Milwaukee, first premium,	\$5.00
Best four varieties, Geo. Jeffrey, Milwaukee, first premium,	3.00
Best three varieties, long keepers, Geo. Jeffrey, Milwaukee, first premium,	3.00
Best three varieties Crab apples, Geo. Jeffrey, Milwaukee, first premium,	3.00
Best single plate, Northern Spy, Northwestern Greening, Ben Davis, Walbridge, Pewaukee, Jonathan, Switzer, seven varieties, \$1.00 each, Geo. Jeffrey, Milwaukee, ...	7.00
Three plates pears, Geo. Jeffrey, Milwaukee,	1.00
Three plate Repka Malenka, F. H. Chappell, Oregon,	1.00
Best display potatoes, ten varieties, Geo. J. Kellogg, Janesville, first premium,	3.00
J. L. Herbst, Sparta, second,	1.50
Best half peck early potatoes, Geo. J. Kellogg, Janesville, first premium,	1.00
Best half peck late potatoes, Geo. J. Kellogg, Janesville, first premium,	1.00
Best half peck onions, Geo. J. Kellogg, Janesville, first premium,	1.00

J. C. Plumb,
E. A. Perry,
F. A. Harden,
Committee.

SHALL FARMERS GROW SMALL FRUITS?

A. J. Sweezy, Rockford, Ill.

The farmer's home should be the ideal home. It should be the best attainable in all its appointments and environments. Within the farm home are reared the children who will become the men and women that are to fill the important positions in all the departments of industry and usefulness. The foremost men of our country, many of our largest merchants and manufacturers, our best teachers, ministers and editors, and our noblest statesmen were reared upon the farm. Their ranks are continually being recruited from the children of the farm. It is of great importance that the farm children have the best means for development and culture, that they may grow strong, healthy and vigorous in body and in mind, with every good faculty attuned to harmonious and perfect action.

Good food is a necessity for such development. As the plants and trees grow from the soil, so do people grow from the food they eat. This food must be of a proper material from which to construct the delicate and intricate faculties of the human being, in a normal condition of perfection, strength and purity. The importance of eating only the very best kinds of wholesome food has not enlisted the earnest thought and careful attention of our people, that their own vital interest demands. They do not give it as much study as they do other subjects that are of less importance. The intelligent farmer who rears domestic animals studies carefully the properties and the effects of the food he feeds them. If he grows horses for strength and speed; cows for milk, butter and cheese; beeves for their flesh, sheep for their wool, swine for their bacon and lard, or poultry for their eggs, he feeds to each the proper ration of food that will best produce the desired result. But in feeding himself and his family, he gives no thought as to whether the food provided is best adapted to proper human growth and development.

It is not the province of this paper to discuss the merits of the different kinds of food used for human sustenance; but I do want to make more clear and prominent the fact that good

fruits are among the best kinds of food, and that they are well adapted to aid in developing the normal faculties of the human being to a high degree of purity, strength and activity.

Fruits are highly vitalized. In their perfection they possess a vitality or life power sufficient, under proper conditions, to enable them to grow into perfect plants or trees. How much of this innate vitality is imparted to those eating the fruit has never been determined, but it is well known that perfect fruit maturely ripe is much more nutritious and wholesome than that which has lost its vitality and is partially decayed.

Fruit in its perfection is a pure food. It is free from the unwholesome adulterations to which many compound foods are subjected. It does not carry into the system foul parasites or germs of disease; nor does it produce that abnormal condition of the tissues favorable to the lodgment and propagation of microscopic germs of many contagious or malignant diseases. Good fruit of some kind should form a part of the daily food of every family, and especially that of the children during the time of their rapid growth and development.

Small fruits are the fruits for the summer time, the time when fruit is most needed for food, and the time when other fruit in prime condition is more difficult to obtain. While they each have a brief period of perfect maturity, by having different kinds and varieties ripen in succession, their season can be prolonged throughout the entire summer. If grown at home, they can be gathered daily, as wanted, and in the best possible condition of ripeness and perfection—much better than if obtained in the market, perhaps several miles distant. The supply, too, will be more abundant and reliable. Many farmers, who depend on buying their fruit, get very little of it, and that only at convenient times. The housewife who has an abundant supply of good fruit continually at hand is saved the trouble and vexation of having to get something else to supply its place on her table, where there must always be something for her family to eat. It is cheaper to grow fruit than it is to buy it. I would rather grow the fruit for my table than to go to the market and buy it, if the money was furnished me to pay for it. Every farmer can grow his own small fruits if he chooses to do it. There is no greater skill required than to

grow successfully the ordinary crops of the farm. A soil that will produce good crops of corn, potatoes, or wheat will grow strawberries, gooseberries, currants and raspberries. Extra care in the preparation and culture will pay just as well in growing these fruits as in all other farm products. The great problem with the ordinary farmer is to have such a desire to do the work that he will get at it, and do it seasonably and effectively. In the planting season he is usually so much engaged with his farm work; his large fields of grain and corn must be seasonably attended to, and the small fruit garden, considered of less importance, gets neglected. But that small area, if well cared for, will prove to be the most profitable of any part of his farm.

One good way is to let the children, the boys and the girls, have a chance at it. All children are fond of fruits and berries, and with proper encouragement will enjoy seeing them grow and will take an active part in their culture. Prepare a suitable piece of ground and let the children have the care of it. Let them have a portion of time each day, in which they can plant and cultivate the strawberries, raspberries, currants and blackberries. Let them have good books and periodicals to read on horticulture. If nothing better, get some of the illustrated catalogues of our best large fruit growers. An interest will be awakened in fruit growing and a desire to learn how plants grow. As they cultivate the fruit plants and see them grow, their own minds are also growing, and in the right direction, and they are gaining strength and ability for future usefulness.

After furnishing the home table, give the children the benefit of any surplus berries and fruits that they may sell to the neighbors or in the market. The satisfaction of earning some money for their own personal use is a great incentive to the smart boys and girls for good and faithful work. They will soon be trying to produce the best and largest fruits in the vicinity. They will learn that excellence in culture will result in excellence in quality and quantity of the crop. The habits of good work thus formed will obtain benefits in all the business of life. This will have a tendency to make the children love the farm and their farm home. They have helped to in-

crease its comforts and its attractions, and they feel a personal interest therein. They will not so soon want to leave it for other business. Wherever they may go in after years and whatever may be their occupation, they will fondly cherish the memories of their ancestral farm home as the best spot ever known on earth.

In conclusion: The ideal farm home will have among its surroundings various kinds of fruits, flowers and ornamental trees, to augment the comforts of farm life, and to aid in developing among the industrial farmers and their households a higher and nobler manhood and womanhood.

A vote of thanks was given to Mr. Sweezy for his excellent paper.

HORTICULTURE IN CONNECTION WITH OUR SCHOOLS.

Miss Lulu Philips, West Salem.

Read at the Winter Meeting, Feb. 4, 1896.

A teacher was once asked (and a gentleman too), to state the difference between horticulture and agriculture. His answer was, "Agriculture is farming with oxen and horticulture is farming with horses." He evidently meant to be understood that to handle the lines and guide the horses was more elevating than to trudge after the oxen and guide them by the use of a stick.

But, to be plain and practical, we will define horticulture as the growing of fruits, flowers, vegetables and ornamental trees. By far too many of us find, when we engage in the active business of our lives, that while our education in grammar, history, philosophy, algebra and geometry has been thorough, that some of the minor studies which would add much value to us as citizens have been sadly neglected.

While there may be exceptions I believe the boy who is taught early in life to plant and care for trees and flowers on the school ground will be far more interested in his studies and will have more respect for his teachers if the latter will take pains to educate him in the work. He will certainly give better satisfaction and command better wages to work in the garden, or on the farm, or will be far better fitted to be the owner or manager of the farm and home.

He would also be more likely to grow fruit for his family, or beautify his home, where his devoted wife spends so much of her time, and where his children receive their first lessons in life, than he would had his attention never been called to these things on the school ground.

I also believe that the girl who is taught to care for plants and flowers on the school ground will have something instilled in her mind that will better enable her to fill her allotted sphere in life, whatever it be.

When parents realize the fact that the large majority of the children in our state receive the larger part of their education in the common schools, they ought to feel the necessity of instituting the inquiry "What system of education will best fit them for usefulness?" and the study and practice of horticultural pursuits is in my opinion, one of the best plans to adopt. The nature lessons, which should be conducted in all schools, can be made very interesting, and furnish abundant material for language work. Let the children be taught to use their eyes; let them study the ever open book of nature. By this way they will have reverence for the Maker of the beautiful things around them. And the building of their character in the right way will surely follow.

It is no concern of ours to teach in school that which an observant and intelligent child would learn out of doors, but it is our concern to teach him so as to make him observant and intelligent. It would be a shame to pass our lives in this well ordered and harmonious world and catch no echo of the music of its laws. Who ever has not in youth collected plants knows not half the interest which lanes and hedge rows can assume. If we endeavor to advance our work more and more along this line, the education would be far more practical, our schools would be better, teaching more pleasant, horticulture would take a long stride in advance and members of the State Society would not say we have no more members than we had twenty years ago. What pleasanter thought for a young man to cherish, when he leaves the place of his birth, than to realize that he helped to plant trees and flowers on the school ground and around the old home.

Horticulture inculcated in the minds of the children at

school will show itself later in beautifying the cities of the silent dead. How much our hearts have ached in seeing those places neglected, and growing up to weeds. But I am glad to say that within the last few years there has been a marked improvement in our county in their care.

Like other reforms ladies have taken hold and flowers are blooming on every hand. A former resident of our town who is now dead, was once one of our school officers. He planted a number of elm trees in our school yard at his own expense and they now afford very pleasant shade. Are not these living monuments in memory of Mr. C. C. Palmer?

The pupils are always interested in beautifying the school ground and room. They enjoy bringing plants and seeds to be used for this purpose. I once applied for a situation to teach a school where the work the term before had not been very satisfactory to the parents. The clerk said, "I do not care for your certificate, what I want to know is, will you make them obey?"

He told me their school money had been thrown away the previous term, and a great amount of the property had been partially damaged or destroyed. To make a long story short he said "If you can teach the school I will pay you, and if not, you can quit."

My father was with me and intimated I had better let it alone. But I was rather anxious to try it, so engaged to teach on those terms, provided the other members of the board consented, but I confess when I saw the condition of things, my courage nearly failed. But the contract was made, the board agreeing to put the house and surroundings in proper repair, and I agreeing to keep them so, if I could.

School began, and as soon as I could I began with the assistance of the smaller girls and boys to arrange and make flower beds. As the larger boys came I found them to be quite as willing to assist in caring for the plants as they formerly had been to destroy the property.

I taught there three terms and had the satisfaction of knowing I could have held the position longer. The board said that my successor must care for the flower beds. Let us ask, do we as teachers, to whose care the fathers and mothers of

our state commit the training of their dear ones, do all we can to benefit the children? Can we not in connection with their studies use more influence to aid in the noble work of interesting school children in horticulture which was begun and is still being carried on by the State Society?

Which work will cause other states in years to come to point to Wisconsin as the leader in this, as she is now looked on as the leader in that grand work of the Farmers' Institutes.

Then let us unite horticulture with our schools. Then we will have better schools and more beautiful surroundings. This will create a desire for model homes and farms where fruits and flowers abound. And then perchance you, the members and friends here assembled, may in future years be impressed with the belief that Wisconsin has a model horticultural society.

A. A. Arnold—This paper is very suggestive and that is the beauty of a good speech or a good paper, to have it suggest thought.

INFLUENCE OF HORTICULTURE UPON CHILDREN.

F. E. Doty, Principal Waupaca Schools.

Read at Summer Meeting at Waupaca.

During the past few weeks my attention has been given to the preparation of our annual school crop for the harvest; and I have no doubt that if placed in competition with your choicest exhibits of flowers and fruits it would carry off the prize. The anxiety connected with this labor has prevented me from treating the theme assigned me in anything like the way it deserves. I shall therefore discuss but one phase of it, *The Moral Influence of Horticulture upon Children.*

Horticulture and morality! Has it not been horticulture and immorality for the past centuries? It is not necessary to go back to the case of Adam and the apple for illustration. Has not a single well cultivated melon patch conveniently situated, given to an entire neighborhood of innocent children their first lessons in dishonesty? Has not a single plum tree, hanging its branches temptingly near the roadside awakened

for the first time an accusing conscience in more than one boy and girl? I appeal to you old gray heads, did you not twist the truth out of all form and semblance of itself for the first time in connection with some article of diet? Perhaps it was not a fruit tree but it was surely in connection with something to eat. I suspect that if the facts were known, George Washington had in reality eaten the cherries on his father's cherry tree, and was trying to conceal the evidences of his guilt, when captured, by carrying off the tree.

Do you know that a ripe strawberry to a hungry, growing boy, is twice as large as to man and that it is infinitely more delicious? Do you know too that it is far more necessary to his physical well being? Do you know that within the shining circumference of a single sun-kissed apple is contained health and the sum total of boyhood's happiness?

Fruit is a great temptation to a child. He doesn't see the sense in bottling up the miserable little pail of cherries from the only scrub cherry tree on the farm, to be stowed away for six months in a dark cellar there to lose its freshness and flavor in order to supply a winter table for invited guests. Why not enjoy it now when it is fit to be enjoyed?

A man near Waupaca has stopped raising watermelons because, he says, the neighbors' boys are too numerous; and now his own boys are obliged to walk nearly three miles and run the risk of all sorts of terrors in the dark, in order to get the supply of fruit which they feel their physical well being demands, and which their father refuses to produce for them. A friend of mine here in Waupaca owns a number of vacant lots, and the other day he told me that it would be useless to plant them to fruit because the town boys would be sure to carry it off. As a consequence, he leaves the lots vacant, derives no benefit from them himself, neither do the boys.

What is the conclusion from all this? It is inevitable, under the present conditions, taking men as we find them today, selfish and penny wise. Either the small boy or horticulture must go. Talk about your chilling frosts, your droughts, blights, birds and parasites, they are nothing in comparison with the small boy.

There is one other possible solution which I would not dare

to suggest except to an audience of generous, enthusiastic horticulturists. It was shadowed forth in the day dreams of my youth. I said—"I will own a farm when I become a man, and along its borders I will plant, not maples, poplars and elm trees, as my father does, but will plant cherries, plums and apples and they shall stand along the roadside, and under them shall walk the children on their way from school, and I will put up signs inviting them to enjoy the shade and feast upon the ripened fruits. I did not think of the possibility of encouraging tramps and perhaps for that reason would not advocate the scheme now, but it does seem possible that every farm and every city lot should have these necessary luxuries (?) Would not a reasonable abundance of fruit create a love for the home, an ambition to make it more and more beautiful and comfortable? an ambition to make it something more than a place to sleep in and work in?

People talk about the money there is in fruit. Some refuse to raise it because it doesn't pay. Others raise it because it does pay. I wish more people would raise it without a thought of pay, simply for the comfort and happiness of the family. Sell everything else if need be, but do not deprive the children of fruit in reasonable and sufficient abundance. Do you know we talk about giving children the benefit of a free education, we donate to them the use of public libraries and parks, they feast their eyes on public works of art, but the boys and girls would like it if we were to add to those benefits the privilege to do as the birds and the bees do, enjoy the sweetness of the flowers and feast freely upon God's bounty. And they are willing to work for it too; they will gladly help to set out the trees and tend the berries if a reasonable amount of youthful enthusiasm and encouragement may come from the father, to sustain them in their efforts. You know the older people sometimes talk in a very discouraging way; they say the land is too valuable, the trees will die, the frost will blight, better plant potatoes, and at last the boy concludes it will on the whole be better to trust to luck and perhaps his own ingenuity in getting at some neighbor's orchard for his supply.

Horticulture and Morality! Do you know, there is something in this worth thinking about? Honesty flourishes best

where natural and reasonable desires are satisfied. It is hard to create high ideals, love for beauty, honesty, uprightness and nobility of character in a hungry man, much harder still in a hungry boy. Our ministers have learned that. They are coming to shorten their sermons as the dinner hour approaches.

The good farmer feels it a duty to supply every growing thing, plant and animal with all that it needs for perfect growth, and takes a pride in doing so. I am here simply to urge that his growing children receive the same attention, to urge a better bill of fare for the children. My father had a cow that had developed into a thief and a runaway. I hated her, the whole neighborhood hated her. No ordinary fence would keep her in; but whose fault was it? Not hers. She had been half starved in a dry and barren pasture with a field of corn just over the fence. Hunger taught her dishonesty. Hunger combined with temptation teaches children dishonesty. We have still to learn the lesson of Eve in the garden aright. My point is surely clear.

A little Horticulture is a very dangerous thing,
Dig deep, plant much in each succeeding spring.

BENEFITS DERIVED FROM A LOCAL HORTICULTURAL SOCIETY.

A. S. Robinson, Centralia.

Winter meeting, 1896.

The object of this paper is to give in a plain and concise way some of the benefits that we are receiving by having a local horticultural society. It has been something over three years since we first organized, and in that time we have collected about 700 books and pamphlets, forming a nucleus for a valuable library that we could not purchase for any money.

This library gives the results of careful and accurate tests on different lines of agriculture, horticulture, etc., carried on by the different experiment stations in different parts of the United States, conducted on a scientific basis and contains

facts of great value, collected under all of the climatic conditions that are found in different parts of the union.

Now, there is a great benefit to be derived from the use of this library. And I do not know of a better or more practical way to get the matter before you than by giving you a brief synopsis, of the number of articles that his library contains, on a few subjects taken at random.

On potatoes we have reports on Variety tests, twenty-five articles; on Care, culture and management, forty-five articles; on Diseases and remedies, sixty-one articles. On apples, we have on Variety tests, thirty-two articles; on Care, culture and management, forty-one articles; on Diseases and remedies, ninety-six articles.

On strawberries, we have reports on Variety tests, thirty-seven articles; on Care, culture and management, twenty-seven articles; on Diseases and remedies, sixteen articles; on Special reports on strawberries, two articles; of Spraying Bulletins, giving the time for spraying different crops, the ingredients for and manner of making spray fluids for general garden application, we have eighteen.

On manure and its application, we have forty-two general articles; on Stable manure, twenty-three articles.

On Commercial fertilizers, including the wholesale price of the ingredients and instructions for mixing at home, thirty-eight articles. On green manuring, thirty-seven articles and reports; on Value of special fertilizers, such as wood ashes, bone, lime, plaster, phosphate rock, muck, marl, etc., we have twenty-eight publications; on Chemical analysis and composition of common manures, we have eight general articles and treatises.

On corn we have reports on Variety tests, eight; on Care, culture and management, fifteen; on Diseases and remedies, two; general articles on such subjects as Stover and shredded fodder, etc., fifteen.

On market gardening, twenty-eight articles; general articles on Horticulture, 119. These are only a few from over 200 subjects contained in the catalogue of our library.

But you see from this partial list that there is not a farmer, horticulturist, fruit-grower or market gardener but can find something of value and practical use to them in such a library.

Now allow me to cite you two cases (and there are many of them) where the parties have received valuable knowledge from this library, that came under my own observation. A thrifty German farmer came into the office of our librarian, the very picture of disconsolation, the sweat standing in great drops on his manly and honest countenance, his whole frame quivering with excitement, and when he had become sufficiently calmed, stated the object of his visit. Some new enemy, of kind unknown to him, was eating his tomato vines (of which he had some acres), making the leaves full of little round holes. Our librarian, being somewhat of an entomologist, soon discovered the trouble when he took from his pocket a small vial containing a number of flea beetles. So he was told of a remedy to try on them, and he was told to also apply the same to his potato vines. But he said there were none on his potatoes. A few days later he came to town an entirely different looking man. Smiles and sunshine had taken the place of wrinkles and frowns, and he exclaimed, "By golly, I kill dem leedle fellers so kvick as never vas. Day sthick py dem feet aber day no eat." He further states that they had been working on his potatoes too, but he had not noticed them there until he was told that they worked on potatoes. The other case was an ex-county school superintendent; he had lately come into possession of a farm in the southern part of this state, and on his farm were some grape vines that had been allowed to go unpruned for several years. He, not having had any experience of his own, wished, through our society, to learn the proper method of trimming and training. We invited him up into our office, and found for him a number of articles on grape culture. He spent nearly two hours in reading and studying, and borrowed some of our books; he afterward expressed himself as well paid for his trouble.

Another thing we consider of great value to us is our experimental work. For two years we have carried on a series of tests to determine the value of new varieties of potatoes. Living, as we do, in what is known as the potato belt, it is of great importance to us to find out what varieties are best suited to our locality, climatic conditions and soil. Out of a

list of sixty-eight varieties tested we find less than ten that are any improvement over our old standards. Now the varieties tested are mostly of the new and recent kinds, having a wonderful seed catalogue reputation, but when placed side by side with the old standards in our trial plat, where the soil condition was as near alike as possible to find on dry land, most of them failed to substantiate, either in productiveness or freedom from disease, their introducers' claims for them. Some of these kinds cost us twenty cents per single tuber, a price which we would be glad to receive per bushel now.

These experiments have run through two years but unfortunately they have both been dry ones. However, I have an idea that a year of average rainfall would not change the comparative results very materially. These experiments cost us \$45 and resulted in the discovery of six extra fine varieties.

Twenty of our members raise potatoes on soils similar to the ones on which our tests were carried on. There is no reason to suppose that they could have made the tests cheaper than the society did. Had each member made the test it would have cost them altogether \$900, and the results would have been of little more, perhaps of not so much, value, saving to the community \$855.

Our regular meetings are held monthly and at each meeting we generally manage to have a paper on some topic of local interest, and have it discussed, so that the members of our society may each and every one receive some benefit. We usually have these papers published in our local newspapers.

These three years of excessive drouth have worked a marked change in the locality where I reside and our conditions are wonderfully changed, horticulturally. Three years ago our cranberry lands were giving us a paying return for the capital invested, and the owners were considered "well fixed," most of them having a good bank credit. But the wild marsh fires, so fierce in their destructiveness, have produced a marked change, and most of these once valuable and desirable cranberry lands are at the present time of but little money value, and are generally known as the "burned marsh land of Northern Wisconsin." Now these lands are rich, and the question is, "What shall be done with them?" "What variety of crops are best

sued to their changed condition?" Our society has taken hold of these questions, hoping through papers, discussions and experiments to find answers to them.

So you see, we, both individually and as a community, are receiving good returns by having the society with us.

This paper would be incomplete if I did not make some special mention of the great object lesson that met our vision at the regular June meeting of the State Society at Grand Rapids. It was just simply grand, and the words of encouragement and instruction that we there received from practical horticulturists and fruit growers, although now past, will long be remembered and put to use, and the pleasant associations and new acquaintances formed will long hold a green place in our memories.

Now, in conclusion I wish to say that if I have made any suggestion or remark by which some discouraged member in the great work of organizing and maintaining a local horticultural society shall take new courage, the object of this paper will be accomplished. Remember that the few, in all great achievements and enterprise, must work for the many.

1:30 p. m.—Meeting opened with prayer by Rev. Jolliffe, Waupaca.

HOW CAN WE IMPROVE OUR STATE HORTICULTURAL SOCIETY.

By Prof. E. S. Goff of Madison, Wis.

In the best book that has ever been written we learn there were those people who were very unpopular because they spoke unwelcome truths, and I do not know but that you will feel towards me as the people of old felt towards those prophets, when I read my paper. I have written on this topic because I was invited to do so. It is not always pleasant to say unpleasant things but it is for the best sometimes that the truth be spoken.

Some months ago I listened to a lecture by Dr. Lyman Abbott of Brooklyn, on "The Industrial Revolution." In his opening remarks, he said among other things, "I have come to tell you what I think on this subject; not what I think you think I ought to think." I have some such thought in presenting this paper. Sometimes, in my papers, my aim has been to write something that would please every listener. While, in this paper, I certainly do not desire to displease anyone, I incline to fear that some sensitive people may possibly feel a little hurt. If so, I ask your kind forbearance, and that you will at least believe that these criticisms are offered because they are supposed to tend toward the greatest good for the greatest number.

The title of this paper suggests that, at least in the opinion of the writer, our society is not in all respects what it might and should be. I am free to confess that I have long held such an opinion. In saying this, I am fully aware that it is unjust to draw close comparisons between our society and the societies of other states, as New York or California, in which many millions of dollars are invested in commercial horticulture, and where vast fortunes have been amassed from the proceeds of extensive orchards and nurseries. But this argument should not be used to palliate our faults. The question under consideration is, "How can we improve our society?" It should be our aim to make this society as interesting and profitable to its members as it is possible to make it, and we should be content with nothing less.

I suggest first—as perhaps most important—we can improve our society by raising the standard of the papers presented at our meetings. The custom of inviting local societies to send a delegate, requiring such delegate to present a paper, when we have no knowledge as to whom the delegate is to be, and no assurance that the so-called paper is worth the time of our society, or the space required to print it in our "Transactions" is to be deprecated. Such papers are all right for local societies, but, with rare exceptions, they are out of place in the meetings of a state society. What inducement has one to travel fifty or a hundred miles to attend a state meeting, if the papers presented are not of a higher

order than those of the average local society? But you will ask, "How can we do this?" One way will be to use some of the money now paid for delegates' expenses to procure papers from specialists from our own and other states, upon subjects in their chosen lines. A paper by Robert Douglass on Evergreens, by Jackson Dawson on Propagating Trees and Shrubs, by Wm. Falconer on Ornamental Shrubs, by Prof. Bailey on Plant Breeding, by Prof. Van Deman on Orchard Fruits or by Mr. Galloway on Fungus Diseases would do more to raise the standard of our "Transactions" than many times the cost paid as expenses for delegates of local societies. It may be doubted, by some, if such men as these can be procured. If you look through the published transactions of the Western N. Y. Horticultural Society you will find that they abound in papers written by this class of men; yet this society receives no state aid, but is entirely supported by the voluntary contributions of its members. Men of this class are not so difficult to secure as is often supposed. I know the Department of Agriculture has sometimes paid the expenses of its workers to the meetings of the Western N. Y. Horticultural Society when requested to do so.

In writing this I would by no means ignore the fact that we have specialists among our own members, and that these have from time to time presented excellent papers at our meetings, but it is quite as true that we need to broaden the field from which we draw our supply of useful information that is the chief office of this society to disseminate. We should hear more from the specialists of other states. I do not mean that we should use no home talent that does not fall in the category of the specialist. A paper from an obscure cultivator may have more real, practical value than one from a learned professor. We should insist, however, that every paper should contain some useful knowledge, and should be written by one who feels that he has something to say on his subject, rather than by one who feels that he has to say something. With rare exceptions, a paper that has nothing to commend it except that it is entertaining is out of order on the program of a State Horticultural Society. School

compositions are excellent in their place, but this is not their place.

The committee on program should be a permanent one, with broad powers to act. Months before the meeting of the state society, this committee should decide on the most important subjects for presentation, and should be empowered to secure the proper talent to write the needed papers. Every session should have at least one paper by a man of national reputation, whose testimony in his special field will be so valuable that our horticultural workers can not afford to lose it. When this good time comes, we shall not need to pay the expenses of our members to induce them to attend our meetings.

Second—We can improve our society by having our published "Transactions" more carefully edited. It is through these that the outside world must form its opinion of us. I have had fourteen years' experience in writing and editing reports, and I have never succeeded in turning out one that was free from humiliating errors. Yet I am sure that the papers in our "Transactions" can be improved, and I sincerely hope this will be done.

Third—We can improve our society by improving our monthly journal. Could I have my wish in this respect, this journal should contain no matter that is intended for our "Transactions." I fail to see the necessity of publishing the same matter twice for the same set of readers. The "Transactions" might be enriched by using the cream of the journal, but I would not deal out the annual volume piecemeal. There is abundant room in our state for a monthly horticultural journal devoted to original matter, and dealing exclusively with northwestern conditions.

Fourth—Our society has been robbing itself by fostering local societies with its own life blood. The custom of supplying the members of all local societies with our "Transactions," requiring nothing in return, is suicidal. The members of these societies have no inducement to join our society, nor to attend our meetings, so long as we give them all we have for nothing. Thus we impoverish our own treasury and reduce the attendance of our meetings and the value of our discus-

sions. I would encourage the formation of local societies by every legitimate means, but I would so manage matters that they shall feed our state society, and not feed upon it as they are now doing.

Lastly—the proposition that might perhaps better have been placed first. We can improve our society by making the salary of its secretary sufficient so that he can afford to devote his whole time to promoting its interests. “There is a withholding that tendeth to poverty.” A better paid secretary might so manage our affairs as to pay his own salary from the increase in membership dues. He might make our monthly journal so sparkling with bright and useful hints for horticulture that its light would shine into other states. By visiting our local societies he might so inspire them with his enthusiasm that our members might soon be counted in hundreds instead of in scores.

I would not leave the impression with you that I have seen nothing good in our society. If I had started to write of the good things in our society, I am sure I could have found more creditable things than I enumerated among its faults. But the good things do not need to be improved so much as the bad ones, hence I have not spoken of them here.

DISCUSSION.

Mr. Rich—I am somewhat interested in Prof. Goff’s paper, especially where he speaks of the local societies feeding upon the State society. I think the object of the State society is to benefit the state at large, and I do not know how we can be benefited in any way so much as we can to get these reports distributed among the members of the local societies. It seems to me the professor cuts pretty close in what he says on the subject. I would like to hear the opinion of others.

Secretary—I was in hopes Prof. Goff would make statements that would have stirred up more discussion on this subject. We who are in the habit of attending the meetings of other state societies feel that our state society is in the rear. There was a time when Minnesota had to look to Wisconsin for information and experience, but now, in many respects,

they are ahead of us. They pay their secretary enough so that he can afford to spend the whole of his time in his work of building up the society. Iowa has increased the salary of its secretary and has gone so far as to say they will not give away their reports. I do not know as it would be just the thing for us to say that, but I do think we should take some steps to increase our membership. Our reports are valuable to people and they want them but if they can get them for nothing they are not going to pay one dollar a year for the purpose of becoming members of the state society to get them. Since we have been publishing the magazine I have had letters which read this way: "I see you want to increase your membership, I get your 'Transactions' through my member of the legislature." Another says he gets them at the Farmers' Institutes, another gets it by sending ten cents to me to pay the postage and another through the local society. Now what inducement can you offer these people to take membership in our society? There are very few people who will pay one dollar for the report coming out in monthly installments if they can get it for nothing when it comes out in the annual "Transactions." Perhaps it is not quite right to speak of the local societies as feeders, but there are quite a number of local societies that only ask ten cents for membership dues, they have no local expenses whatever, they get our "Transactions" and do not pay anything into our treasury to help us. I have thought of a plan like this: if each local society could send us one member for every five of its own membership it would be a help to us. If we should try to work up the matter of organizing we could work up enough local societies to strand the state society in a very short time. The only way we can increase our membership is to have a larger attendance at our meetings. In Minnesota they are working in the different districts to arouse an interest in the state society.

M. A. Thayer—I must heartily approve of most of the suggestions in the paper read by Prof. Goff, but I am in favor of distributing these reports freely among the people. There is an almost universal belief in the state that apples cannot be successfully grown in Wisconsin. When we attend our state meetings we find that two-thirds of our program is made up

of papers and discussions on apple growing and when the people say they are not interested in our meetings and our work it is because they have no faith in it. I have heard the statements made in several of our last meetings that the majority would be more interested in the growing of small fruits or something that the average man can grow on his farm. I throw this out as a suggestion to you as one way in which to interest the people. When was this society ever so prosperous as it was when so much effort was being made to organize local societies through the state?

Prof. Goff—What inducement has any one for paying one dollar a year for a membership in the society if he can have all of the privileges it affords without becoming a member? Any one can attend our meetings and any one can have our reports whether a member or not, then why should he pay the one dollar per year for the privilege? I think we should have our constitution changed so we can encourage membership and not make it a purely voluntary affair as it is at present.

A short report on Plant Distribution was read at this time by John L. Herbst, corresponding secretary.

Secretary—This report properly comes in at our winter meeting but I suggested to Mr. Herbst that there would be a good many at this meeting who would not know about this work and that it would be interesting to them to know what the society is doing.

I want to say something about the remarks made by Mr. Thayer with regard to apple growing, and topics of a like character, on our program. There was a time, for a number of years, when almost the whole of the discussions at our meetings were on small fruits. Then there came a call for something upon apples. Some said there was nothing the people had been so much humbugged about as they had about apple trees, and I guess it was true. Since Mr. Thayer made his statement I have been looking over the reports and I find that apple topics take up but a small part of the volume. You will find men all over the state who say you cannot raise

apples in Wisconsin, and yet a man has come over here from Michigan who is full of enthusiasm about apple growing, and he has set out a large orchard. It may be the ruination of him. I do not know. That remains to be seen. One thing I do know, and that is, Waupaca county has reason to be proud of her apples. I am going to read a statement made by Mr. Gibson:

"Description of an apple tree growing on section 27, town of Lind, Waupaca county. Height of tree, thirty-one feet; length of body, three and one-half feet; circumference of body in the smallest place, five and one-third feet; spread of branches north and south, forty-two feet; spread of branches east and west, forty feet.

"The seed from which this tree grew was brought from Canada and planted by Mrs. H. Gibson in 1852. The tree appears sound and healthy in every respect; it has always been a shy bearer, producing only a few specimens before it was twenty years old.

"Hollis Gibson."

Q—What can we do to prevent the ravages of the cut worm and striped bugs?

Prof. Goff—Cover the vines with boxes covered with mosquito netting. I found one thing this year, that the striped bugs come up on the ground under the boxes and we have to take off the boxes and get them out. If you have not boxes enough dust the vines over with bone dust or coal ashes, that treatment will keep the bugs away.

Little piles of clover scattered through the field will attract the cut worm. I have taken as many as twenty cut worms out from under a handful of clover.

The only thing you can do for the large squash bugs is to take a pail of water and brush them off in it as you brush the bugs off potato vines. You cannot kill them with Paris green because they do not eat the foliage, they suck the juice out of the leaf.

THE VEGETABLE GARDEN.

John F. Hauser, Onalaska, a German Gardener.

Read at summer meeting at Waupaca.

The garden should be near the house so as to save steps in the cultivation and daily gathering of the produce; it should have good drainage and a warm exposure to bring it into condition for early cultivation. Ground that has been occupied with cultivated crops is easily brought into fine condition; sod land is difficult to till. Manure should be short, well rotted, so that it will not interfere with the hoe and cultivator. Plants will suffer more in dry seasons if coarse manure is used. Plow the whole garden as early as the ground is dry enough, and harrow frequently so as to kill the weeds and hold moisture. Lay out the garden, taking care to plant varieties of the same family some distance from each other so they will not mix and thereby become deteriorated; this is especially important in planting cucumbers, melons, pumpkins and squash. Give plants, that are grown in hot beds for setting, plenty of air so they will not be weak and spindling; if the weather is so cold and the sashes cannot be lifted they should not have much water.

Plant beans when the weather is settled, and never cultivate them when the foliage is wet. Good varieties are: Early Valentine, Prolific German Wax, Golden Wax, Burpee's Bush Lima, Henderson's Bush Lima, Jackson's Wonder Bush Lima, King of the Garden, Pole Lima; they are best in the order named.

Beets:—Plant from April to the fifteenth of June; transplant if too thick; thin to three inches in rows. For early, Early Eclipse, Egyptian; late, Edmonds.

Cabbage:—For early, Jersey, Wakefield, All Head, Early Summer; start in hot-bed in March. Sow late cabbage from the first to the tenth of May. Kill the black flea in seed bed, and green worm in the field with Pyrethrum applied dry. Two good winter varieties, Succession and Surehead.

Cauliflower:—Sow seed either early or quite late that they

may mature before or after hot weather; they should be grown on the richest and coolest place in the garden. As heads are forming the leaves up over them to keep them white and sweet. Snowball and selected strain of Erfurt varieties are the best; cheap varieties are not profitable to grow.

Carrots:—Plant any time until the fifteenth of June. Do not use raw manure. Early Horn, Oxheart and Danver's Half Long are good kinds.

Musk Melons:—Plant at corn planting time on light soil with southern exposure, five feet apart each way. For family garden I would recommend, Jenny Lind, Wetted Gem, Emerald Gem.

Water Melons:—Plant eight feet apart and give the same culture as for musk melons. Best kinds, White Gem, Hungarian Honey; good varieties of larger sorts are, Ice Cream, Dixie, Florida's Favorite and Kolb's Gem.

Sweet Corn:—Test seed before planting. Early Minnesota, Crosby's Early and Stowell's will mature in succession.

Cucumbers:—Plant five feet apart each way, keep vines picked clean so as to prolong bearing. White Spine, Long Green and Giant Perra are good varieties. For pickling, plant from fifteenth to twentieth of June, Boston and Prolific Pickling.

Lettuce:—Sow thinly in hot-bed and transplant, pinching off large leaves. Good kinds are Hanson, Simpson, Onandago and California Cream Butter.

Onions:—Rich ground, early planting and constant cultivation are essentials. Pull as soon as ripe, as a rain may start them to growing again. Southport Red, White and Yellow Globe are my favorites. Spanish and Italian are good for fall use.

Parsnips and Salsify should receive the same culture as carrots; leaving them in the ground during winter improves them.

Peas:—Plant early and deep; late plantings never do well. Do not use fresh manure. Earliest American Wonder and Champion of England are the best of their class.

Squashes:—Plant summer squashes four feet apart, winter squashes ten feet apart each way. Plant Crookneck for sum-

mer. Sibley and Fordhook are as good, if not better, for family use for winter than the Hubbard.

Tomatoes:—Start in hot-bed; when three inches high transplant to cold frame; set two inches apart; cover cold frame with muslin; transplant to garden about the fifteenth to twentieth of May. Good, purple varieties for early are Fordhook, Trucker's Favorite and Dwarf Champion for general crop. Light colored varieties, Early Ruby, Matchless and Livingston's Favorite. Golden Queen for best yellow. The Ponderoso is the best in quality, but will have to be improved in form before it will become a general favorite.

DISCUSSION.

W. H. Holmes—What do you do with the squash bugs?

John F. Hauser—I know of no remedy of getting rid of them entirely. I put sand or dust on the leaves.

Mr. Taggart—What benefit is it to put sand or dust on the leaves?

John F. Hauser—I do not know unless it is because it grinds their teeth and they do not like it.

S. H. Marshall—Do you raise head lettuce, and if so how?

John F. Hauser—We sow seed in the hot beds about the fifteenth or twentieth of February, and when the plants are large enough we transplant, and we never have any trouble in getting nice head lettuce; it is desirable to get it started quite early.

W. J. Bendixen—I beg leave to differ with Mr. Hauser about his list of peas. The Champion of England is all right but it is too much trouble to grow it. I do not like the American Wonder. I like the Abundance much better, it is easier grown and gives better satisfaction. My Champion of England has mildewed this year. The quality may be a little better this spring, but the price is not any better. I sold peas in September from the Abundance. I sow deep, from three to four, or even five to six, inches. I plowed some in and they were excellent. I expect to sow some this week, I shall sow them five inches deep.

John F. Hauser—I agree with the gentleman, I like the

smaller varieties better, but since we have commenced market gardening our customers want the Champion of England. Late peas must not be planted on too rich soil or they will grow too rank, they will not mildew and they will yield more than the American Wonder.

M. A. Thayer—I have found that wire netting is the best support for peas and it pays to use it. I use the four feet netting. The Champion of England grows six feet high with us. I think you will get one-third more yield if you string them up well.

Q—Mr. Hauser, what in your opinion is the best variety of tomato for the farmer to plant?

John F. Hauser—Fordhook.

Secretary—Mr. President, I call for the discussion on the new monthly magazine.

Geo. J. Kellogg—I think it is one splendid publication and every horticulturist in the state ought to have it.

Secretary—It has occurred to me that perhaps we could obtain subscribers by offering some special inducements in the way of premiums. The Hosterman Publishing Company, Springfield, Ohio, have made us an offer to furnish two of their publications, Farm News and Womankind, on such terms that we could afford to combine them, one or both, with the Wisconsin Horticulturist for the purpose of inducing people to subscribe.

M. A. Thayer—Would it not be advisable to adopt the Minnesota plan of offering premiums? I will be one of ten, or one of five, to give fifty dollars' worth of plants to the first 500 subscribers, or in that proportion, as fast as they come.

A. D. Barnes—I will give the same amount.

Prof. Goff—It seems to me the object of the magazine is not to put money into the pockets of the subscribers but to put some knowledge of horticulture into the minds of the people, and the way to do that is to put something useful and instructive in the magazine. I would urge that we make the magazine original. I wish we might not publish any of our proceedings in it. I think it should be entirely original. I do not see any advantage in giving the same matter to the same set of readers twice. We give our papers and discus-

sions in monthly installments in the magazine and then at the end of the year in the published "Transactions."

Secretary—The decision about this magazine was made at the close of our last winter's meeting, and was made quite hastily, when there were but few there. Mr. Hirschinger had gone home; he wrote to me afterwards that he thought it was "a snap game put up after most of the members had left." And for these reasons I have been anxious for the subject to be brought up at this meeting. I think there must be an effort made to go out and reach the people in the interest of the magazine. I think we can have more pages of original matter if we wish to.

Prof. Goff—It is always experimental to start a new publication. At first it would cost more than after it was established, because after it becomes established the members become contributors, hence the expense of editing would decrease after the first year.

The offer of Hosterman Publishing Company was referred to the Resolutions Committee.

Adjourned.

Tuesday Evening.

Opened with instrumental music, a duet by Mrs. Woodward and Miss Ross, Waupaca.

Miss Hatch, Waupaca, recited "A Forest Hymn," by William Cullen Bryant, and was heartily encored. She responded with "Planting the Apple Tree."

A. D. Barnes moved that a vote of thanks be given Miss Hatch and that she be elected an honorary member of the society for the ensuing year. Motion prevailed.

SWEET PEAS.

S. H. Marshall, Madison.

The *Lathyrus Odoratus*, or sweet pea, is to me the queen of all annuals, and the flower of the many, thriving as it does in almost any good garden soil, with little care, and giving more (I venture to say) in return for the labor spent than any of our numerous and beautiful annuals.

It is hardly possible to compare it with other flowers, but we may say it combines a perfume equal to the mignonette and heliotrope, with a range of colors and shades not surpassed by the far famed chrysanthemum, a freedom and continuance of bloom greater than the geranium or nasturtium, and last but not least when we carry our spraying pump and various insecticides to the rose garden we do not have to stop at our row of sweet peas.

The sweet pea is a native of the island of Sicily, and has been known to the lovers of flowers for nearly two hundred years. Naturally a pink and white flower it has, owing to the perseverance of Mr. Eckford and other skilled specialists, become a flower of various hues, and I presume has much larger blossoms than it had originally.

I have been growing sweet peas as an amateur and in a small way for the past seven or eight years. Four years ago could have come before you with much more confidence than I do today, as I had at that time a succession of good crops and thought I knew something about this flower; a few failures since have destroyed all my confidence, but have given me an experience from which I hope a few here may derive some some benefit.

To begin with, when buying seeds, procure them of some reliable seedsman. Buy a few named varieties in ounce packages, which contain from 450 to 600 seeds and which will sow a single row of twenty feet of all the dark seeded kinds, and about ten feet of the light colored seeds. If an ounce of a kind is more than you want, it will pay you to club together with one or more neighbors and buy them in this

way, selecting the best sorts; but leave the new and expensive varieties severely alone, unless you wish to try a few seeds as an experiment and can start them under cover where you can regulate the moisture and temperature, and then I would only grow them for seeds for next year.

In planting, the ground should be prepared the fall before by removing some six inches of the surface soil, making a trench about eighteen inches wide. Spade over the bottom of your trench and give it a very liberal dressing of manure (old horse manure preferred) mixing it well and leaving it in this shape over winter. In the spring as soon as you can work the ground, put in about an inch of the soil you removed in the fall and on this drop your seeds in two rows about ten inches apart. Put them in thick as they are uncertain and it is easy to thin them out when they are up four inches or more.

This early planting is a very important matter in successful growing of sweet peas, and it is well to remember that you can not plant too early after the ground is in condition to work, and that they will stand a severe frost without injury.

I would cover my seeds about an inch, tramp them down, and then fill in the trench, thus covering the seeds at once about six inches. Most authorities recommend covering your seeds with only an inch of soil and then filling in the trench gradually as the plants grow, but unless your ground is well drained and you use great care in putting the soil back, you are apt to lose most or all of your plants; at least that has been my experience, and the only benefit that I have seen from gradual filling is blossoms a few days earlier than your neighbors. To support your peas there is nothing better than brush five to seven feet long put in between the rows as close as it can be placed; or light poultry netting five or six feet wide makes a very good support, and when well put up has the advantage of being permanent.

To obtain the best results, sweet peas should not be grown on the same ground for two years in succession, but a very easy way to obviate this is the plan suggested by "Rev. W. T. Hutchins," that of planting your double rows from north

to south and about four feet apart, using the ground between the rows every alternate year.

After your peas are up and have been thinned out to about two inches apart and have started to climb the trellis or brush, they need very little care, except a good mulching and the free use of the knife or scissors to keep the blooms and the free use of the knife or scissors to keep the blooms picked off, for you must not let them go to seed if you wish a continuance of flowers.

In August when you find the stems of the flowers becoming short and crooked, if you will take off about six inches or a foot of the top of the vines with the flowers, you will find that this gives them a new start, particularly if at about the same time you can feed them a dressing of liquid manure, after a thorough watering.

Grown in this way there is no reason why we should not have blossoms and plenty of them until quite late in the fall, as a slight frost does not kill the vine nor affect the flower. Before leaving the subject of growing sweet peas I would like again to call your attention to what seems to be the four most important points to be attended to: 1st, Early and deep planting; 2nd, having all your fertilizer under the seeds; 3rd, good mulching, and 4th, not to allow a pod to appear on your vines.

We read a great deal about the loss of vines when from six inches to a foot high, by the cut worm, but so far I am thankful to say they have never bothered me, although I have never taken any precautions against them.

My experience with the numerous varieties is quite limited, but of those I have tried if I could only have one in my garden, it should be the old fashioned pink and white, as represented by that beautiful pea the "Blanch Fessy," and for a pure white there is none better than the "Emily Henderson," which is another American variety and said to be a sport of this same pea.

Most of the Eckfords I have grown have proved themselves very handsome and free bloomers; such are the "Boreatton" (dark maroon), "Cardinal" (scarlet), "Captain of the Blues" (blue), "Countess of Radnor" (mauve and lilac), "Firefly" (scarlet), "Senator" (chocolate and light yellow), and "Orange

Prince" (orange pink). There are a great many more varieties, as any seed catalogue will tell you, and some of them may be finer than these, but any one having a well grown row of all, or a part, of these that I have mentioned, has a garden to be proud of, and one that will give the grower and all his or her friends a great deal of pleasure from the first of July to the first of October.

To those, if there be any present, who have never grown the sweet pea, and may not care to go to the trouble of growing them in the way suggested here, let me beg of you to buy an ounce of seed of some one variety next spring and plant them about five inches deep, in a row, in the sunniest spot in your garden and when they come up just give them some brush to climb on and let them take care of themselves, and I know unless you have some hard luck you will be more than pleased with the result.

WORK AND PROGRESS.

Mrs. C. E. Bushnell, Appleton.

Read at Summer Meeting.

I select the topic "Work" because it is one with which I am familiar. I was born and reared on a farm and became early acquainted with all the phases of industry pertaining thereto, and, in my later years in the management of a farmer's household, I find there is no royal road to ease and comfort. There is still room for labor and plenty of it. I presume this is the experience of most of my sister friends present and the subject may interest them. I could have chosen the more aesthetic and sentimental theme "Flowers," but I will let them speak for themselves, and I am sure they can do so with greater eloquence than I can command. June, of all the months of the year, is the most propitious, and inviting for these beautiful creatures, now in their greatest glory. With glowing skies and well tempered atmosphere she issues her mandate and flowers overspread the earth. Flora leads forth her shining train to the sunlight

and to our inspection, and our eyes revel in their wealth of bloom. This is an engaging scene and I turn from it as I imagine, with some such reluctance, though with quite a different motive, as Mahomet felt when he and his followers turned their camel's heads away from the vineyards of Damascus, declining to enter. He beheld from an eminence the city embowered, as it was, in a wilderness of oriental foliage and shrubbery; a sight most alluring to the eye and sense, and decided that such an earthly paradise was not to be enjoyed by one in search of an heavenly one. My converse now will be upon the old, old theme, worn with usage, work, associated with nature. This subject has an attraction for me because of its elasticity. It can be made to stretch over a vast region of thought. Indeed, it is a great sea, from the shores of which if I can gather a few pebbles I shall be happy.

All things are full of labor, and most of the human kind are formed with a special adaptability for it. Nature is ever on the move. The tides of the ocean ebb and flow. The vapors extracted from this vast reservoir are wafted far into the interior by seasonable winds, where they are precipitated in the form of rain to fertilize and refresh the ground. And the rivers and streams are ever hastening with their burdens of water from the mountains toward the great sea, and so by this continued circuitous process preserving the equality of nature, and supplying by its own methods demands necessitated by past drafts.

The circuit is so complete, the distribution so perfect that congestion rarely becomes a fact. This method, nature's own, ought to point a lesson to man. The great universal mind, that pervades the universe more closely than the atmosphere invests our globe, has so constituted mundane affairs that the work of nature must be supplemented by that of man to make this world habitable and the home of civilization.

When our first parents entered upon their trial career, nature, I think we may safely infer, stood in a much more favorable attitude toward man than it does at present. Her secrets were not withheld, but with open face and liberal hands she was ready to cater to all they required.

It was like a bank, with untold resources that could and would honor all drafts and demands upon it. But unfortunately our progenitors met with a misfortune, to term it as mildly as possible, and really, come to think of what has happened in the last six thousand years, truth compels us to say it was rather a serious misfortune.

Nature from that time assumed another coloring. She is now reserved, secretive. She holds within her grasp today secrets of the utmost importance, while it must be admitted that much that was unknown until very recent times has been drawn from her custody. She has yielded those secrets only to almost unexampled industry and perseverance.

Our Professor Goff, the friend of the gardener and the enemy of the insect pest, if he were not too modest to trump his own praises, could tell of researches, toils and vigils in his own chosen field that would almost put to the blush the hard working farmer and constrain the admittance that he was outworked by the professor.

Ask Prof. Goff and others of our students of nature and they will say that this same nature is appreciative and will respond to painstaking investigation and will richly repay those who, fascinated by her attractions, sit at her feet and pass all the time available in her society. Those professors who have a specific work, in a line that has to do with nature, are to be envied.

But the most successful are restricted to narrow limits. For no person can go over too much ground and gain proper accuracy in his department. We, as non-professionals can, however, interview nature at any part of the field at our own leisure and in our own way, and many a hint shall we hope to gain from this great store house of knowledge, if we with proper humility and enthusiasm apply ourselves to her teachings. The farmers and horticulturists are right at home in her school, and may, indeed, congratulate themselves upon the favorable environments that encompass them. We live in a world of contrasts, a sort of dual world, especially where qualities are concerned. Almost every conceivable thing with a quality has its direct opposite. Thus, we have pride and humility, strength and weakness, virtue and vice,

heat and cold, indolence and activity, and the list is interminable. Any quality is apparently intensified by being set over against its opposite. And conversely, vice is made more repulsive when dragged into the presence of perfect purity. Solomon understood the law of contrasts when he penned those proverbs in which commendable things are placed in antithesis to those worthy of denunciation. Indolence is satirized unmercifully, while diligence in business prepares the way to the presence and favor of the king. Perhaps dignity had a higher value in Solomon's time than in ours, and probably none of us work for the dignity there is in it, still we claim there is dignity in honest labor. Good sense, good judgment and a disposition to make the best of opportunities in every age commands respect, and any person who fritters away his or her opportunities in sloth and frivolity forfeits the same and is held justly in contempt. . . . The law of conformity to type is rigid and unyielding. It is one of the laws of nature that commends itself to the fruit grower and farmer. For by the operation of this law we know that if we plant corn, our harvest will be corn, and if we plant an apple seed, if that seed germinates into a plant and the plant develops into a tree, we shall have an apple tree, not an oak. Now let us indulge in an illusion; we have done so before and such an illusion would be far less apparent than many others. We will change this law, the law of conformity to type. With the long succession of bad lives that have cursed the world, holding this law responsible for these, we naturally wish that such a law could have been suspended or made inoperative in these cases. But our wish is not granted, thus, we have come down to us the types of mankind against which Solomon flung his keen satire. We have the drunkard, the parasite, the glutton and do nothing. We have, just as in his time, the woman who is loud and noisy and whose feet abide not in her house; we have the poor drunkard who has wounds without cause, and who sleeps with fancied security upon the top of a mast, or who in modern times stretches himself, as in his own bed at home, with idiotic fatality upon the railway track before the approaching train, and the result is one from which the sickened heart turns instinctively away. We have

also in view the lazy man, who though he loves to labor, sees in every job that presents itself an enraged and furious lion in a threatening posture panting for the life of the poor victim. Of course such a risk would not, could not, be encountered, so the work remains undone. We have also the self-inflated egotist, wiser in his own conceit than seven men that can render a reason, who scorning advice pursues the way that seemeth right in his own eyes, until the outcome at last is one of extreme sorrow and humiliation, if not entire ruin.

But let us now consider our secondary subject, "Progress". It is almost startling to reflect that only seventy years ago, when this wide northwest was a wilderness, the home of wild beasts and savages, now powerful states with populous cities exist. Homes everywhere abound and the work of the pioneer is nearly ended. Transformation in methods of labor is no less startling. To illustrate by one instance. It is said that in cotton spinning, owing to improved machinery, one man and two boys can now do the work it required 1,100 spinners to do a few years ago.

Methods of travel and modes of conveyance are so wonderfully improved that all countries are being drawn closely together as in one great family, and the world has awakened to find itself confronted by new conditions, involving problems of tremendous import. But while this change in material lines is so marked, taking the world as a whole, the question arises, has there been a corresponding change in individual character? It will help us in arriving at some conclusion, or intelligent impression at least, if we look over the great daily news journals. What we shall find there need not be stated at length, but there will be enough to convince us that Satan is as active as ever, and all men are as yet far from being saints. There is certainly a wide opportunity to improve upon the present conditions. It is observable that, as the different races become by association acquainted with each other, there is not that great difference between them that was once thought to exist. We can no longer say, "We are the people and the rest of the world are barbarians." The Japanese and West Indians show points of culture that we might do well to imitate. The sad fact remains that nations

the most advanced in social, intellectual and moral progress are far below the standard to which it is their privilege to attain. The flowers are perfect in their way. The modest pansy is all that a pansy is expected to be. It cannot well be improved upon in form and fragrance and remain a pansy. The more showy and graceful tulip, emblem of majesty, is also perfect. To confirm this statement we have these beautiful lines of Wordsworth:

"Not one of Flora's brilliant train
A form more perfect can display;
Art could not feign more simple grace,
Nor nature take a line away."

The improvement of animals in the service of man can be expressed by the scale with figures or by the lines and curves of their anatomical structure. But not so with man, made in the image of God, born with such wonderful capabilities. No bounds can be fixed to his possible attainments. The grandeur of his high estate is thus described by the great poet, "What a piece of work is man! How noble in reason! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a God!"

BENEFITS OF LOCAL HORTICULTURAL SOCIETIES.

Mrs. Joseph Treleven, Omro.

Read at summer meeting.

In this day and age before engaging in any business, taking up any new enterprise, or joining any society, the first question which confronts the thoughtful person is—"What practical benefit will I derive from this or that source?" This evening I am to present the benefits of local horticultural societies. These are so many, and so varied, that I will be able only to hint at a few of them in the time allotted to me tonight.

Our society, at home, is only five years old, yet we can already see much good work accomplished and a growing interest in horticulture, floriculture and agriculture. The educa-

tional feature of the local society is an all-important one. We are never too old to learn and whether the society is composed of young people or of older people the meeting together is a practicable means of education. Upon intelligence depends the success of man in any enterprise or undertaking. The farmers need more educational advantages, and these local societies are one of the advantages given him at the present time. We need a wider range of thought than the little circle of our daily work. Farming in this age, holds the domain of intellect, and these associations for improvement must be formed, and attended with as much zeal as a religious or a political meeting, and there is no reason why they cannot be to our horticulturists what our public schools are to our children.

The next benefit I will mention, is the knowledge gained by the experience of others. We live in an experimental age. Ruskin says: "For one person who is fitted for the study of words, fifty are fitted for the study of things, and were intended to have a natural, simple and religious delight in watching the processes or admiring the creatures of the natural universe." The farmer's life is, or should be, a study of things, and if the knowledge gained in his study be given to others, it has accomplished a two-fold purpose. In these society meetings the failures and successes of the different members, along different, or the same, departments of work, are discussed and mutual profit given to all.

Our society has been experimenting some as a society by expending money in fruit vines and shrubs, and trying them on different soils in our locality, for the mutual benefit of all the members. Much information has been gained by experimenting, even though it is on a small scale.

The information gained by the experience of others need not necessarily be confined to horticulture alone. In our society ladies often talk over different ways of doing housework, making bread, cakes, pies, etc., as well as the best way to grow a calla, fuchsia or chrysanthemum. These local societies increase the interest in horticulture. When our society was first organized, it was hard to get enough to hold a meeting. But now all the meetings are largely attended and interest

much deepened. Some of our members who formerly took no interest in raising or caring for fruits or flowers, now raise their own small fruit for family use and their windows are filled with the beautiful flowers which not only please but better mankind, and no one will question the fact that the influence of these beautiful things in nature are restful and refining. And as our hearts are drawn out toward the beautiful so are they ennobled.

We derive much benefit from our local societies socially. We all have the social side of our natures which must needs be developed; and here on one common level we meet and extend the cordial handshake and the friendly greeting and spend a few hours in social intercourse with one another and rejoice in our hearts that we who are engaged in the broad field of horticulture can meet in a social way as members of a Horticultural Society.

I must not neglect to mention the work being done by our State Society. I know if more of our local society members would unite with them, they would be greatly benefited thereby. We can do no greater favor to our friends, who have never attended these meetings, than to call their attention to them and urge an attendance. It is a meeting of practical men for practical purposes, and no one can attend the meetings without receiving benefit far in excess of time and expense of attending. The same is true of local societies.

M. A. Thayer—I move that the ladies who have furnished music and read papers be elected honorary members for the ensuing year. Carried.

REPORT OF COMMITTEE ON AWARDS.

To the officers and members of the Wisconsin State Horticultural Society:

Your committee on awards respectfully submit the following report:

ON VEGETABLES.

Best half dozen bunches radishes:	
W. J. Bendixen, Waupaca, first premium.....	\$1 00
Mrs. T. Rich, second premium.....	50
Best half dozen heads of lettuce:	
W. Shaw, first premium.....	1 00
Geo. H. Davis, second premium.....	50
Best peck of peas:	
W. Shaw, first premium.....	1 00
Chas. Churchill, second premium.....	50
Best half dozen bunches onions:	
W. Shaw, first premium.....	1 00
W. J. Bendixen, second premium.....	50
Best half dozen bunches asparagus:	
Mrs. T. Rich, first premium.....	1 00
Best six stalks pie plant:	
A. D. Barnes, first premium.....	1 00
Best exhibit vegetables:	
W. Shaw, first premium.....	3 00
W. J. Bendixen, second premium.....	2 00

STRAWBERRIES.

Best display of strawberries:	
Geo. J. Kellogg & Sons (53 vars.), Janesville, first premium....	\$3 00
Thayer Fruit Farm (19 vars.), Sparta, second premium.....	2 00
A. D. Barnes (16 vars.), Waupaca, third premium.....	1 00
Best new seedling: (Crosby No. 27.)	
Geo. J. Kellogg & Sons, Janesville, first premium.....	2 00
Best quart for general cultivation: (Warfield.)	
Thayer Fruit Farm, Sparta, first premium.....	1 00
Geo. J. Kellogg & Sons, Janesville, second premium.....	50
Best quart early:	
Geo. J. Kellogg & Sons, (Warfield), Janesville, first premium..	1 00
A. D. Barnes (Sandoval), Waupaca, second premium.....	50
Best quart late:	
Geo. J. Kellogg & Sons (Earle), Janesville, first premium.....	1 00
Thayer Fruit Farm (Gandy), Sparta, second premium.....	50
Best quart Warfield:	
Thayer Fruit Farm, Sparta, first premium.....	1 00
Geo. J. Kellogg & Sons, Janesville, second premium.....	50
Best quart Jessie:	
Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
A. D. Barnes, Waupaca, second premium.....	50
Best quart Haverland:	
A. D. Barnes, Waupaca, first premium.....	1 00
Geo. J. Kellogg & Sons, Janesville, second premium.....	50
Best quart Bubach:	
Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
Thayer Fruit Farm, Sparta, second premium.....	50

Best quart Van Deman:

Thayer Fruit Farm, Sparta, first premium.....	\$1 00
A. D. Barnes, Waupaca, second premium.....	50

Best quart Enhance:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
A. D. Barnes, Waupaca, second premium.....	50

Best quart Crescent:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
Thayer Fruit Farm, Sparta, second premium.....	50

Best quart Wood:

A. D. Barnes, Waupaca, first premium.....	1 00
Geo. J. Kellogg & Sons, Janesville, second premium.....	50

Best quart Eureka:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
A. D. Barnes, Waupaca, second premium.....	50

Best quart Greenville:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
A. D. Barnes, Waupaca, second premium.....	50

Best quart Wilson:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
Thayer Fruit Farm, Sparta, second premium.....	50

Best quart Michel:

Thayer Fruit Farm, Sparta, first premium.....	1 00
Geo. J. Kellogg & Sons, Janesville, second premium.....	50

Best quart Gandy:

Geo. J. Kellogg & Sons, Janesville, first premium.....	1 00
Thayer Fruit Farm, Sparta, second premium.....	50

Best quart Belmont:

A. D. Barnes, Waupaca, first premium.....	1 00
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Best quart Sparta:

Thayer Fruit Farm, Sparta, first premium.....	1 00
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Best three varieties for the farmer:

Warfield, Van Deman, Sparta—

Thayer Fruit Farm, Sparta, first premium.....	1 00
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Enhance, Splendid, Earle—

Geo. J. Kellogg & Sons, Janesville, second premium.....	50
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Best quart for distant market:

Thayer Fruit Farm, Sparta, (Warfield), first premium.....	1 00
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Geo. J. Kellogg & Sons, Janesville, (Aroma), second premium..	50
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Best quart for near market:

George J. Kellogg & Sons, Janesville, (Haverland), first premium.	1 00
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A. D. Barnes, Waupaca, (Greenville), second premium.....	50
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Special premiums were awarded to Geo. J. Kellogg & Sons, Janesville, as follows:

On Wolverton, first premium.....	\$1 00
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On Swindle, second premium.....	50
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On Smith, second premium.....	50
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On Muskingum, first premium.....	1 00
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On Southard, first premium.....	1 00
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To A. D. Barnes, Waupaca:

On Princess, second premium..... \$ 50

Best quart cherries:

A. D. Barnes, Waupaca, first premium..... 1 00

Chas. Churchill, Waupaca, second premium..... 50

F. M. BENEDICT, Waupaca,

JOHN F. HAUSER, Onalaska,

R. J. COE, Fort Atkinson,

Committee on Vegetables and Strawberries.

Best collection house plants:

Mrs. Chas. Churchill, Waupaca, first premium..... \$3 00

Mrs. P. K. Coons, Waupaca, second premium..... 2 00

Best collection native ferns and wild plants:

Miss Frances M. Benedict, Waupaca, first premium..... 2 00

Mrs. W. Shaw, Waupaca, second premium..... 1 00

Best show wild flowers:

Geo. W. Dawes, Waupaca, first premium..... 1 00

Mrs. A. D. Barnes, Waupaca, second premium..... 1 00

Best collection roses in variety:

Geo. J. Kellogg & Sons, Janesville, first premium..... 2 00

Best table bouquet roses:

Geo. J. Kellogg & Sons, Janesville, first premium..... 1 00

Best bouquet roses:

Mrs. T. Rich, Waupaca, first premium..... 1 00

Geo. J. Kellogg & Sons, Janesville, second premium..... 50

Best bouquet white roses:

Mrs. A. D. Barnes, Waupaca, first premium..... 1 00

Mrs. Chas. Churchill, Waupaca, second premium..... 50

Best bouquet other than white:

Geo. J. Kellogg & Sons, Janesville, first premium..... 1 00

Best collection foliage plants:

Mrs. W. Shaw, Waupaca, first premium..... 2 00

Best show pansies:

Mrs. A. D. Barnes, Waupaca, first premium..... 2 00

Mrs. Chas. Churchill, Waupaca, second premium..... 1 00

Best floral design:

Miss Frances M. Benedict, Waupaca, first premium..... 2 00

Best show cut flowers:

Mrs. Chas. Churchill, Waupaca, first premium..... 2 00

Best collection fuchsias:

Mrs. Chas. Churchill, Waupaca, first premium..... 1 00

Best bouquet wild roses by boy or girl under fifteen years of age:

Oscar Bendixen, Waupaca, first premium..... 1 00

Morris Coons, Waupaca, second premium..... 50

MRS. C. E. BUSHNELL, Appleton,

MRS. JOSEPH TRELEVEN, Omro,

MISS JEAN L. HARDEN, Weyauwega,

Committee on Flowers.

Adjourned.

Wednesday Forenoon, June 17.

Carriages were provided by the Waupaca Horticultural Society to go to "The Grand View Hotel," at "The Chain-o'-Lakes," three and one half miles from Waupaca. The drive was a delightful one over the macadamized road. Fine farms with beautiful residences gave unmistakable evidence of the fertility of Waupaca county's soil. Wednesday's meetings were held on the spacious porch that surrounds "The Grand View Hotel." Every convenience and comfort for holding a model horticultural meeting was provided by the courteous proprietors of the hotel. "The Chain-o'-Lakes" has been called "The Killarneys of Wisconsin." The scenery is beautiful. Nature was in her gayest, happiest mood when she tinted the water of the lakes with such a lavish hand, and added so many charms to the landscape. If the eyes of the reporter occasionally strayed from duty, and her pen faltered, it was because one of the most beautiful sheets of water in the state was spread temptingly before her. It seemed strangely at variance with the poetry of the surroundings to put one's self down to the prosaic matter-of-fact work of reporting the saying of those learned and wise in the arts of Wisconsin horticulture, but the work of the day demanded that it must be done, and when President Kellogg's cheery voice said, "let us come to order," we deliberately turned our attention to the first order of business which was:

REPORT OF COMMITTEE ON RESOLUTIONS.

Resolved, that it is the sense of this Society that the monthly magazine recently inaugurated should be devoted to original matter relating mainly to horticulture in the northwest, and that the publication in such magazine of matter intended for our annual "Transactions" should be discretionary with the editor and secretary. Adopted.

Resolved, that we regard the gratuitous distribution of the "Transactions" of this Society as detrimental to its interests, and as the most serious obstacle to its progress and prosperity.

Laid on the table until annual meeting.

Resolved, that this Society extend its sympathy to our long-time active member, Daniel Huntley, of Appleton, in his serious and increasing infirmity. Adopted.

Resolved, that the thanks of the Wisconsin State Horticultural Society are due, and are hereby tendered to, the Wau-paca Horticultural Society, for the courtesies extended at this meeting, and for the efforts made in increasing the membership of our State Society. Adopted.

Resolved, that our thanks are hereby tendered to the ladies who contributed so much to our entertainment at the evening meeting by their music and recitations. Adopted.

The following discussion took place regarding the gratuitous distribution of our "Transactions", and as the resolution was laid over until the annual meeting we give the discussion in full:

M. A. Thayer—Can we pass that resolution and carry it out?

Prof. Goff—It was not intended to restrict the Society. It was offered as a suggestion.

M. A. Thayer—It might be detrimental to the interests of the local society, and so react on the state society.

Secretary—When the legislature is asked for an appropriation of a certain number of volumes they will ask what we are to do with them, and would it not hinder us from getting the appropriation if we should limit the distribution? I would be in favor of a less number in paper covers. I find that people do not care enough about paper covers to carry them home. It has been remarked that this free distribution has been a stumbling block in the pathway of our progress. Now that we have voted to change the plan of the magazine, and more original matter will be published, we will have an advantage that we have never had before.

President—There are two sides to this question. We can distribute to the local societies, but of course that prevents our getting membership in the state society.

Prof. Goff—Would it not be well to state to the legislature that we believe it hurts us to have those volumes distributed

as they have been, and tell them we could do with a less number and would rather have the money they cost to use in other ways?

Mrs. Treleven—Do you not think it would be a greater benefit if some of the money could be used in sending a man out among the local societies to build them up? They are complaining now that the state society does not do anything for them.

Geo. J. Kellogg—I would be in favor of having 4,000 or 5,000 volumes for distribution but I do not believe in having a lot of them lying around in the capitol.

Prof. Goff—It seems to me we are not looking clear through this subject. We cannot have a good society unless we have members. We cannot have a good meeting unless we have good papers. We cannot have good, helpful "Transactions" if they are not helpful—they are of little value; people will not want them because we have not made them of interest to them. We are weakening in numbers and in influence. We have always had a high standard of education in Wisconsin and there is no reason why horticulture should be behind in this state today. It seems to me it is from mismanagement that it is so.

Mr. Perry—I think it would be better to continue the distribution and get membership by the aid of it.

Prof. Goff—It seems to me when we ask a man to join our society we are asking him to contribute one dollar to us, simply this and nothing else; he can get the "Transactions" if he is not a member, and he can attend our meetings and join in our discussions. A good many will think there is no particular benefit to be derived from being a member.

Secretary—People write to me, "We can get your volume of 'Transactions' by paying ten cents postage. What advantage is there in becoming a member?" Minnesota society makes the magazine good enough so they can get subscribers to it, and they now have 500 members. I do not see that it will affect matters any to throw the resolution aside. We can be thinking it over and then act on it next winter.

M. A. Thayer—If the officers of this society have any plan to present to us for the increase of membership and for the

prosperity, I am willing to take it and try it, but without they present some such plan I am not willing to take any such action as the resolution calls for. With regard to the third resolution, I would ask if there is not an action on record, taken by this society some time ago, that gives local societies the privilege of sending a delegate to the state society, or of having some member from the state society visit their meeting, and should not local societies have the privilege of so doing?

R. J. Coe—There was such an action taken and we know it has not been lived up to.

Secretary—Such a motion was made at a former meeting but it was tabled.

John F. Hauser—I am well aware that if we get a member of the state society to come to our local society we get a great deal of good.

Mr. Perry—The question of economy was not brought forward at all in the resolution. It will cost the state society a great deal more than it does now.

Mrs. Huntley—I am interested in this resolution. I feel that it would be much better for us if we could have a state worker visit us in our local society, and do us more good than we could derive by having the expenses of one of our members paid as a delegate to the state society.

Secretary—I believe the local society ought to have money enough on hand to send a delegate to our state society. I think though that this would cut off our representation somewhat at our annual meeting in February. I do think the local societies should do something in return for what we do for them. Mrs. Huntley has it right. The Appleton society has been benefited by having a member from the state society visit them and they appreciate it. There is one thing in favor of paying the expenses of a delegate. You have a delegate come to the state society from his own society and he will come alone, but if you pay his expenses he will bring his wife with him. I think the local societies should do something in return.

Geo. J. Kellogg—I believe the local society that asks for a

member to come to their meetings will be the most benefited, and if they want one to come they should have the privilege of choosing whom it shall be. If they want Prof. Goff they should have him.

Mrs. Bushnell—I speak as secretary of Grand Chute Society. We have money in our treasury, and I am sure we could pay a delegate's expenses to the state society.

A. D. Barnes—I wish to report that I have the names of twenty-two paid up members to the state society.

Secretary—We have lost one of our old, time-honored and valuable members, Mr. Daniels, and I move that a committee be appointed to draft a memorial for him to be read at our winter meeting, and also for Phineas Crosby. Motion prevailed and the chair appointed the secretary and Geo. J. Kellogg as such committee.

Adjourned.

Wednesday Afternoon.

REPORT OF COMMITTEE TO REVISE PREMIUM LIST.

R. J. Coe—We thought best not to make any change in the fruit list at present. We think it is as good as we can make it.

Mrs. Bushnell—The committee on flowers recommend striking out "best bouquet of roses other than white" and "best table bouquet of roses." Adopted.

Geo. J. Kellogg—I move that we increase the number of premiums to four on "bouquet of roses". Carried.

R. J. Coe—One thing has been weighing on my mind for some time and that is, how shall we increase the membership of our society? I was out of the room on committee work yesterday afternoon; if I had met with you I should have presented this proposition, that every member of a local society shall become a member of the state society. The membership

fee shall be one dollar per year and a certain portion of that fee shall go to the state society. This will increase our membership right away, and put us on a sound foundation from the start. Let seventy-five cents of the dollar go to the state society. Of course we cannot compel any member to become a member of the state society, but unless they do that they are not entitled to the privileges of the state society. We need to increase our membership, and also increase the interest in horticulture throughout the state.

M. A. Thayer—How d'd we live when we only had seven or eight local societies? We never had so many members as we have had since we have organized so many local societies.

A. D. Barnes—If we adopt this recommendation then there will be a uniform price of one dollar throughout the state. I most heartily approve of Mr. Coe's proposition.

President—I will endorse the motion providing we enforce the order.

Prof. Goff—The adoption of Mr. Coe's proposition makes all local societies tributary to the state society but does not compel any one to become members; they simply are cut loose from the state society and do not receive any benefits therefrom.

Mr. Floyd—We feel very anxious, in our section of the country, to try to get every one interested in horticulture, because we find it elevates humanity. If those who want to join us cannot pay their dues we pay them for them.

Mrs. Treleven—I do not think you would get ten members to the state society if you should pass that recommendation, because they would think they paid the money and the state society received all of the benefit.

Mrs. Bushnell—I think it is a good move, but the question is whether you can get the membership. I am afraid our local membership would drop right out. I think it would work well for the state society if it could be inaugurated.

Prof. Goff—It seems to me that Mrs. Bushnell over-estimates the danger that might be done the local society when she says she thinks the membership would drop right out. I was once a member of a Grange where I had to pay five dollars for membership and I do not know of a family that was kept out be-

cause of the fee. I do not think it is generally the case that you keep people out of societies because of the membership dues.

Mrs. Huntley—I take much the same view of the question that Mrs. Bushnell does. I do believe if we were to ask for membership dues that it would be a long time before we would get any more members.

W. J. Bendixen—It seems to me these delegates from Appleton do not understand it, or else I do not. I have always supposed the society in Appleton was a very strong and an interested society, but it seems to me now from what these ladies say that they do not appreciate what they have.

V. H. Campbell—I move that this recommendation be referred to the mover to be brought up at the annual meeting for further consideration. Motion prevailed.

REPORT FROM EAU CLAIRE DISTRICT.

By Julius F. Case.

Fruits and Observations in the Northwest.

The season has been very late with us but remarkably clear of frosts; we have not had any frosts to do any damage to our fruit since the first of May.

The second week in May when our currants, gooseberries, plums, cherries and apples were in blossom the mercury went away up in the nineties every day, and hot sunshine accompanied with a hot blighting wind from a little east of south. That week told on our fruit of those varieties; the blossoms were all blasted, nothing left of any consequence; few plums and few cherries.

Raspberries were very nearly ruined with the drouth, so much so that a great many dug their bushes all up. They seemed to be worse on old plantings; my one and two year old patches are not as badly affected as the five year old ones.

There are a great many sprouts or laterals that have start-

ed up from the old stock below where it is killed, some below the top of the ground, and they are loaded with blossoms and fruit; they will be very late, but I think we will have quite a crop if some foolish thing does not come along and blight them. Now strawberries, three weeks ago I knew I would have twelve thousand boxes, now I am quite sure I won't get one thousand. They seemed to look all right when we took the mulching off in the spring, but they did not start to grow. The foliage did not start; they acted backward and shiftless about starting, but at last they put out their peduncles and blossoms and they only remained in blossom one week before they were all gone. That week it rained all the week and was cold and cloudy, and when it rained it just washed every thing. The next week it cleared up and the blossoms were nearly all gone. Now they have commenced ripening; the berries are about as big over as a ten cent piece and the shape of a turban or Turk's cap.

Now if you wise men that are assembled here today can tell me what is the matter, what the cause is and what to do you will confer upon us a power of good here in the north-west.

I am spraying my raspberries with bordeaux mixture. I have gone over them once thoroughly and as soon as they are done bearing shall trim them right away and go over them again. I am bound to win or bust.

Guess I have told you all I know at present. I regret very much that I can't be with you today and have a good social time.

REPORT OF COMMITTEE ON TRIAL ORCHARD.

Whereas the object of the "North-Central Trial Orchard," located near Wausau, is for the testing, in a practical way, the tree fruits adapted to central Wisconsin.

Therefore, your committee respectfully report and recommend the planting of (not to exceed) twenty varieties of the best known, most hardy and productive apples on the plan presented by A. J. Philips; of other varieties of tree fruit, including crabs, plums, cherries, additional apples and any-

thing else determined upon by the executive committee. We recommend that two trees of a kind be planted in continuous orchard rows and that all trees be planted twenty feet apart each way.

In addition to the above we recommend that a commercial orchard be planted for profit, of from ten to twenty trees of a kind, not to exceed ten varieties; this orchard to be planted the spring of 1896, as the farmer could plant if so disposed; that all trees be protected from sun-scald from the week of planting.

The following is the list of varieties recommended for planting the Trial Orchard:

Tetofski, Yellow Transparent, Duchess, Barloff (of Tuttle, Early), Glass Green, Hibernial, Antonovka, Longfield, Switzer, Wealthy, Northwestern Greening, Wolf, Patten's Greening, Windsor, Newell, McMahan, Haas, Scott's Winter.

Your committee also recommend the following list of varieties to select from for the commercial orchard: Duchess, McMahan, Hibernial, Newell, Northwestern Greening, Scott's Winter, Wealthy, Patten's Greening.

Respectfully submitted,

Geo. J. Kellogg.

J. C. Plumb.

Report of committee adopted.

Geo. J. Kellogg—I move that E. H. S. Dartt, Owatonna, Minn., Chas. G. Patten, Charles City, Iowa, and M. E. Hinkley, Marcus, Iowa, be made honorary life members of this society.

Motion prevailed.

DIFFERENCE IN SOILS FOR BLACKBERRY CULTURE.

N. E. France, Platteville.

After reading our horticultural reports on blackberry culture, how easy it was to lay the canes down close to the ground, and cover them with earth, with a little expense next season to uncover them, then tie up, cultivate, mulch and pick the sure crop of berries. We set out a plantation,

mostly Snyder and Briton, with a few rows of Kittatinny, Minnewaski, Stones' Hardy and others. We found that our clay soil, on the ridge, produced larger bushes and roots in proportion than is found in the looser soils of our state; that the expense and labor were far different, especially the last few, dry seasons.

While the plants and roots are small, from one to two years old, we can loosen the soil around them and cover quite easily, but by the time they are old enough to produce good crops, we find it very difficult to bend the roots, especially the Snyders; and with the old plantations of each kind it is impossible to bend the roots, so we are compelled to bend the canes, which breaks some of them. The more the canes have been pinched back to produce bearing branches, the larger the main cane and the more easily it is broken.

I have tried mulching of various kinds. I find a good heavy mulch of coarse manure in the row is as good as any for our soil. The point I wish to emphasize is, that, on a clay soil, or even prairie loam over clay, blackberry bushes old enough to bear good crops cannot be laid down and covered as is done on the more sandy or looser soils.

In seasons that have been favorable to good crops of corn our berry bushes have produced fine crops of large berries excellent in quality.

DISCUSSION.

J. D. Searles—My idea is that, on those soils Mr. France has just described, it would be better to pinch them back. Keep your laterals sixteen inches long, and let the canes stand. We find we cannot lay those canes down on heavy soil without breaking them; they break with me, and I shall try the experiment another year of letting them stand, and see how they come out.

N. E. France—I will show you some of those little roots we grow on our clay soil, and I would like some suggestions or advice about how to lay them down.

Mrs. Treleven—I am interested in small fruits and I know we do not raise many berries unless we cover them, and we do not break many of them either.

G. A. Freeman—I want to ask Mr. France if he has ever tried dividing the hill? I have had to do that sometimes.

N. E. France—I have tried taking a portion of the hill at a time. Some of them will lay down well while some of them will split or break below the surface of the ground.

J. D. Searles—I have tried that same way and I had the same experience Mr. France has. I found they were broken just below the surface.

Mr. McCullom—In a few instances I lost a crop by failing to uncover at the proper time in the spring. Then I tried leaving them uncovered for a year or two and I gained the best results by leaving them uncovered. I got 200 bushels of fruit. I do not lay anything down now. When a plantation gets as large roots as those that are shown here I think it is run out and I would cut out and get a new growth of roots. I live in Sheboygan county. The best results I got was from red clay on the highest part of the field. On my soil they stand up without support; they stand up too well.

Mr. Perry—We grow blackberries for the roots to sell. We never cover. My berries were beginning to dry up and I took the sprayer and sprayed them right in the middle of the bushes and we got a bushel of berries from the little patch.

C. E. Tobey—I think the fruit growers in our part of the country have become convinced of this fact, we cannot grow the Snyder blackberry or the Gregg raspberry without protection. Mr. Hanchett's father has been growing fruit for the last twelve years and his experience has been the same.

Franklin Johnson—I know something about putting down blackberries on very heavy soil. I find it more economical to put four men to the row on those heavy roots. A few years ago Mr. Tuttle advocated letting them stand; finally there came a year when he lost the entire crop and he then said he would never leave them uncovered again. My neighbors sometimes tell me their blackberries come out all right without being covered, but when the dry weather comes on and they dry up they think it is owing to the drouth, while the facts are it is not the dry weather that affects them so much as it is the freezing in the winter.

F. C. Edwards—We cannot always keep them in Ft. Atkinson without covering.

Gentleman in audience—I lost my berries and I covered and mulched. When the dry weather came on I had no berries. I went to buy some and asked who grew them; they told me “Mr. Johnson.” I then went to his place to find out the secret of it and I found out that his berries were surrounded by timber; that is why he can grow berries.

WHAT SHALL WE PLANT NEXT SPRING?

Fred A. Harden, Weyauwega.

We should not be in a hurry to answer this question. Let us take time to consider, to see what we need.

What we sow we reap; what we plant we expect to harvest.

What I propose to plant is something that will be useful to every farmer or to myself.

Every farmer should have a good garden of fruit and vegetables.

I will now take the horticultural side of the question.

What shall we plant? From the delicious strawberry of June to the noble apple of autumn and winter our senses of sight, smell and taste should be gratified. We should select the best varieties and plant with great care. Some will need better care than others, and to this we should give our special attention.

The public in general is prone to forget, during a period of mild and favorable seasons, the great fickleness of our climate and plant half hardy varieties of fruit and give them but little care, if any, then wonder why they did not grow.

I would experiment with new kinds with caution, certainly not with those that had not any better recommendation than those coming from some unknown tree peddler.

I would that every farmer in the state had taste and enterprise enough that he would get good first class trees and plants, know for himself that they are hardy varieties and take proper care of what he buys.

The farmer who intends to grow a good orchard, and all should have a good one, should be a close student of his business.

Many persons find fault because so many trees and plants die, get discouraged and will not plant any more and what has succeeded in living, they will neglect until all are gone.

Now we must have fruit, and if we have it in any quantity, we must raise it. There are hardy kinds that are productive and of good quality too, that will live if given any care. Will any die is the question? Well, yes! some will, but let us plant a little faster than they can die.

Of small fruits I would set enough varieties so I could have fruit from spring until fall. And of apples enough so that I could have them all the year round. There are but few farmers in the state so badly located that they can not raise enough fruit for their families, and at a cost that will make the growing of it profitable if their plants are only planted carefully and cared for.

I think, for market or home use, we should grow only a few varieties of strawberries, such as Warfield, Crescent, Wilson, Enhance and Barton's Eclipse. There are several other varieties, perhaps, just as good for the home and near market but I prefer these because they are the most productive and best shippers. One can experiment with as many other varieties as his time and money will allow.

Now we must plant some raspberries both red and black. Of red varieties, for early, Marlboro; for late and main crop, Cuthbert. There are two new varieties of reds, The Loudon and Columbia, said to be better than anything yet grown, but as I have never grown, or seen, either, I shall not recommend them, but will try them this spring.

Of black varieties, for early, Palmer, for medium, Older, and for late and main crop, Gregg.

Next comes the blackberries; we surely must have them for they are so delicious and always bring such a good price in market. For Wisconsin there is but one kind, The Briton.

There are the currants, grapes and gooseberries, that must not be forgotten, as they are just as luscious as the above mentioned fruits.

We have never fruited very many currants or gooseberries but shall set this spring for currants, Victoria, some Long Bunch Holland, and a few Fay's. Gooseberries, only Downings. Grapes, we should be sure and set early varieties, those that will ripen before the early frosts. A good list is, Worden, Moore's Early, Concord, Brighton and Delaware.

Last but not least comes the apples. Of all fruits these seem to be the most welcome and are sought after by almost every one.

Plant good, hardy and productive trees; without these qualities they are of no use to us. Then added to these we want quality.

Trees of Duchess, Tetofski, Wealthy, McMahan, Hebernal and Haas varieties are very hardy and productive. We can add to this list, Fameuse, Newell's Winter, Longfield, Wolf River, Talman Sweet, N. W. Greening and Sops of Wine.

These are doing well on all good orchard land, but nearly every one has a preference for a variety or varieties.

By setting a few of each that I have mentioned you will soon learn which varieties do the best in your orchard. As fast as trees die plant in others of those kinds that prove the best with you.

All trees that blight badly should be discarded. A few trees each of plums and cherries will not be out of place in an orchard. In closing I wish to quote a few words from the Farm Journal:

“Faith, Courage, Success.

“A word to our folks who are discouraged and almost ready to give up. Please do not give up.

“Hold on, fight on, times will be better—we are sure of it. Plan now and plant in the spring; do the best farming next season you have ever done.

“But please do a big lot of thinking this winter. Somebody has undertaken to do it for you, without your asking them, and a pretty mess they have made of it. They must quit; we'll do our own thinking; and work for our own welfare, knowing whatever is good for us is good for the country at large.

"Be courageous, be patient, be resolute and hold on! The skies will brighten and the day of prosperity will surely dawn."

DISCUSSION.

Geo. J. Kellogg—Have you tried the Kansas raspberry?

A.—Yes, I have. It is about the same as the Gregg.

Geo. J. Kellogg—It is hardier than the Gregg.

Chas. Hirschinger—I want to take exceptions to what Mr. Harden said about the Briton. I have no objections to the Briton but that old Badger will raise more berries than the Briton. The Badger stands up better and is easier to pick.

J. D. Searles—So far as the Briton is concerned it is one of the best in the state and the Badger stands side by side with it. They have equal merit on my place.

Chas. Hirschinger—You may not be able to tell the difference, but there is a difference, and the simple reason that we cannot tell does not answer the question.

Geo. J. Kellogg—Mr. France had a good deal of experience with the Badger.

F. L. Barney—There has been a good deal said pro and con about this Badger blackberry. I was looking up some of our Horticultural Reports and I saw the Briton spoken of as being a wild berry that originated in the woods of Wisconsin. I think that ought to be corrected for it was brought here from England. I would recommend the Western Triumph.

Geo. J. Kellogg—I plowed under the Western Triumph years ago.

J. S. Stickney—This matter was all gone over a year ago when we named this berry. It is said that it was a seedling from the Briton, and I think there are reasons for thinking it is so. There was a neglected patch of blackberries that stood for four or five years. This plant stood in that patch and one year it bore a large crop of fruit, thus attracting attention to itself. There is every reason to believe that the Badger originated from a seed dropped in this neglected patch. It had stood unprotected.

M. E. Hinkley—I want to ask if there is anything certain

about the origin of the Briton? In Iowa we have the impression that it was named for a man by the name of Briton, and I thought that over here in Wisconsin where it is so popular we would find out the truth of it.

J. S. Stickney—I bought the whole lot of a man by the name of Hassum; he named it Briton. I think I got the whole lot. I paid him \$100.00 for it.

Adjourned.

Thursday Evening—Senate Chamber.

Recitation, King Volmar and Elsie, Miss Daisy Converse, Ft. Atkinson.

GIRDLING TO PRODUCE EARLY BEARING.

E. H. S. Dartt, Owatonna, Minnesota.

In a country like ours where apple trees are of uncertain growth and naturally short lived, it has seemed quite essential that we plant early bearing varieties. I settled in Wisconsin in 1844 and I remember that the first planting of apple trees tumbled down in about twenty years. In Minnesota the same rule holds good and a large majority of the trees planted twenty to twenty-five years ago are gone now. Some of them attained considerable size and died without ever having produced an apple. Of course there are many notable exceptions to this general rule, for where hardy varieties have been planted in favorable localities and have been cared for by intelligent, energetic men success has been achieved. This success would have been much greater but for the fact that many of our hardy varieties are slow in coming into bearing. We have frequently noticed that trees that have received serious injury by being girdled by mice or otherwise have blossomed profusely the next season. In the spring of 1894 I girdled a large branch of a tree by removing a ring of bark nearly one-fourth of an inch wide. The next spring this branch was covered with blossoms, whilst on the rest of the tree there were

none. Another limb girdled by the label wire was full of blossoms and a small limb in the orchard thus girdled produced several apples. In the spring of 1895 there being many trees in the nursery from four to eight years old that needed to be thinned out, I commenced to girdle in a reckless way, for if half the trees were killed no harm would be done. Work was continued at odd spells up to the middle of July and recent inspection shows that nearly all wounds are healed over and that trees are likely to bloom freely next season. Most of the girdling thus far has been done by removing the ring of bark just below the limbs. In some cases I have placed wires tightly around the trees which are expected to produce the desired effect the next season. This method I would not recommend even for trial. I have also girdled some trees with a saw which, to my mind, is the most expeditious and practical way. I start in and go down around the body of the tree so that the end of the cut will be several inches lower than the starting point. This will not kill a hardy tree and the saw works just as well on a large tree as on a small one. It is likely that on rapidly growing trees the girdling would need to be repeated every two or three years, while on slow growing varieties it might not be best to girdle at all. I would suggest the month of June as the best time.

In girdling I have noticed one peculiarity; below the girdle there is sometimes no perceptible increase in size and watersprouts frequently start out, while just above the girdle there is much enlargement. A tree girdled last spring measures five inches in circumference below the girdle and six and one-fourth inches above. This would indicate that elements of growth come almost entirely from the atmosphere taken in through the leaves, the roots only supplying moisture, and we may here see how it is in top grafting that the scion so frequently outgrows the stock.

I would not recommend the girdling of young orchards, but where tardy bearers have attained considerable size, and where orchards are closely planted so that there is little room for tops to expand, I believe judicious girdling will be found very beneficial and perhaps the regular annual production may

be partially controlled, and even blight, the great tree scourge of the west, may be diminished by checking the flow of sap to the extremities.

DISCUSSION.

G. A. Freeman—How deep do you remove the bark?

A.—To the thin fibre next to the wood. I commenced a little higher up than where I finished and that left a ring that was not touched. I think about the first of June would be the safest time to take the bark off.

Franklin Johnson—I know of an instance where this girdling has been productive of good results. I know a man who girdled his trees; he did not care if he did kill them. He drove nails into them. The next year he had a good crop of Perry Russets.

F. M. Benedict—I wish to present to you an invitation from our people to visit us next summer. Waupaca county is one of two banner counties in the state for possibilities. We haven't very much yet but we have good territory; we have good ground. We are all standing waiting for you to come up there and give us some good lessons. Our local society wished me to say to you that we would be glad to have you hold your meetings one day at the beautiful Chain-o'-Lakes near the Veterans' Home, and then if you felt you could spend the time for a third day we would make it something of a hurrah day. We think we could get out 3,000 people at the lakes and we would take just as good care of you as Grangers could take care of people. We ask you once more to come up and hold your meeting with us.

Geo. J. Kellogg—Why would it not be a good idea in the distribution of plants to offer a premium to the ones who shall grow the largest number of plants? I think it will help the children and also help us.

Mr. Perry—I understand that the one who furnishes the evergreens gets no benefit from the advertising. I want to know if that is so?

J. L. Herbst—It was understood last winter that there should be no advertising in the packages. The tags gave the name of the donor.

F. L. Barney—It seems to me you ought to send directions for setting out and fertilizing the plants.

C. E. Tobey—Directions could be printed on the back of the tags.

Mr. Perry—What is the reason for this society objecting to a man's putting in advertising matter?

Chas. Hirschinger—I think it is proper for one to speak that has made no offer. I cannot see why you would prohibit a man from putting in his circular. Why shouldn't they who contribute plants be advertised? You are awakening an interest in the school children. I am clerk in a school district. I have been most all of my life. The school children wanted some plants and the teacher told them that I would get them for them; that I knew all about it. So I told the children the plants were there and to come and get them. I did not let you fellows advertise in my school district.

Geo. McKerrow—Ladies and Gentlemen: I can hardly imagine what you asked me to come in here and talk to you for. From the way your president introduced me I conclude that you want me to give you some advice, but I am not a horticulturist, yet if you do not want my advice you need not take it.

In the first place I want to advise the gentlemen here to a certain extent. I have a better half at home who has insisted, for the past few years, that we should have a better garden. Every year I would resolve that we should, but there would come a time when the garden ought to be taken care of and we were busy in the hay, and the result was that a time would come when we would have to have a haying time in the garden. She one day said she thought I was not a success as a gardener. That riled me a little and I asked her if she thought she could do any better, to which she promptly replied that she could and she would do it if I would work in the garden when she asked me to. I agreed to that and the result is we have a better garden.

I am going to refresh your memory a little about institutes. In 1885 the legislature appropriated \$5,000.00 for institute work. After two years the work had made such progress under the management of the lamented W. H. Morrison that

\$12,000.00 was appropriated. In the last institute year which closed in June, we had held 103 meetings. The institute session that is now in progress, we have planned to hold 114 of two days each, the "Round up" of three days, and ten meetings of one day each. Mr. Morrison began the publishing of the Bulletin as a sort of a personal interest. This year the legislature ordered the superintendent of public instruction to provide one copy per library in every school district in the state and that it should be properly bound. I felt that it was almost useless to send to those schools paper covers and so I laid it before the board and the result was we decided to bind this year 12,000 more copies to put into the school libraries. They are sent now to many of the countries of the world and all over the United States; some are sent to Australia and a few to Africa.

You will find us ready and willing to do all that lies in our power to aid you at any time and in any way.

Mr. Perry—I do not think it is very well understood here about that matter of sending the advertising matter with those plants and I would like to have it.

Wm. Toole—I move that any one who is generous enough to supply plants for distribution should have all the benefit that can be derived from it.

J. L. Herbst—I do not see why any advertising matter should be sent out.

W. J. Moyle—I do not see why we should talk around the fence about the matter. It is generally known that it is an advertising scheme.

Motion carried.

J. L. Herbst—Then if advertising matter is sent out they must not fall back on me for postage. The donors must provide for postage on the advertising matter.

Adjourned.

Friday Morning—Senate Chamber.

R. J. Coe—Yesterday and the day before it was our pleasure to have with us delegates from Iowa, Illinois and Minnesota. Today we have with us a delegate from southern Illinois, Mr. Fry, and I move that we make him an honorary member of our society.

Motion prevailed.

Wm. Toole—I move that the ladies who have read papers at this convention be made honorary members also. Motion carried.

Mr. Fry—I thank you very kindly for the courtesy you have extended to me in making me a member of your society, but I wish to state to you that I am a regularly elected delegate from the Illinois state society.

Mrs. Treleven—I would like to extend to you a cordial invitation to hold your summer meeting with our local society at Omro.

THE APPLE PROBLEM.

M. E. Hinkley, Marcus, Iowa.

What wheat is among the cereals of the temperate zone, for human food, the apple is among fruits. How may it be cheaply and abundantly provided for all the people? This question is so important that it can hardly be overestimated. Locally, and in detail, the question may be stated in various ways:

1. Granting that the congenial home of the apple is south of the forty-third parallel, how far north can its profitable culture be pushed?
2. Can we, and, if so, how, assist nature in the development of varieties, suitable in tree and fruit, for our northern borders?
3. Must the hundred millions of people who are destined to live between the forty-third and forty-eighth parallels forever look to the south for their apple supply?

Who shall answer these questions of far-reaching impor-

tance? Life has been aptly called "an eternal struggle" for good. What is to be the outcome of the struggle for apples in our American northwest? In clearing the ground for a statement of our horticultural problem, it is well to remember there is no limit to human attainments. But it is also true that there is a limit to apple production on the north. Somewhere we shall meet the fiat: "Thus far and no farther," but where shall we locate the dead line? We are not yet disposed to abandon hope at the forty-fourth parallel.

In order to understand the present and forecast the future it is always necessary to consider the past. The apple has probably been cultivated for two thousand years or more. The best authorities hold that it has been developed through the union of several distinct types. There is evidence that it was known to the Swiss lake dwellers in the remote past. Early Roman history shows that at that time about thirty varieties of the apple were cultivated in southern Europe. Marco Polo, who published the story of his travels in China six hundred years ago, records his astonishment at finding there a profusion of good apples. We may thank the eternal laws of variation and interbreeding for the manifold forms of this fruit which we possess.

It would be intensely interesting to know just how much we owe to climatic modification, how much to crossing, and how much, if any, man has assisted Nature in reaching the results in apple development which we see in this century. It would throw a flood of light on the pathway before us; for future progress must be made along the ways indicated by the facts of the past. If man has not just begun intelligent efforts in fruit improvement, at least our records of past work are exceedingly meager.

Not much over a century ago lived Van Mous, the Belgian experimenter, and with him our written story of artificial fruit development begins. It is quite likely, if we could study the moldy treasures of Chinese literature, we should find that cotemporaries of Confucius struggled in their day as we do now with the apple problem. There is certainly a strong presumption that apple culture was pushed well to the northward a thousand years ago. The Chinese fruits worked westward

along the great caravan routes and probably first united in the region about the Caspian sea, latitude forty-four to five, with the apples of south Europe; from this combination doubtless sprang the Russian apples, which are profitably grown as far north as the fifty-fifth parallel. And this is the race which today we are testing and interbreeding with our American apples. In the great field of apple development we have many faithful laborers, but not half enough. Wisconsin, Minnesota and Iowa, as well as other states, have persistent experimenters who, with more or less science and system, are seeking to solve the problem.

Following the pathway of cross-fertilization and seedling production with thousands of disappointments, they have scored some so-called triumphs. Often we hear a flourish of trumpets, and someone loudly shouts "Eureka", but experience soon proves that enthusiastic hope has misled judgment. In all cases the new productions are found lacking in some essential element of the future great northern apples. Some of them are valuable for a time; like many of the importations from northeast Europe they have a present value and place which they are likely to keep for a term of years, but their real mission and destiny is to serve as stepping stones to better things. Who will win fame and fortune and the gratitude of unborn millions, by producing the apple of which we dream? It must be as prolific as Ben Davis, and keep like the Soulard crab; as hardy as the Hibernian and at home in all soils, like the Oldenburg; as good in size and color as the Baldwin, and as well flavored as Grimes' Golden. Where is the horticultural chemist capable of assisting nature in the successful combination of these elements? We will welcome something even a little short of ideal perfection.

A study of past work and present effort leads to this conclusion. Time is a leading factor in our problem. Nature is not to be hurried. Jerseys and Short Horns were not evolved in theory nor produced to order. Perfect success in apple breeding waits on a long series of experiments. Perfect success is probably for those who come after us. The fruit breeders of this age are in a labyrinth. We have as yet no art in the business, and barely a scientific theory. We have

no settled plans of work and are groping in an unexplored land. In this struggle against climatic obstacles the elements of the problem to be considered are numerous. They cover the domains of botany, geology and meteorology. Trained minds must elucidate the still hidden laws of plant breeding; they must explain to us all the conditions of plant life, as affected by climatic extremes. Geology must yield its well kept secrets, revealing more fully the intimate connection between soils and vegetable growth. The science of meteorology must reach such a stage of development that it can tell us the causes of climatic extremes, and how to avoid their evil effects; it must indicate and light the way to the great national works of water retention and reforestation, which are probably necessary to climatic equilibrium.

And we must not neglect to keep, and study, careful records of experience in fruit breeding and acclimation. This will save much misdirected effort and the repetition of old blunders. It is the work of this generation to master the conditions. A complete understanding of the problem must precede its solution. Our horticultural scientists today are pioneers and explorers; they are but laying the leader beams for the great pomological ship of the future. The work we are engaged in requires at least three generations. The pioneer generation, which saw its orchards destroyed and first realized that the men of the northwest had a great problem before them, has passed away. We belong to the generation of effort which, after many blind, fruitless wanderings, is just beginning the systematic development of the northwestern apple. The next generation is to be the generation of accomplishment. It is reserved for the boys of today to see the triumph of apple growing in the northwest.

President—Mr. Patten, we would be pleased to have you give us a report of your fruit exhibit at your last state fair.

Chas. G. Patten—If you will pardon me, perhaps my remarks may be a little rambling.

As I have listened to your excellent papers and practical discussions, showing what has been done in your state, and also the very excellent paper we have just listened to, I thought perhaps I might be able to broaden out a little and

give you some thoughts that may show you how you may be able to reach the people in the future. I think we have now reached a point where we need have no fears as to the results of the future. We are just merging upon a new era which the scientific experiments all over the country have inaugurated; we will no longer be conducting experiments haphazard, but will conduct them on a scientific basis.

Pupils in the horticultural department in the universities are taught from the very beginning how to germinate the seed and how to graft, and principles that we never dreamed of. Those boys that are being taught in this way all over the country are soon to be the teachers. I would like to turn the thoughts of my hearers towards the future twenty-five years. We will have a city to the east of us of half a million people. Des Moines will then be a city of 200,000 inhabitants and Madison will then no doubt be a city of 100,000 inhabitants. Who will be the fruit growers for these great cities?

There is a condition in Iowa that augurs great things for the future. I wish to call your attention to what has been done and what is now being done there in fruit growing. Orchards are being planted of 100 to 150 acres and they are not by any means uncommon. One man has the best apple orchard I ever knew and it produced 75,000 bushels of fruit last year. I wish the entire audience that has listened to these papers and discussions could have seen the exhibit of fruit at the Iowa state fair this year. Many of you saw the fruit exhibit at the world's fair, but I must say to you that the wonderful exhibit at the Iowa state fair exceeded it all. The people of the eastern states are soon going to be compelled to compete with the apple growers in the west. In a few years California will have to compete with the pears grown in southern Iowa. In the next twenty-five years we are going to have pears grown in that section that will be as good as any grown in the world. I have already accomplished something that I regard as the most important of anything that has been done in the world, and those seedlings that have been distributed through the country are of more value than anything we have ever had. If you can produce in a tree

something that is better than anything you have ever had you have taken a long step in advance.

This year the State Horticultural society of Iowa has appropriated the magnificent sum of \$1,200.00 for the purpose of experimenting with cross-fertilization. As I said before, we are stepping out in a new era of horticulture in this country. I was surprised last summer in visiting the station of Mr. Dartt. He is altogether too modest in referring to it; he is the father of that station. I was surprised at the number of seedling trees he has there from seeds saved from Wisconsin and Iowa fruit, and I say again, we have entered upon a new era in horticulture.

B. S. Hoxie—I do not know how far we shall be able to progress in this direction. It used to be said that you could never get a machine to set type; that there could not be anything invented that could pick up the type and set it, but we had to take a new departure and now the lineotype casts its own type from the melted metal and sets it. People are now questioning whether we can ever bring about those great principles in nature that we hope to. Mr. Hinkley says there is a limit, and of course there must be the dead line which, I think, is about 48. And so I think that, in fruit growing, we must take a new departure. Just as Mr. Patten says, most of our important inventions had to be wrought out patiently, little by little, and so it may be with regard to our progress in horticulture; it may be that it will have to be wrought out little by little with its disappointments and its discouragements.

THE PEAR TREE ON WISCONSIN SOIL.

W. J. Moyle, Yorkville.

My earliest recollections of the pear tree growing on Wisconsin soil dates back to the time when I was just old and large enough to run abroad from the home nest and get into mischief. At that early stage, or eighteen years ago, a neighbor of ours was the owner of one of the finest pear-orchards in southeastern Wisconsin. In the spring of the year, when the

trees were in full bloom, it was a beautiful sight to behold; was the admiration of the traveler and was pointed to with pride by the villagers (as is every well-kept garden or orchard), it being proof of the possibility of successful pear culture in this state of ours which is subject to such sudden extremes of temperature. The time that this orchard held the greatest fascination for me, in my early boyhood, was in the late summer months when the fruit began to ripen; then it was that I, regardless alike of the strict surveillance of the owner, who considered a small boy a nuisance, or the chidings of my own conscience, would be found in the vicinity of this orchard making and breaking my way through a dense brake of wild plums, black, elder and gooseberry bushes interwoven with barb wire, which surrounded the place. I always managed to get through, though often leaving tell-tale marks on cuticle and clothing and trusted to the tall waving orchard and timothy grass to screen me in my depredations. I successfully eluded the proprietor, but my worthy parents finding me on divers occasions eating "pears" in out of the way corners and knowing that I was a true son of Adam suspected that I had been tempted and resisted not, so orthodoxly speaking they spared not the rod and saved the child. My excuse invariably was that we had no pears while our neighbor had more than he needed. During those painful reminders, of the way of the transgressor, it was that I vowed in my childish heart that when I became a man I would have a pear orchard of my own. The unlawful expeditions referred to were not without their benefits, as they afforded me early in life the opportunity of becoming a discriminating judge of the quality of each kind of pear in the orchard. How well I remember a stately old "Sheldon tree" with its large russet colored fruit! In my youthful eyes they were the choicer when compared with the golden apples of "Hesperides." The average boy is very apt to judge all things in regard to their suitability for his stomach; that insatiable part of his being that is always craving for more; anything from acorn and chokecherries to pears will suit as long as they produce a satisfied feeling. In the following years as I grew to manhood, the old gentleman who owned the orchard described,

seeing the interest I displayed in horticulture, in his fruit trees especially, took me under his wing so to speak and many were the pleasant hours spent with him walking under the very trees that I cribbed from in early life. Many were the lessons I received from his forty years of experience in raising fruit in our latitude, then I learned the weaknesses and good qualities of the trees in the orchard. Here grew Flemish Beauty, Louise Bonne de Jersey, Duchess, Bussock, Clapp's Favorite, Anyou, Sheldon Belle, Lucrative, Seckle, Keiffer and many others; particularly do I remember a Keiffer of twelve years' growth loaded with its bushels of fruit, to such an extent that each separate limb had to receive two props in order to save despoiling the tree.

The Keiffer in spite of its inferior quality of today will in future years be a standard not only of productions but quality; though the producer of the improved strain may change the name, still it will be the Keiffer. A tree so wonderfully prolific as the above named will not be lost. When I began to think of planting my orchard, I was astonished at the prices charged by all eastern firms. They ranged from 75 cents to \$3.00 apiece for small young trees. Our own western nurserymen claimed that they could not be successfully propagated here. I resolved to try my luck at it, in spite of what "they" said. I tried grafting on the thorn, mountain ash, and root grafting, discarding them all in a few years as inferior to budding on pear stocks. I first tried imported French seedlings which succumbed to our southwest simoons although I did fairly well with them. The old gentleman spoken of saved a quantity of Keiffer seeds for me, which I planted. I was surprised to see how well they agreed with their environments. About this time the Japan seedlings were being boomed and I reasoned that if oriental blood was such a good thing for the Keiffer, it surely would be good for all varieties. I procured a few hundred to experiment with. They are an improvement on French stock although comparatively tender. I have demonstrated to my own satisfaction that success is mine and we in the region of Lake Michigan's breezes can raise our own trees and sell to the neighbors at much lower rates than the eastern firms, with

just as strong, sturdy, healthy trees. There are trees in my nursery budded last year on Japan seedlings, that are beautiful little whips of four and five feet which will make fine trees at two or three years of age. I say, let every farmer have an orchard and raise and eat his own Wisconsin pears.

Yorkville, Wis., July 22, 1896.

A. J. Philips, West Salem, Wis.

Dear Sir: Inclosed please find my paper on the pear. My only excuse for not sending it before is procrastination and a multitude of other sins, and work with no let up, but I hope it will be all right.

We have had a fine season here; never saw such a crop of blackberries in my life before and trees are loaded to the ground with apples with very few wormy ones.

DISCUSSION.

B. S. Hoxie—Have you tried keeping the pollen for a number of days and then using it when the trees that you wish to experiment with are in blossom?

W. J. Moyle—No, I never have, but I have been told it can be done.

B. S. Hoxie—If that can be successfully done it will go a long way towards solving the problem of cross fertilization.

W. J. Moyle—I have not had much experience with the Idaho as far as bearing is concerned but as far as my experience has been with growth I should think it would prove hardy.

Q. How long have you had pear trees in bearing?

A. Not long. You see I am a young man and that is why I am so enthusiastic. I have tried root grafting and have discarded it as worthless. I do not think it advisable to plant on low land. You will lose every tree if you do.

I do not recommend dwarf pears, but still I shall plant some for my own benefit. I think if you send off and get Japan seedlings you will be disappointed as I was, for they killed down to the snow line. I am on red clay soil and thirteen miles from the lake. The Keiffer is a very vigorous grower and I have great hopes along that line because I think we will get good growth in our trees. Seeds can be

procured from Japan much cheaper than the French varieties are sold for.

B. F. Adams—I have been trying to grow some pears in Dane county for the last forty-three years, but I have not succeeded to any extent. I had thought that I would not try any more, but in conversation with Mr. Tuttle, six years ago, he persuaded me to try some more and I planted some Idahos. They are all very thrifty but Mr. Tuttle's have nearly all died so I do not feel very much encouraged about raising pears. Still the Idaho seems very hardy.

W. J. Moyle—I do not know the names of a great many varieties that I have. I am young and I am going to learn the names of them if I can.

Secretary—I want to say just a word about grafting pears on the Northwestern Greening. I procured some cions and grafted them on the Northwestern Greening and on the Virginia crab. Two years ago there was a good crop on the Northwestern Greening. I find that by top-working, the wood ripens up better in the fall on the Virginia crab than on the Northwestern Greening. Prof. Goff says these experiments of top-working on the apple are not long lived although they bear well. Mr. Moyle has the right idea. We want something that is hardy and long lived. I am glad we have one man who has some enthusiasm.

W. J. Moyle—I kept on trying to get a stock, and I got the Japan seedling which grows like so many weeds. They bud readily. You are aware that pear roots go directly down. I have not tried root grafting the Japan pear. I have tried the Keiffer but the roots are so tender that when you cut them up so much they are not apt to grow.

F. L. Barney—I started with a few pear trees. I tried Wilder's Early. I protect them with cornstalks. I know of an instance where pears were grafted on the mountain ash, twenty-eight years ago, and every year they get some pears from the tree. This year there were thirty or forty pears on it; the tree is thirty miles west of Milwaukee.

Chas. Hirschinger—I have two apple trees that are growing very rapidly on white elm. I got some seedlings from Iowa that had white elm among them. My eyesight not

being very good I grafted them and they are doing very well.

Chas. G. Patten—I have some very nice seedlings of the white elm. Perhaps Mr. Hirschinger would like them to root graft in. Before you pass this very interesting subject I would like to advance a thought that may be useful. In 1848 or '49, in passing through Burlington, I saw some very nice peaches and people thought they could grow them here as well as anywhere, but we know that in 1850 there was a winter that took them all, and so it will be with your pears. There have been some very favorable winters but there will come a winter that will take them all. I wish to say that the Keiffer will blight and it is not hardy. I will say to the gentleman that he can send and procure pollen from the Longworth and Lincoln. I know of nothing more hardy unless it is a little sand pear. Scientific experimenters now know that seeds taken from the Keiffer pear may produce trees hardier than either of its parents.

J. L. Herbst—I feel rather proud of Mr. Moyle's paper. When we used to go to school together in the university I used to hear him talk about growing pears in Wisconsin and I am glad to see that he is doing so well.

Geo. J. Kellogg—I used to make the statement, and I shall make it again, that every pear grown west of the Mississippi costs us ten dollars a piece, that is outside of the lake influence, and that extends about thirty miles from the lake. I do not believe it's of any use to spend our time trying to grow pears. We have been having peach seasons for the past few years, but look out, we are going to have some seasons that will catch you.

Mr. Perry—You must remember that Mr. Moyle does not recommend the same trial for all over the state or for Iowa or Minnesota. You will notice that he says, all through his paper, "on our soil." Some of you old growers may get some pointers that may set you all to try to grow good pears again.

R. J. Coe—I want to bring before the society the question of publishing the report of our meetings in sections, or in other words the issuing of a monthly magazine. It has been found to be a great advantage to our Minnesota neighbors

and with our plant distribution I feel that it would be much more so to us. I know we are not very flush with money, but I do believe it will be a good thing for us to do it this year and then try to get the state to give us an increased appropriation for it. I move that we, this year, issue a monthly magazine.

B. F. Adams—I would not wish to vote on this question until I could do so intelligently, and to do that I would like to know what the expense would be.

Secretary—I talked with Mr. Latham, and he told me that theirs cost them about \$175.00 extra.

R. J. Coe—We have in our treasury \$100.00 more this year than last year.

Chas. Hirschinger—I do not like to be an off horse always but I think inasmuch as we haven't funds enough to carry on the work that we ought to I think we ought to defer this matter. If we do this someone must be paid for doing it. In Minnesota they have an assistant secretary which we do not have in this state. We have been in the habit of restricting instead of increasing the expense. Now it occurs to me we can get along without this for this year. We have got along without it all our lives. I think next year when the legislature is in session someone ought to prepare a paper showing what the society needs and then ask for an increased appropriation. I think we should get ourselves ready with some plan to bring before the legislature even if we have to talk a little less apple this year.

Mr. Perry—It seems, from what our secretary has said, that this subject was talked about a year ago and has been talked of this year. Now if we put it off a year it will make three years. I think if the state society will go ahead and start this magazine it will not be difficult to get the legislature to make an appropriation for them.

Chas. Hirschinger—You have never appeared before the legislature to tell them how much you needed until this year. When you applied to them they were willing to give you all you wanted and \$1,000.00 or more but when the matter went to the finance committee it was not followed up and it was not allowed.

B. S. Hoxie—I know something of what it costs to publish. If you attempt anything of the kind there will be considerable matter that must be kept locked up in type for several months and that would be an expense to the printers. Now if the state legislature would be willing to step in and say it would give us a larger appropriation to reimburse the state printers for getting that matter in stereotype then we could afford to publish the magazine.

Matt. Anderson—I have had some little experience in getting bills through the legislature. It is a bad time now to ask the legislature for any larger appropriation. I think I succeeded in getting the first one for this society. The legislature believes this work is not done by just your 150 members but by the state at large. Now if you attempt to get up a magazine they will think it is for an advertising scheme and you will not get what you ask. I think the volume as it is will be more benefit than the magazine would be.

Geo. J. Kellogg—The difference between our society and Minnesota is they have an appropriation with which they publish their own magazine. Now I seconded this motion but I believe it is better for us to publish a bulletin for distribution and get it out among the children. The society has not much money.

E. H. S. Dartt—We have an advantage over this society in this way: We get our magazine out and the public gets it while it is fresh. I believe that if you would publish one you could revive your interest and get new members. I do not believe the legislature cares so much about the money as they do the way in which you spend the money. If you can go before them and ask for the money and can show that it is judiciously and profitably used they will be willing to give it to you. You cannot do so much to educate the public with regard to the peddlers and frauds as you can by the publication of a magazine. You can run up the subscription list 400 or 500. Send out the advertisement that they can have the free distribution of plants, if they will become subscribers, and it will win; then go before the legislature and show it to them and it will go through with a rush.

F. L. Barney—I know something of the Minnesota magazine. My copy has been passed over and read by at least a dozen different families. I know that we could reach a great many more than we can with our reports.

Mr. Perry—It would cost considerable to get out an edition but if you would put it in the hands of a man who is a hustler and let him have what he could get out of the advertisements you could afford to do it. Mr. Fry, how much would it cost for a thirty page magazine? You are a publisher.

Mr. Fry—It would cost about \$40.00 or \$50.00 for the type-setting alone. I think it could be published for about \$150.00. These would perhaps be the outside figures for 5,000 copies.

F. L. Barney—I had a little experience in publishing a little quarto and it cost me \$45.00 per month for 2,600 copies.

F. C. Edwards—I had a little different idea from Mr. Anderson. I thought we would publish this for the masses instead of for the members of the society. The thing we need most to do is to bring ourselves in closer touch with the people. I have heard the agricultural society spoken of as "a kid glove society." Now we do not want this feeling to obtain with regard to the horticultural society, therefore anything we can do to reach the people is a move in the right direction.

President—There seems to be a determination among some of our members to publish this magazine; perhaps they are a little too fast; perhaps we need a governor; the engine needs a governor. I hope the motion will pass and we will have the magazine.

R. J. Coe—I hope this society will take action on this question and that we will go on and publish this magazine. I believe we can publish one of sixteen pages.

President—I have understood that the Minnesota society increased its membership by the publication of its magazine.

E. H. S. Dartt—Our society did not increase its membership but I believe your society can by the publication of such a magazine.

B. F. Adams— I think the "twin cities" of St. Paul and Minneapolis helped this magazine by subscribing for about

200 copies, now can we do the same thing here in Wisconsin?

R. J. Coe—Supposing those cities did do that. We have conditions here that Minnesota does not have. With the interest that we have created in our plant distribution I believe we can do it and make it pay.

Matt. Anderson—I do not believe in your going into something and asking the legislature to pay your bills.

F. L. Barney—I believe you can get twenty-five subscribers in my city.

E. J. Scofield—I believe it will increase our membership. I think it can be published for a good deal less than some of you are figuring, and then I believe we can save something in advertisements. I would like to ask what the Minnesota magazine gets for its advertising?

A. \$75.00.

Question called and motion carried.

B. S. Hoxie—I move that the chair appoint a committee of three to see the printers, get an estimate of the cost of publication and report before the close of this meeting if possible, or, if not, in one month's time to the executive committee. Carried.

President appointed B. S. Hoxie, R. J. Coe, F. L. Barney.

Secretary—There is a subject I wish to bring before you in regard to our local societies. We ought to organize 100 local societies this year, but here is a matter that confronts us, we have agreed to pay the expenses of delegates and they are to furnish papers. We can only use ten or twelve papers. We send them our reports but there is nothing to compel them to help us out any. Some of our delegates have cost us twenty-five dollars. Some societies have ten or twelve members while others will dwindle down to about one, perhaps. We have had delegates come here, whose expenses we have paid, who did not even join our society while they were here. I think we should have some plan by which we can make them some help to us. I think a society that has forty members should give us eight.

Adjourned.

Friday Afternoon.

REPORT OF COMMITTEE ON RESOLUTIONS.

Resolved, that we as a horticultural society endorse the action of the farm institutes in placing on the program at each institute a practical fruit grower, as the most direct means of educating our people in the culture of fruit in our state and the proper distribution of our literature.

Resolved, that we recommend the publication of enough bound volumes of the Annual Transactions so that each district school library may be furnished with a copy.

Resolved, that the executive board shall carefully outline work that may involve any considerable expense to our society.

Resolved, that we tender our thanks to the Minnesota State Horticultural society for its gift of 150 copies of the monthly magazine to our members.

Resolved, that the thanks of this society are due and are hereby tendered to the superintendent of public property, C. E. Morley, for the use of the senate chamber.

Having learned with regret of the sickness of one of our most useful and honored members, A. L. Hatch, therefore be it

Resolved, that the Horticultural society now in session tender their sympathy to Mr. Hatch and hope that he may speedily recover so as to take his accustomed place in our horticultural ranks as formerly, and that a copy of this resolution be forwarded to Mr. Hatch.

SOME BITS OF HISTORY ABOUT THE APPLE.

B. S. Hoxie, Evansville.

A few days since I read in a local paper that the apple crop of the United States for the year 1895 was one barrel per capita for the inhabitants of our country. Whether this be a fact or not, wife and I will each take a barrel, hoping every

man, woman and child will get theirs, if they have not already done so.

Among all the fruits of the temperate zone there are none to take the place of the apple, so it may well be called the king of fruits. From July to July again we have them fresh, sparkling and juicy in all shades of color, numbering into the thousands in variety, and each distinct in quality; and, although we are the largest importers of fruit of any nation, our exports of apples for the year 1891, in green and dried, amounted to four and one half million dollars, London and Liverpool taking the larger part of the exports. Canada also ships large quantities of apples every year to the "mother" country. These, in the main, are considered rather better than those from "the states". We cannot attribute this entirely to prejudice, for the fact remains that certain varieties of the standard sorts there arrive at their greatest perfection, and among these we may count the Pippins, a variety called Gravenstine, the King Pom de Fir and Northern Spy.

Canada, including Quebec, Nova Scotia and New Brunswick, had an exhibition at the world's fair of over three hundred varieties of apples. Soil and climate has much to do with the same variety of fruit, and in no kind of fruit is this in so strongly a marked degree as in the apple. We are all familiar with the luscious looking pears and peaches of California, but in all of my tasting of those the exhibitors called their best, I never yet have seen one that I cared to eat when compared with same fruit from our own west or northwestern states. It was an interesting study to compare this king of fruits as I saw it from the different states where the same variety was grown two or three thousand miles apart, or even from Maine to Wisconsin. The Bell Flower, for instance, growing in Washington and Colorado, hardly looked like the same variety grown in Canada or New York, and the quality was nearly lost in its larger size, while the Pewaukee, one of our Wisconsin seedlings, was not only larger and finer in appearance, but equally as fine, if not superior, in flavor grown in Colorado as it is in its native home. Who cares to eat a Missouri Jonathan, though growing so large and fine looking, when they can get one from Iowa or Michigan?

As a rule the rich prairie soils do not produce the best quality of apples of any variety and also as a rule the farther north a given variety will grow the better is the quality of fruit. I think this is notably true of the Fameuse and Snow, for our Canada friends claim the two distinct varieties, while we say Fameuse or Snow.

Degrees of latitude are not always a sure guide as indicating the best apple region, but isothermal lines in connection with the latitude, quality of soil, and the annual depth of snow-fall in the limit of the apple region are more sure tests in the absence of positive trials, and this fact we are beginning to learn in Wisconsin. England, Wales and Scotland, as well as France and Germany, produce some quite good fruit, and Russia must not be left out when from there we have had so many varieties in the last decade, and where the prepotency of the seeds of some varieties produce when planted, nearly, or quite the parent variety. Indeed, so much is this true that the seedlings of the Oldenburg are more like the parent in many characteristics than any other variety we can plant. But for all of this there are no varieties of apples which are so highly prized in the London or Liverpool market as American Pippins and Gravensteins.

At the world's fair I saw, in the month of May, a fine collection of apples from Australia; in size and shape they were about equal to those of the same name in our northern states, but were lacking in color and flavor. These apples were picked from the trees in February, which corresponds to our September, and after a voyage of two months, partly owing to unforeseen delays, they were placed on the tables, but did not stand up or keep as long as those of our own fruit taken from cold storage, although at the first presenting the appearance of fresh fruit. We all admire beauty wherever we see it, but to a boy is there any beauty to be compared to a bright red apple, and especially when his teeth munches the rich juicy flavor of a Jonathan, Northern Spy or a Newtown Pippin? So, for beauty and flavor in apples we must look to Canada, Maine, New York, Ohio, Michigan, Iowa and Wisconsin. I know there are some in our state ready to doubt this and disparage even some of our best; but these statements

come too often from men who are not familiar with our fruit, or perhaps have tried to raise apples of poorly adapted varieties or locality of soil and exposure not suited, and so straightway condemn the whole list and repeat the words "you can't raise apples in Wisconsin," and even some of these same men, after seeing our exhibit at the world's fair in May and then again in September, went so far as to say, "you bought them, for I have lived in Wisconsin twenty years and never saw such apples in the state." This was quite encouraging to a few of us who were doing our best to make a good exhibit, for they were unwittingly paying us a compliment when they did not intend it as such. The editor of the *Prairie Farmer* visited our exhibit a number of times during the fair and I will quote an extract from his editorial the last week in August of that year: "Without doubt the finest show of apples at the world's fair may be found in the Wisconsin exhibit. The great variety of new seedlings, the high and delicate coloring, their perfect form, free from spot or blemish and all shown in the month of August, is a surprise to all, and receives the commendation of chiefs, judges and horticulturists everywhere." I would like to add more from this same article but the extract will show the opinion of men who know, as contrasted with that of those who do not know, what they are talking about when the subject of apples is under discussion.

Notwithstanding the fact that there are more than two thousand distinct named varieties of apples, and many new ones being added to the list every year, we can almost count the few distinctive good ones on the fingers of our two hands. I would hardly dare to boast of our Wisconsin apples but it is nevertheless a fact that we have originated more good varieties which have been largely disseminated outside of our state than any other apple growing state in the union; but whether we ever produce an equal to the Pippin or Baldwin remains to be seen. One of the judges from Canada, after looking over our fine collection of seedlings at the world's fair, and calling again not in his official capacity, said, "you are a long way on the road to perfection."

As I was to give some "bits" of history, we know that the apple has been the favorite fruit for more than two thousand

years, and if we go farther back than that, tradition, as well as scripture, tells us it was the golden apple that tempted our mother Eve, which appeared so beautiful to her that she gave it to the unwise and more foolish Adam with the compliments of the first bride. Greek mythology calls it the "golden apple", and it is pictured with this inscription: "Let the beauty eat me." But whatever opinions we may have about this early history of the first pair, or the "garden" in which they were placed, it is quite certain that the apple was one of the first fruits as food for man. Traditions and quaint bits of prose and poetry we find all the way down in history, and so in Homer's time we find this about the apple:

"The red'ning apple ripens here to gold,
With deeper red the full pomegranate glows,
Here the blue fig with luscious juice o'erflows,
The branch here bends beneath the weighty pear
And verdant olives flourish round the year."

Pliny tells us that the process of grafting was practiced more than two thousand years ago, and he enumerates twenty-nine sorts of apples, including the quince. He also speaks of the introduction of the apple into Great Britain and northern Europe. This was without doubt the work of the Romans who also transplanted the plum, pear and cherry, as well as the box and the walnut. Up to the fourteenth century the cultivation of the apple in England was chiefly done by the priests, in whose gardens the fine transplanted Roman fruits first tempted the islanders with their bloom and delicious fruitage. In this country even we find wherever the priests established a mission they were always mindful to plant out fruit trees, and in Mexico and California we see old orange groves and grape vines, as well as apple trees, where this fruit would grow. For many centuries it was the custom of the clergy of Britain to bless the apple on St. James day, while the custom of wassailing the trees of the orchard on New Year's Eve and Twelfth Night is a very ancient one. This was a time of merry making and the custom was to have wine, nutmeg, sugar and roasted apples. Particular trees in the orchard often received special blessings, and here is one of the songs they sung to these special trees:

"Here's to the old apple tree—

Whence thou may'st bud and whence thou may'st blow.

Hats full! caps full!

Bushel basket, sacks full!

And my pockets full, too! Huzza!"

The only kinds of apples mentioned in English history before the twelfth century are the Pearmain and Custard. The Custard apple is mentioned in a fruiter's bill to Edward I., in 1292, and the price is put down at one shilling per hundred, and though we have left this practice of selling apples, as we now count them in bushels and barrels, but still cling to the count by one's, two's and dozens when we come to oranges and lemons. Cider is first mentioned in 1282, when the bailiff of Cowick, near Richmond of Yorkshire, mentions that he had made sixty gallons of cider from three quarters and a half of apples. The Apple John of Shakespeare has been identified as the Winter Greening and the "leather coats" as our Russetts, Girarde, writing in the sixteenth century, gives this description of the apple orchard and "syder" of Kent: "The tame and grafted apple trees are planted and set in gardens and orchards made for that purpose; they delite' to growe in goode and fertile grounde. Kent doeth abounde with apples of most sorts. But I have seen in the pastures and hedge rows around the grounds of a worshipful gentleman's dwelling twoe miles from Hereford, called Master Roger Badnome, so manye trees of all sorts, the servants drinke for the most parte in other drinks but that which is made of apples. The quantitie is suche that by the report of the gentleman himself the parson hath for tithe many hogsheads of syder. The hogs are fed with the fallings of them which are so manye that they make choice of those apples which they do eat as only the best. But envie sayth the poore will break down our hedges and we shall have the best part of our fruit but forward in the name of God gruffe (gruft) set plant and nourish up trees in every corner of your grounds; the labour is smalle, the cost is nothing, the community which have no lande is greate; yourselvs shall have plentie, the poor shall have somewhat in time of want

to relieve their necessities and God shall reward your good minds and diligence."

This last is good advice for many to follow in our day and why not set out trees by the road side that those who travel may take the fruit in its season. I am told that this custom is almost universal in most parts of Germany, and often seats are placed under the trees for resting places where the travelers may rest and eat all the fruit they wanted, but none must be taken away; and this custom or law is so universal that theft, or purloining fruit, is almost unknown.

While the use of cider is not as common as in good old New England times, the use of apples for eating and cooking is of almost universal practice, and no kind of fruit can take its place either green or dried. Did I say dried? for who among the old or middle aged cannot remember the "apple bees" and the long strings of apples as they were festooned around the old fashioned kitchen in the fall of the year, or suspended on poles overhead, and then to see them hung up in the stores in the same way, as a sign where they were kept on sale; but now-a-days it is "evaporated" that we must call for—another process, but not half as good as the old fashioned kind.

The lovers of any special variety of fruit do not lack for words to sing its praises, but in the whole region of the temperate zones there is no fruit in my estimation which is more healthful than the apple or can be eaten with such impunity as can a good, ripe apple. In my own family when apples could be had, I never was without, whatever the price might be, and in my own case I never enjoy better health or sleep more soundly than when I eat an apple or two just before retiring at night, and this has been my universal practice for years and have urged it upon others, and lately I have read one or two articles from the medical profession recommending the same thing. Why is it that for ages people have eaten apple sauce with their roast goose and baked pigs? Simply because the acids and pectones in the fruit assist in digesting the fats so abundant in this kind of food, but if we want their digestive action more potent after a heavy dinner they should be eaten raw, or a good sized apple before the meal.

Bryant, that great poet who was always fond of his native

country and American scenery, wrote that beautiful poem, "The Planters of the Apple Tree", and I want to give a few verses of it here to conclude this short paper on the apple:

"What plant we in this apple tree?
Buds, which in the breath of summer days
Shall lengthen into leafy sprays;
Boughs where the thrush with crimson breast
Shall haunt and sing and hide her nest.

We plant upon the sunny lea
A shadow for the noontide hour,
A shelter from the summer shower
When we plant the apple tree.

"What plant we in this apple tree?
Sweets for a hundred flowery springs
To load the May wind's restless wings,
When from the orchard row he pours
Its fragrance through our open doors;
A world of blossoms for the bee,
Flowers for the sick girl's silent room,
For the glad infant's spring of bloom,
We plant with the apple tree.

"What plant we in this apple tree?
Fruits that shall swell in sunny June
And redden in the August noon,
And drop when gentle airs come by
That fan the blue September sky;
While children come with cries of glee
And seek them where the fragrant grass
Betrays their bed to those who pass
At the foot of the apple tree.

"And when above this apple tree
The wintry stars are quivering bright,
And winds go howling through the night,
Girls, whose young eyes o'erflow with mirth,

Shall feel its fruit by cottage hearth;
And guests in prouder homes shall see
Heaped with the grape of Cintra's vine
And golden orange of the line
The fruit of the apple tree."

Adjourned.

COMMENTS ON B. W. STRONG'S PAPER ON CHRYSANTHEMUMS.

By Fred Cranefield, Madison, Wis.

If the society does not consider it out of order, I would like to give a few thoughts suggested by the very excellent paper presented last evening. I refer to Mr. Strong's paper on "Mums". The spirit moved me at the time to make some remarks, but as the hour was late and more important topics were waiting for discussion, I concluded to await a more favorable opportunity. To all Mr. Strong said I can heartily say, Amen! The culture of chrysanthemums is outlined with marked clearness and shows an extensive knowledge of the subject. If I were to make any criticism, it would be that it is altogether from a commercial florist's standpoint. He has outlined the method pursued by the trade and it seems to me, if it served no other purpose, it will help to make clear to the people at large that the *secrets* of greenhouse practice are fast becoming public property, as of right should be the case.

The progressive florist of today considers his customer in a different light than did his predecessors. He knows that it is better policy to tell the buyer of a chrysanthemum plant, for instance, how it was grown and how to care for it in its future home that it may bloom and so encourage a love of plants that will lead to future sales, than to remain "mum" and hope that it will soon die and thereby make room for another. Ten years ago such a paper as Mr. Strong's, read before a gathering of those outside the sacred precincts of greenhouse walls, would have been condemned by his brethren as high treason.

To return to my subject, it seemed to me that the paper

didn't strike quite the right spot in this meeting. The lack of responses to that able description of "Mum" culture certainly can not mean that we care nothing for the beautiful Queen of Autumn. My sole object in standing here today is to make another plea for this beautiful flower. Nothing else than my love, I might say adoration, of this flower and all its sisters would have brought me here today, unasked, to take up your valuable time. I am filled with a burning desire to tell you that chrysanthemums may be enjoyed by each and every one of you, if you will only *try*, and they will be made doubly valuable by the knowledge that they are creatures of your own patience and labor. The florist, and the florist alone, with his fully equipped greenhouse, can produce the ten and twelve-inch blooms that the gentleman mentions, but very creditable plants may be grown with no other equipment than a mellow garden spot and a south window. Cuttings root quite readily and may be started as easily as geraniums. When the plants are about four inches in height begin pinching and keep it up until August 1st. About June 1st set these plants in the garden and give them as good care at least as the neighboring peas and potatoes and if you can spare ten minutes each day, caress and coax them, for like the beautiful and queenly, as expressed by the God-given, best part of all creation—woman—they *can* live on foods from the earth alone, but give back to us, transformed and multiplied a thousand fold, our more tender care.

As you have no greenhouse, "lift" these plants carefully about August 15th, in this section, and place them in six or eight-inch pots, or boxes equal in size. Set the pots on the north side of a building or under a tree and water freely and sprinkle daily for two or three days, or until they no longer wilt during the middle of the day. Next, remove them to the coolest room of the dwelling that has a south or west window and keep them here, giving the same care as to other "house" plants, until danger from frost threatens, then remove to the place they will occupy when in bloom. You will find that this gradual hardening will pay. If you are seeking *quantity* rather than quality, allow each bud that sets to develop, but if you wish to arrive as nearly to the florist's perfection as pos-

sible, "dis-bud" exactly as recommended by Mr. Strong. The ordinary garden grown plant will scarcely bring more than eight or ten blooms to any degree of perfection and these can not be expected to attain a size of more than three inches in diameter. However, if I can judge of your sensations by mine, when I beheld in full perfection of bloom, my first chrysanthemum plant, you will feel well repaid.

FORCING VEGETABLES FOR THE WINTER MARKET.

By Fred Cranefield, Madison, Wis.

Forcing vegetables for the winter market is a branch of horticultural industry that is not, as yet, overdone in Wisconsin. In the vicinity of Milwaukee there are less than half a dozen market gardeners who have small ranges of forcing houses for a winter income. None of them consider it an important part of their business. Aside from these I do not know of a single well-equipped greenhouse vegetable establishment in the state. With a population of over 2,000,000 people, all hungry for crisp lettuce and radishes and juicy cucumbers, there would seem to be an opening.

The profits to be derived from the business are dependent mainly, of course, upon the ability of the grower and the location. Compared with flower growing, it is not as profitable, but not every one cares to spend the time necessary to become proficient in growing American Beauties or double violets. Far less capital and less skill are required than in flower growing. A man might build five or even ten miles from a city on land worth \$100.00 per acre and be as favorably located as the retail florist who must of necessity be within easy reach of the market and who occupies land worth many thousands per acre.

A knowledge of the fundamental principles of greenhouse management is necessary and may be gained in a "Short Course" of about twelve weeks. A successful market gardener who is familiar with the management of hot beds can safely begin without further experience. Many different styles of

houses and pits have been recommended for vegetable growing. A common plan is to construct an even span roof, raised but a few inches above the ground, with a trench two or three feet deep and as many wide, excavated through the middle to serve as a path. The heat, in this case, must necessarily be supplied either by steam or hot water and will be all overhead, just the place it is not needed for most crops.

There is also a lack of "head-room" or space from bed to glass in houses built on this plan, the highest part, that directly beneath the ridge, being occupied by the walk. Another and greater objection to these "underground" houses is the limited space within them, making proper ventilation a very difficult task. The moisture and temperature are more readily under control in houses built high and wide than in low built and narrow houses. My preference is for houses 14 to 16 feet wide, with walls 2 1-2 to 3 feet in height, even span, built north and south, with elevated benches, a bench on each side 3 feet wide, with a 2-foot walk surrounding a central bench. In houses of this style, any of the vegetables ordinarily forced, may be grown. They also admit of the flue system being used. If tomatoes are not grown, narrower houses may be built, omitting the central bench. This plan would give houses about 10 feet wide, a bench 4 feet wide on each side, with a 2-foot walk. The varieties of vegetables usually grown for winter market are lettuce, radishes, tomatoes, cucumbers, parsley, cabbage and cauliflower. It will be impossible in so brief an article to give full cultural directions. A few points only will be mentioned.

Lettuce requires a low temperature and an abundance of water in the soil, but none should be applied on the foliage. Fifty degrees Fahr. at night is sufficient and 45 degrees better, with 10 to 15 degrees higher by day. A higher temperature, especially with a moist atmosphere, induces disease. The commonest disease attacking lettuce is the lettuce rot, *Bortrytis Vulgaris*. It may be prevented by maintaining a low temperature and by thorough cleanliness in the greenhouse. The spores of this and other fungi are ever present in the air and grow and multiply upon decaying vegetable tissues. Cleanliness, absolute cleanliness, should be the watch-

word in lettuce growing and in fact in all greenhouse operations. Lettuce does not require bottom heat nor full sunshine. About twelve weeks are required to bring a crop to market size.

The varieties that have proved most profitable to grow in this section are: Grand Rapids, Denver Market, Tilton's White Star and Chicago Forcing, all "loose leaf" varieties or garnishing lettuce. Of these Grand Rapids is the most attractive and most profitable. The varieties that form a head seem to demand peculiar soil conditions that are difficult to attain in this region. Heading varieties are also more likely to rot, require more room and are longer in coming to maturity. Radishes require a high temperature and an abundance of moisture. A steady, rapid growth from beginning to end is required. A crop may be grown to market size in six weeks. Tomatoes require, at all times, strong heat and an abundance of light. A night temperature of 60 to 65 degrees is necessary and 10 to 20 degrees higher by day. They also require strong bottom heat. The plants may be set eighteen inches apart or even closer. From one to three main stems should be trained to stakes or cords and all side shoots pinched out. When the plants have reached a height of five or six feet, the terminal shoot should be pinched out and the strength of the plant will be expended in ripening its fruit. Although the tomato is highly self-fertile, the blossoms require to be artificially pollenized when grown under glass.

Cucumbers demand a higher temperature than any other vegetable grown under glass and are therefore not usually started until midwinter is past. They are generally started in March, to follow the third lettuce crop. The young plants are frequently attacked by powdery mildew, *Sphaerotheca pannosa*. From twelve to fourteen weeks are required to mature a crop.

Parsley does not require a high temperature nor direct sunlight. Diffused light is sufficient to produce a good growth. It may therefore be grown under the benches or in places that would not produce a crop of lettuce or other vegetables. A good plan is to plant seeds out doors in June or July and transfer the plants to the greenhouse in September or Octo-

ber. A plant of parsley, if not cut too closely, will produce several crops during the winter.

The small, early varieties of cabbage and cauliflower may be forced successfully. From twelve to fourteen weeks are required. The luscious strawberry may also be grown under glass. You who grow Prize Warfields and "rejoice and make exceeding glad" when you get 12 or 15 cents per box, are way behind the procession. Growers near New York and Brooklyn would treat with scorn an offer of less than \$5.00 per box, of much less than a quart, at Christmas. Time, patience and skill are required to do it, but it may be done.

This ends the list of vegetables that may be profitably grown under glass. The season begins in August, when the first tomato seeds should be planted, to be followed soon after by the first sowing of lettuce. It ends usually with May, when the crop of cucumbers will be harvested. After this date outdoor and hot-bed vegetables are on the market. I will close by repeating my statement that I fully believe there is a good opening in almost any part of this state in this business, but I do not wish to create the impression that there is an opportunity to acquire an independent fortune in a short time without labor. It is not all sunshine by any means. You who spend your spring and summer days fiercely fighting the codlin moth, bark louse, apple scab, orange rust, Anthracnose, etc., would, if you engaged in this business, be able to continue the battle throughout the year. Downy mildew, powdery mildew, black rot, dry rot, black, white, green and yellow aphides, along with red spider and mealy bugs, all combine to keep one busy. The long winter evenings will be occupied in shoveling coal into the furnace. It is a business that requires patience and painstaking effort. The profits, however, from a well conducted business are somewhat larger than in any other branch of horticultural work. It may be made a very valuable adjunct to market gardening or fruit growing.

B. S. Hoxie—I have been interested for several years in the cultivation of chrysanthemums and I am troubled very much in having too many shoots come up. I want to know

how to take care of them through the winter and if Mr. Cranefield knows how to do this I wish he would tell us.

Fred Cranefield—You do not want to keep your chrysanthemums over from one year to another. After they have done blossoming remove them to the cellar and let them remain until March, then bring them to the light; they will soon send up many shoots; these are what the florist cuts for the new plants. Keep off all side shoots from the new plants and train to a single stem.

Do not think of carrying over the old plants for a second blooming; they will not prove satisfactory.

B. S. Hoxie—What I want is the plant that forms a nice bush; these plants he speaks of are not satisfactory. I want more than one blossom on a plant. I would rather have a number even if they are not quite so large.

W. J. Moyle—I will tell Mr. Hoxie how I succeed in growing chrysanthemums. In the first place I plant them in the garden; we have a clayish soil. We let them grow there until buds are formed, then we take them up and put them in pots; give them a liberal amount of water and shade for a few days and they will soon bloom for the house. I will say that I think the Challenge is the most desirable for blooming. If any of the horticulturists want to please their wives let them get three or four varieties of these beautiful plants.

Mr. Perry—What time of the year does Mr. Cranefield think is the best to start cuttings?

Fred Cranefield—I would suggest they be rooted from the middle of April to the first of May, perhaps May 1st is the best. I know of no method by which you can get a good bush plant by growing one for two years.

Mr. Perry—I have a small greenhouse. I set out fifty chrysanthemums last spring. They grew about four feet high; they were slips in April. I had nothing but six inch pots to transplant them to in the fall. When I took them up I clipped the roots off and put them in the pots. I sold them for a good price.

IRRIGATION.

DISCUSSION.

F. C. Edwards—How many inches of water do you aim to put on?

Prof. Goff—That depends on circumstances.

Q. How many times a year do you irrigate strawberries?

Prof. Goff—Well, that depends also on conditions; sometimes twice a week during the fruiting season. We remove the mulching in the spring for the purpose of cultivating. then we put it back again, and it was on while we irrigated. We made a rude estimate and concluded that, after we had learned how to do it, two men working all day on an acre would take care of it but perhaps it would be better to say three men.

F. H. Chappell—What kind of troughs do you use?

Prof. Goff—We took two fence boards sixteen feet long and nailed them together like eaves troughs. We use stakes to support the troughs; we have holes in the ends of the stakes and put in a pin to hold them together, setting them on the ground, and lay the troughs on them. We run down the length of the bed dropping down the troughs as they run along until when we have run along 200 feet we have dropped to the ground, or nearly so. We have not attempted to work water on a level. The water runs down through the rows. Our ground slopes just enough to carry it; it ought to slope an inch to the rod, and when we lay out our beds again we shall aim to have it. We conduct the water from the lake in iron pipes.

Geo. J. Kellogg—How would you irrigate a ten acre field on level ground?

Prof. Goff—I would divide it into fifty beds. You seldom get perfectly level ground in a ten acre piece.

Prof. Henry regards irrigating as better than spraying.

As a rule, a little dirt thrown in the trough will soon stop the leak; we do not like to have the troughs leak because it makes too much water in a place.

Q. Would a well furnish enough water?

Prof. Goff—That depends on the well. I think it is better to have your bed near a supply of water than to take the water to the bed.

Q. Is not the water from a well too cold?

Prof. Goff—I do not think so. The ground is warm and the temperature of the water is changed as it runs along in the troughs. I do not think it is a matter of much importance.

No doubt there are wells that can be used for irrigating.

Q. Would it not be necessary if a well is used for irrigating to have a large reservoir to store the water?

Prof. Goff—There is no question but the reservoir is of great advantage.

Q. Would it not pay to move the troughs oftener? It seems to me that leaving them so long in one place would put too much water in one place.

Prof. Goff—We move the troughs as needed. I do not wish to be understood as leaving them in one place. Of course there will be some waste. I understand that in the west they provide for this wastage of water by putting out some plant that needs it. We run the water from the first bed, which was a fifty foot bed, into a field where there was grass so that the water was not wasted, although we aimed only to water the strawberries. In the west I have seen water carried a mile or more in ditches without any particular waste as it run along, but their soil is different from ours. We had some trouble with the supports for our troughs and we decided to put in a cross piece next season.

A. N. Seymour—I have a piece of land that I want to irrigate, but it slopes too much.

Prof. Goff—Then run your rows the other way. Since I have become interested in the subject of irrigation I have kept my eyes open and I have frequently seen places where water is running to waste. I saw a case in Waupaca county where there was an artesian well by the side of the road, then on the other side was a strawberry bed where the plants were all drying up for the want of water. In another place I saw a mill-dam where there was enough water running to waste to irrigate a good many fields.

If I was going into the fruit business I would locate in a place where I would not have to pump water out of a well or even to pump it by steam from a lake.

F. M. Benedict—A Californian told me that in some places they were obliged to turn on a large stream of water. Would you advise letting it on and flooding the row?

Prof. Goff—We want it to soak in slowly. A large rain, you know, lasts several hours, soaking the ground thoroughly.

A. N. Seymour—If you put on too much water wouldn't the fertilizers leach down?

Prof. Goff—It might do so but you know it would come to the surface again. On sandy soils there might be too much of a tendency to that. The Smith Brothers, of Green Bay, make a practice of spraying; whether they have tried flowing or not I do not know, but spraying packs the ground down more than flowing does. A two and a half inch pipe, with a little pressure will furnish water enough to irrigate fifty rows.

Chas. G. Patten—Do you apply water between the rows?

Prof. Goff—We think it gets to its place quicker if it is applied along the rows; we make a little furrow along each side of the row and run the water in that. By keeping a part of the ground not soaked up we have a place to walk all the time and we think it better than to keep it all puddled. We aim to cultivate just as soon as we can after irrigating. During the fruiting season the mulch was never disturbed; we found it was very valuable to prevent washing and also to prevent baking.

REPORT OF COMMITTEE TO INVESTIGATE THE FEASIBILITY OF PUBLISHING A MAGAZINE.

B. S. Hoxie, chairman of the committee, reported in favor of publishing a monthly magazine if satisfactory arrangements can be made for the coming year.

F. L. Barney—I think it is important that we get out a monthly just before it is time to set plants; so the children can have the instructions about setting the plants and the care for them. There are people who can write in such a way that it will be interesting as well as instructive to children.

C. E. Tobey—It seems to me we have got this to a practical basis, and if we can push it I think we ought to.

Prof. Goff—I want to ask if any provision is made for the editing? That would be a considerable part of the expense.

B. S. Hoxie—The largest part of it will be edited by the secretary just as he now edits it for the volume.

Prof. Goff—There is one thought that occurs to me and that is, the Minnesota society have given us a very cordial invitation to join them and I think we need such a journal in the northwest. It seems to me that co-operation with Minnesota would be beneficial in many ways.

B. S. Hoxie—Minnesota society has tried it one year and now I think we can go on and try it a year. They have their report published by state aid just as we do. If we should unite it would be a different thing and we may not feel like taking up something which is more like a private enterprise.

President—There is a question that ought to be considered and that is the additional labor devolving upon our secretary. How will you arrange for this?

Prof. Goff—I move that our secretary be the managing editor and business manager of our proposed monthly magazine, and that Mrs. Campbell be associate editor of the same and have charge of the matter published in the magazine other than that which shall be re-published in our annual report, and that her compensation for this work shall be fifty dollars per annum. Carried.

Mr. Cranefield showed some plants in bloom that he recommended because easy of cultivation and every one could have them in their homes; he called attention to the Crozy, Canna and said: "The Star of '91 is a free and continuous bloomer. There is only one so called Crozy, which is the Madam Crozy. This is of the Crozy family and is called Star of '91. I brought the Otahcite orange and the double daffodil here to illustrate how easily every family can have flowers. Start cannas in March or April if you want early blossoms. A dormant bulb that may be cut up like a dahlias or a potato can be bought for fifteen cents. The Crozy is far ahead of the old kinds for budding. I do not see why any one will use the old kinds when they can get the dwarf varieties, besides the Crozy cannas will produce fifteen or twenty blossoms in a season. This has grown from one eye.

B. S. Hoxie—I move that Mr. Cranefield be made an honorary member of this society for one year. Carried.

The report of committee on revision of fruit list was presented by C. E. Tobey and adopted.

F. C. Edwards—I move that a copy of the resolution relating to the farm institutes be furnished Mr. McKerrow Carried.

President—There is a matter that has been laid over and perhaps it might be brought up at this time; it is with regard to re-imbursing Mr. Herbst for his work in the plant distribution for the past three years.

Mr. Perry—I move that an order be drawn on the treasury sufficient to pay Mr. Herbst for his work. Carried.

President—Mr. Herbst, how many offers have you for the plant distribution?

Mr. Herbst—The same as last year with the exception of one person: Mr. Perry has donated the Beaver Dam potato.

Adjourned sine die.

OUR WILD FLOWER SHOW.

By Miss Cornelia Porter, Baraboo, Wis.

In considering the subject of "Wild Flower Shows," it presents itself to me in two phases; the influence past exhibits have had in awakening an interest in our native flora, and the possibilities which lie in future exhibits to make this interest an incentive to learn more about our wild flowers.

Our local wild flower exhibits had their origin in an experiment. Four years ago, in the spring of 1891, a few of our flower-loving citizens conceived the idea of such an exhibit for the purpose of interesting the school children, especially the botany classes, in this work. Accordingly a meeting was called in the west room of the court house to consider the feasibility of having a wild flower show. The ladies were requested to be present, but only one was in attendance. Arrangements were made at this meeting for an "Apple Blossom Show," to be given the 16th of May. Wild crab-apple blossoms were to be made the principal feature of this exhibit. Four premiums were offered:

1. To any member of the botany class for the most tastefully arranged basket of wild flowers, a choice painting.
2. Plants and seeds to the amount of \$1.50 to any scholar for the most tasteful arrangement of wild apple blossoms.
3. Plants and seeds to the amount of \$1.50 to any scholar for the prettiest show of wild flowers.
4. By the Horticultural Society, \$1.00 to any member for the best grown pot plant in bloom.

Owing to the uncertainty of the result of this experiment it was decided to have the exhibit at a private home, and Mrs. Crouch kindly opened her house for the occasion. Since the exhibit was to be given chiefly for the benefit of the schools, only pupils were permitted to make entries for premiums (with one exception, that of \$1.00, given for the best grown pot plant). Early on the afternoon of May 16, the flowers began to come in, and before evening the number of entries

surpassed all expectations. Although the exhibit consisted mostly of wild flowers, yet the display was greatly enhanced by choice cut flowers and pot plants from the gardens and green houses of our home florists.

Encouraged by the large and varied collection of wild flowers and the large number of people in attendance at this "Apple Blossom Show," the Horticultural Society made extended arrangements in the spring of 1892 for a repetition. They decided to hold the exhibit at the court house. The number of premiums was increased from four to eleven. The increase of displays which followed these inducements justified the action. The following year, being the year of the World's Fair, it was decided to postpone the exhibit, but in the spring of 1894 the Horticultural Society again made preparations for a wild flower show. So generously had the pupils responded to the offers of the Horticultural Society at the previous shows, that twenty premiums were offered, five times the number offered three years before. With one exception, the premiums were upon wild flowers, and the fact that of the twenty premiums offered, eleven came from as many leading business firms is significant of the recognition this movement received. This exhibit was the best of the three. One hundred and thirty entries were made, and the court room was found too small to arrange the collection to the best advantage. Nor was the seating capacity equal to the increased attendance.

The above facts show that these wild flower exhibits have been potent in arousing a vigorous interest; yet, this is the least of the good work done.

The botany classes of our High School have used the material of these exhibits to good advantage. Pupils in collecting their flowers, have not only become enthusiastic upon the subject, but have learned to observe more carefully. The finding of a new plant created a desire to know its name; and the name, so often the result of some peculiarity, led to a closer inspection of the plant. Children from the age of seven to seventeen and over have been engaged in this work. In consideration of this fact a suggestion may be made here

in regard to having a primary and senior class of exhibits. The children gather their own flowers and unless a thoughtful parent helps they also arrange them. The effort of these little ones should hardly be judged with those who have had several years of experience in this work.

Not only the children but adults have been benefited by these shows. People came to be entertained but went away surprised at the large number of kinds of wild flowers found in the vicinity of Baraboo. Many a flower of modest color hidden in tall grasses or in the shadow of fallen logs escapes the eye of the careless Rambler through fields and woods; but purpose sharpens the eyes and these retiring plants have not escaped the boys and girls, intent on collecting flowers for our wild flower shows. Each year has brought an increased variety. The late frosts of 1894 must have killed many of the earlier flowers, still this spring found the greatest variety of all. Thus the exhibits that have been given some idea of the range of our flora; and yet, but a small fraction of our flora has been represented. Coming as they have heretofore, in the spring of the year, our shows have brought into notice spring plants only. The majority of our summer and fall flowers are generally unknown. Would it not be advisable to vary the time of the exhibits during successive years, and introduce mid-summer and fall display? At these the fruits of the spring flowers could be given a place. So many plants are recognized only by their blossoms. A display of fruits would to a measure correct this fault. Those who visit the woods from April to November, know that in mid-summer and in September are found some of our choicest blossoms. The fringed Gentian, dainty as it is, scorns the summer heat and opens only to a late September or an October sun. It thrives best when there is a touch of frost in the air. In the fall also are found the brilliant fruits of the Bitter Sweet, the wild Honeysuckle, Jack-in-the-Pulpit, Rose hips and Hawthorne. Such exhibits given at different seasons would give a better knowledge of our plants.

The literary programs, which have thus far been a part of the movement, have added much to the entertainment of the

public; yet, would not the end of these exhibits be promoted if these programs were made up of prize papers, always with a generous sprinkling of music? For example, let there be a call for a paper upon the Hepatica. The plant is to be observed in its habitat, and its habits are to be thoroughly studied. Thus all material must come through observation, and the paper must of necessity, be original. The competitors should be confined to a chosen grade, a date should be set at which time these papers are to be in the hands of the judges. The paper adjudged worthy of the prize should hold a place on the program. Thus some ten subjects could be chosen, one adapted to each grade of our schools including the first primaries. These little folks are capable of much more than is generally credited to them. This plan would involve some tiresome work for the judges, but we presume on the philanthropy of those who have so nobly inaugurated and encouraged this movement for the benefit of the school children, and feel confident there are those among them who would pay even this tax upon their generosity. Certainly this measure would prompt many to take part in a work the value of which cannot be overestimated.

THE CARE OF PLUM ORCHARDS.

Any good corn soil will do for a plum orchard in Iowa. Perhaps the very best location is a gentle northern slope. Do not worry about the soil being too rich, and before planting your trees have it plowed deeply and harrow it very smooth. Set your trees in rows running north and south, sixteen to twenty feet apart between the rows, and ten to twelve feet between the trees in the rows. Be careful to select different varieties that bloom about the same time, and mix them. This will give more perfect fertilization and abundant annual crops. Plant only varieties of the very largest and richest color, especially if you are planting for market, for size and color will sell a fruit better than quality, although it is desirable if we can combine all these points in a commercial orchard fruit. For this climate, our improved natives are the most satisfac-

tory and profitable to plant. They never winter kill, are almost free from disease and bring us paying annual crops. We now have over 200 varieties of these improved natives to make our selections from, and if intelligently made we can pick plums over three months in each fruiting season. I know of no tree fruit in this state that yields so abundantly or is so profitable as these fine native plums. I do but little trimming on my trees, but we cannot give them too much cultivation, and during fruiting give them plenty of well-rotted manure; by thorough cultivation and plenty of manure we can increase the size and quality to a wonderful extent. Nearly all our best native plums overbear, hence the fruit should be well thinned out while yet small. If this is well attended to the balance of the fruit will mature large, fine specimens, and after being carefully hand-picked and put in neat baskets, avoiding more than one variety in a basket, we shall have little trouble in selling them in any market at remunerative prices. In making our selections of varieties we should select so we may have fruit during the entire fruiting season. The very earliest are Milton, Wild Goose and Whitaker. The best for medium seasons are Wyant, Chas. Downing, Hawkeye, Stoddard, Hammer, De Soto, Gaylord, Wolf, Beatty and American Eagle. Miner, Champion, Golden Beauty and Fairchild are the most desirable for a late market. If our horticulturists had planted these splendid natives in place of foreign trash the past twenty years plum orcharding in Iowa today would be out of the experimental stage, and commercial orchards would be as plentiful and profitable as they are in more favorable times. That Iowa has produced so many valuable, large native plums in rapid succession the past ten years seems a little strange, but if we trace effects back to cause we shall discover such results are not from any haphazard chance, but from a deep scientific cause. Our soil and climate has doubtless much to do in producing this superior fruit, but I feel confident that in the long selection and culture by prehistoric man, as well as our present efforts along this line of higher development, lies the true cause. However, I will leave this for another paper.

Iowa.

A. B. Dennis.

SEEDLING PLUMS.

Some of The Prairie Farmer readers have requested our method of raising seedling plums. There are two objects in raising seedlings: One is to get stock upon which to graft or bud valuable varieties; the other is to get valuable new sorts, as new varieties can only be originated by planting pits. The preparation of pits and their care till planting time is very important. If seedlings are desired for stock in budding or grafting, the Miner is perhaps the best that can be used, as this variety seems to give us the most uniform and thrifty seedling. This uniformity, thriftiness and extreme hardiness makes the Miner the ideal stock for nursery use. Gather the pits during the fruiting season by squeezing them from perfect fruit, thoroughly cleansing all the meat from them, and pack them away in clean, moist sand till fall. When it begins to slightly freeze, or a short time previous to freezing, plant them on ground that has been plowed and pulverized. If extensive planting is to be done, use the two-horse corn planter to drill in the pits. If only a few seeds are to be planted, make a little furrow with the garden cultivator, and drill the seed by hand. This completes the work till spring. Then we begin to fight the weeds as soon as possible by giving the ground a thorough surface cultivation. The seeds should be deep enough in the ground to admit of this without endangering or breaking off any of the sprouts that may be starting; if the seeds are drilled in three inches this can be done. After the plants are sufficiently large to mark the rows, give good cultivation at intervals till budding time, which usually can be commenced the latter part of July and continued as long as the bark lifts freely. If the young trees are intended to be used in grafting, let them stand until digging time in the fall; then dig and pack away in a cool cellar till wanted. If seedlings are desired for seedling fruit and new varieties, the same care must be used as here given for stock, but still more care must be used in selecting only the very largest and finest specimens of fruit to secure pits from, and not plant so thickly in the rows. It is also desirable to label



D. C. COOK.

the varieties of pits so you can have sure knowledge of parentage on one side at least; of course, if natural cross-fertilization has taken place, the new fruit may be entirely different from that out of which the pits were taken.

THE COLUMBIAN RASPBERRY.

By R. J. Coe, of Fort Atkinson, Wis.

So many inquiries have been made regarding the Columbian that Secretary Philips has asked me to give a brief history and description of it. It originated with Mr. J. T. Thompson, of Oneida, New York, and is supposed to be a cross between the Gregg and Cuthbert, as these were the only varieties Mr. Thompson had on his grounds. It was raised from seed of the Cuthbert, but propagates from the tip like a black-cap. The illustration is from a photograph of the original bush, taken July 31st, 1894. I stood beside the bush and reached as high as I could, but could not reach the top berries by more than a foot, and the new canes were at least three feet higher than I could reach. I then went from the garden to the field. The first field visited had been allowed to grow without pinching back, and the canes stood about ten feet high and every bush seemed to be a perfect mass of fruit. From there I went into a field of fifteen acres where the canes had been cut back to seven feet, and it was a sight worth going a long distance to see. The fruit is quite dark in color, resembling the Shaffer in this respect, but with smaller seeds, and is much more firm than that variety. Its color would seem to be somewhat against it for market, but on the fruit stands of the town where it originated it was out-selling anything they had in competition with it.

We fruited it last year, and I certainly never saw so good a crop on one year plants of any kind, and that, too, after one of the hardest winters I have ever known on all cane fruits. They received no winter protection whatever and still came through in fairly good condition, much better than either Gregg, Palmer or Shaffer, in the same field. Secretary Philips reports a very satisfactory crop on the few plants he



THE COLUMBIAN RASPBERRY.

had, and says Mrs. Philips calls them fine in quality. We sent plants to Minnesota and other states, and every report we have had from them is very favorable indeed. We now have about an acre and a half of them, and shall leave them unprotected again this winter, and will then make a report as to how they stand our Wisconsin winters compared with other varieties.

REPORT ON THE NEW TRIAL ORCHARD AT WAUSAU
IN MARATHON COUNTY, WISCONSIN.

By A. J. Philips, Secretary.

I have decided to appropriate sufficient space for the report of the new trial orchard at Wausau for the following reason: As the legislature of our state appropriated the sum of five hundred dollars in the winter of 1895—to locate, plant and maintain said orchard, it is a duty we owe the members of said legislature and to the tax payers of Wisconsin to publish for their perusal the manner and objects for which said money has been expended, before we ask for appropriations to further maintain the same or to locate other similar orchards, one of which in my opinion should be in Taylor or Clark county and another in Langlade or the next county to the east. It might be well here to mention the fact that for many years the farmers of Wisconsin, at least those who had a desire to raise apples, have been continually swindled—and large amounts of money have each year been taken from the state through the purchase and planting of southeastern and southern grown trees that were not adapted to the severe climate of the northwest. The State Horticultural Society having abundant evidence of these facts asked for the above appropriation in order to locate and maintain the aforesaid trial orchard where the so-called hardy varieties of apples and plums could be tested and those that were found sufficiently hardy to live, and bear fruit could be recommended to all of the state south of said orchard—and for a short distance north of the same, and the only question of its value

will be the manner in which it is conducted—and whether the farmers will communicate with the officers of the state society or read the monthly magazine and the reports of said Horticultural society and learn—before they expend money for apple trees—whether the same are sufficiently hardy for their several locations and productive enough to be profitable for planting and caring for by them. After the bill making the appropriation was passed, Prof. Goff and the writer were appointed a committee to select and lease a site for the same, on or about the latitude of Antigo, Merrill and Medford and sufficiently far from the eastern boundary of the state to be away from the influence of bodies of water. Accordingly the latter part of April, 1895, we went to Langlade county and made a very thorough examination in the vicinity of Antigo but found the best sites too far from the railroad to be available; we then went to Lincoln county and examined the country near Merrill; the best site we found was on the farm of Hon. David Finn seven miles from Merrill, but by this time we found that warm weather was coming so rapidly (some two weeks ahead of ordinary years) that it would be impossible to make a proper selection of site and trees and do the planting that season so we postponed the work until late in the season. At the time we set for our next trip Prof. Goff's duties at the station called him to Colorado, so the writer went alone.

Made examinations at Phillips, in Price county, Medford, in Taylor county, Marshfield, in Wood county, and Wausau, in Marathon county. The first point I found new and rather too far north; at the second I did not succeed in finding a good site that was obtainable near enough to the city, though here I found a young man, a Mr. Ramm, well suited to the work of caring for the orchard; at the last place I found good sites both east and west of the city, near enough to be practicable. October 15th was the next time set for this work and President Kellogg invited to go along. Prof. Goff being again called away on other business, Mr. Kellogg and myself visited the city of Wausau and after considerable examination made choice of the present site, subject, of course, to the approval of Prof. Goff. In November I closed the contract for ten acres of land for an annual rental of \$5.00 per acre for the

land we used. Prof. Goff was not present, but the lease and specifications were submitted to, and with some changes approved by, him. The expenses up to this time were about \$157.00. At the annual meeting of the society in 1896 three plans were submitted and approved for the planting, which will be explained later on, and the writer selected to order the trees and attend to planting the same. Accordingly the last week in April I went to Wausau and commenced operations, having previously ordered the trees to be all shipped about the same time. The first plan submitted was the same that I have used in my orchard for years, to-wit, to first set a tree on its own roots. Sixteen feet from that set three to five root grafts of same variety, expecting to leave the best one to grow and bear fruit, and next set a Virginia crab or other good stock to graft on, the same to be top worked at the suitable time with the same variety as the first two, then repeat, so that there are six trees of each variety, to-wit, two trees, two root grafts and two top worked trees. In this way I set fifty-four trees or nine varieties, to-wit, Wealthy, Newell, Okabena, Windsor, Utter, N. W. Greening, McMahan, Longfield, and Patton's Greening, the intention being to have this mode of planting repeated for three to four years, so that at the end of that time there will be practical object lessons, as to which plan is best to pursue with those different varieties. Duchess, Hibernial and Tetofski were not included, as we know they are hardy enough on their own roots.

The next plan proposed by a committee and adopted by the society was to plant two or more varieties of our known hardiest trees, about twenty of each kind for a commercial orchard to test whether that would pay in that locality. In dividing the plat I found that thirty-six of each kind would make seven rows so I adopted that number. I also adopted the plan of buying those thirty-six trees of four different men grown at four different places on four different soils, to show which trees were best on that class of soil of which there is so much in northern Wisconsin, on which was formerly heavy timber. For instance, after the first row on the west which were set with Virginia crab to be top worked, the next two rows were set with Hibernial. The first nine were bought of

the Jewell Nursery Co., of Lake City, Minn., the second nine of Charles Hirschinger of Baraboo; the third nine of Messrs. Hatch & Co., of Sturgeon Bay, and the fourth nine of Geo. J. Kellogg & Sons of Janesville, so on through the list excepting Repka Malenka, they all came from Mr. Hirschinger, as he was the only nurseryman that could furnish them of suitable age. I will not take space for all these varieties which consisted of Hibernial, Duchess, N. W. Greening, Longfield, McMahan, Wealthy, Repka, Newell, Wolf River, Peerless, Okabena, Hoadley, Avista, and Patten's Greening. Of the latter six varieties only parts of rows were planted. To show I patronized several different nurseries I bought Longfield of Kellogg & Sons, A. D. Barnes, J. M. Edwards & Son, and Hatch & Co. The third plan was proposed by the committee and was to set for trial one or two trees of a kind for experimental purposes to be donated by those wishing the tests to be made. Of these six rows of eighteen trees were set furnished by the Lake City Nursery Co., A. D. Barnes, Prof. E. S. Goff, Geo. J. Kellogg, A. J. Philips, J. P. Andrews, G. C. Patton and Prof. J. L. Budd. In all 595 trees were set, securely staked, tied and mulched, and since that time lath protectors have been put on all. After setting I went over the entire lot and pruned them as I supposed, sufficient, but after the various reports of feeble trees and plants caused by previous years' drouth came to me, and after spending a day at Ripon with Mr. Winans, who planted and pruned 780 acres of apple trees in Missouri last spring, and examining how he pruned the sixty set by him at Ripon, I concluded I had not pruned severe enough, so in the latter part of June I went to Wausau and went over the entire lot again. The results, after an examination made by myself in November of this year, are, I find only twenty vacant places. Still there may be more next spring. I find about fifty grafts can be put in next spring, but the bulk of grafting will be done in 1898. The trees look well and many made a very good growth for the first season. A number of practical men of that county have visited the orchard and are pleased with its appearance. A. D. Barnes of Waupaca, is the only one of our members who has visited and examined it, and I will ask him to give a short report of

it at our annual meeting. The expenses so far foot up about as follows: Locating, \$157.00, expense of trees, freight, planting, hired help up to May 15, \$146.23; of this latter \$11, fifteen dollars was paid in advertising in our magazine,—care of trees, cultivating—protectors, and putting them on up to December 1st, 1896, \$107.09. There will be due for rent April 1st, 1897, \$30.00, making a total up to that time of about \$440.00. These figures may vary a little, but they are about correct. Now as the matter of appropriations to keep this work going, to decide who will do it and any new plans or details for future planting will all come up for discussion at our next annual meeting, I thought it best to publish this report at this time so that the members and all concerned will have ample time to think it over and give their views concerning it. It is not an easy matter to decide when such an orchard is best located in a state like Wisconsin where there are so many orchard sites as there are in the northern part of the state, and in locating it I was guided only by my own judgment and the advice of Prof. Henry who said, do your duty for the best good of your society and future tree planters, regardless of whom you may disappoint or displease. Therefore, all the foregoing is respectfully submitted.

RIDING A HOBBY.

By A. J. Philips.

A man once came from Boston and bought a farm in western Wisconsin, La Crosse county. After making some improvement his wife and daughter came to live with him, but they did not enjoy frontier life and returned to the city. He remained and lived alone for years. One day a minister called and found fault with the old man's mode of living, and called him a hermit. This made the old man mad, and he ordered the man of God to leave his premises. After he left the old man took down the dictionary and found the meaning of hermit was one who lived in seclusion for the purpose of religious enjoyment—one bound to pray

for another. He told me that that was just what he was doing, and asked me to write an apology to the minister, which I did. So when I found that a young man was circulating circulars through the mails charging me with riding a hobby, I thought I would consult Webster before getting mad, and was glad I did, for I found the definition to be any favorite object, that which a person pursues with zeal or delight. I found that explained my attitude in apple growing in a cold climate. Webster stopped short of the word profit, and many hobby riders do the same. That it has been a favorite object of my life I cannot deny, and I inherited it, for my father taught me to do grafting before I was fifteen years of age (before said young man was born), and the first farming he instructed me in, in Jefferson county, Wisconsin, in 1851, was planting some apple trees that died the next winter, for they were tender kinds. My father continued planting with some success until about 1868, and I pursued other lines. But about that time the late P. A. Jewell spent three nights with me. It was about the time he established the Lake City nurseries. He was enthusiastic in growing apples in the north—was, as the young man says, riding his hobby. He was then delivering trees, and before he left me he had me well mounted on his favorite hobby, and which I have been riding quite a portion of the time since. Now I can not find that it is a crime, neither has it been very profitable, though it now pays better than it did years ago.

In 1884 I dismounted and thought I would mount another, to-wit: sheep growing in Dakota. I was there only a few months when my tenant wrote me, saying the hill is white with blossoms, if you could see it you would not trade it for all Dakota. The short pastures and the bearded needles that would get into the wool and some times into the sheep's body, kept me from mounting my new hobby, and I returned to Wisconsin to remount my old one with renewed energy and zeal. That was the winter I was away and the only meeting of the state society I have missed since 1870. I was a paid member of the Minnesota society

for eight years, so it has cost me over thirty dollars in memberships besides no small amount in traveling expenses and hotel bills, all for what—just to follow my favorite object and solve the problem how to grow apples in a cold climate; or, as the young man expresses it “riding my hobby.” I know of men who are free to criticise, who never spent two dollars in the Minnesota or Wisconsin Horticultural societies in their lives. A man who does not believe that you can successfully grow apples in Wisconsin said to me last fall: “What have you ever made riding your hobby of apple growing?” He said: “I know you can grow apples, but the price is too low to make much.” I said I rode my hobby to the top of the hill and found it the home of the apple—found that spring frosts let me alone. I rode my hobby until I found that top grafting on good suitable stocks increased hardiness, longevity and productiveness, and my orchard is getting better every year. That by sticking zealously astride my hobby, I have now the most promising lot of top worked trees I know of in the state. But that just how much I have made or saved I can not tell. I said I’ve raised six children; four boys and two girls, all healthy and not one seems to hanker for tobacco, beer or saloons, nor cares for any one that does. They have never cost sixty dollars for doctor’s bills, and they have eaten and used as much home grown fruit as any six children in Wisconsin of their ages today. I give plenty of apples much credit for this showing. So it is hard to tell how much I have made riding my hobby. I will say to the young man, I am still riding it. I took a pleasant stroll through the orchard yesterday (Dec. 11th)—nice and warm—cut some cions to send to a man in Minnesota who is riding the same hobby. I cannot help, as I grow older, liking my hobby, and when the young man rides his as long as I have, he will like flowers as well as I do apples. My zeal, earnestness and practice in riding my hobby has helped me to form the acquaintance of some of the best horticulturists in Wisconsin, Iowa, Minnesota and Illinois, to whom I am indebted for much valuable in-

formation. It enabled me to spend six months in the pomological department at Washington at a fair compensation and transportation four times over the road. It enabled me to visit Iowa, to look up the Malinda apple, the grafts of which I brought home with me are now bearing fruit. My tenacity in sticking to my hobby enabled me to visit the following old noted seedling trees, to-wit: The Wealthy, the Wolf River, the Peerless, the Okabena, the Bret No. 1 and 2, the Wightman, the Veteran, the May, the Jenny, the Randall 21, the Whitney No. 20, the Door, Lillie, Minnie and Bay, the Windsor, the Eureka, the Raycraft, the Avista, Murphy's Blush and Prichard, and the last visit I made a little over one year ago with the late lamented Wm. A. Springer was to see the old Ratsburg tree. We rode the same hobby to try to successfully grow apples in the cold north.

Many men ride hobbies. If I had never ridden one I would not have been called on to help locate our new trial orchard, nor I would not have been complimented by Prof. Goff in proposing my name to attend to planting the same. I visited Uncle Daniels a few weeks before his death and he was still zealous praising his favorite, the N. W. Greening. He came close to me with his sightless eyes and said: "I cannot see you but I know your voice. I have six apples in the cellar I want you to have, and oh, how I wish I could see to go out and show you my old Greening trees." Now many planters are saying "God bless the old man's hobby." Uncle Lord, of Minnesota City, is still busy riding his hobby of successful plum growing. Uncle Tuttle, though over eighty years of age, and Prof. Budd, still are zealously riding their Russian hobbies and we all wish they may find something among them that will be of value for the northwest. Another man who is so in earnest riding a favorite hobby that he scarcely smiles is G. C. Patten, of Iowa. To produce valuable varieties of new seedlings is his study and delight, and I can only wish him success. Another I think of so absorbed and so in earnest in his favorite hobby that you would take him for a rector of

some church is my friend A. O. Barrett, of Minnesota, and his hobby is the preservation of our native forests. Mr. Zettel, the grand old fruit grower of Sturgeon Bay, who has brought out so many beautiful seedlings, still rides his hobby, for when I visited him last I found him planting apple seeds. My friend G. J. Kellogg, who has said and done so much for the public in testing and growing plants, has ridden his favorite hobby until he pictures his strawberry larger than the wheelbarrow or the man who is propelling it. Uncle Loudon will ride his hobby of new seedling berries when he is suffering acute pain, and seems just as zealous with the Loudon as he was in his younger days on the Jessie strawberry and the Janesville grape. Uncle Chappel, of Dane county, talks incessantly of his hobby, that of supplying moisture to prevent blight and secure growth, and the proof he has of its value is that when he takes his apples to the state fair he usually takes his full share of the premiums. The quality of his fruit bears testimony that he does not ride his hobby in vain. Edson Gaylord, of Iowa, has sunscald for his hobby, and one night I slept with him he talked me to sleep at 2 A. M. Uncle Harris has a hobby similar to mine, to find all the new things and utilize them so that future planters may be able to obtain the very best. No, I cannot for the sake of office or compliments, give up my hobby. It does not wear out, for I want my boys to mount it when I have done, and if they ride as studiously and earnestly as I have they can have one of the best orchards in the northwest. I am constrained to say, what is a man good for unless he has a hobby, and God bless the hobby rider, my young friend to the contrary notwithstanding.

THE NEW HORTICULTURE.

I have been much interested lately in reading Mr. H. M. Stringfellow's book on the above subject. To think of the time I have spent all these years bending my back to straighten out and save all the roots possible in planting apple trees when according to the new discovery it would have been better and far easier to have cut off both roots and top and set the stub firmly in the ground to send down a new root system. Mr. Wyman Elliott of Minneapolis informs me that he saw a large pear orchard in Texas, that the trees were planted in that way and that were pronounced by members of the American Pomological society to be the finest of their age they ever saw. Mr. Stringfellow tells how he discovered it and certainly gives evidences of its success that recommends it for trial by the northern tree planter. I do know this that grafts set with a short root and leaving them to form their roots and letting them remain right there until they bear fruit, make better and longer lived trees than the same varieties that were transplanted. I also know that some sixteen years ago I bought some No. 20 crab apple trees for myself and my neighbors, when they came and I opened the box I was disgusted for they had been dug in very dry ground with a tree digger and roots almost entirely cut off, some of them not an inch long. I would not deliver such trees and wrote Mr. Whitney to that effect. He answered by saying perhaps the boys did run the digger too shallow; throw them away and I will send you some more; but when spring came and the trees with good roots were set, the others looked so good I cut the tops back and set them, and today they are from six to ten inches through and the very best trees I have. I thought it was the No. 20's great tenacity of life, but after reading his theory and practice I almost think that I had set them the best way—but when we take into consideration the fact that in the warm, moist soil of Texas they can grow apple and pear trees readily from cuttings, it will hardly be safe for northern planters to adopt

his plan of transplanting until our experimenters have given it a fair and extended trial. I will plant some trees in my own orchard, and some should be planted in the Wausau orchard in that way as I have promised to report to Mr. Stringfellow and to some others how the New Horticulture succeeds in Wisconsin. It may do in the loamy or sandy soils and be a failure on the heavy clay soils. Mr. Stringfellow's book can be obtained by sending seventy-five cents to him at Galveston, Texas, and it to me is very interesting reading.

Secretary.

CONCERNING STRAWBERRIES.

By Joseph Meehan in Prairie Farmer.

When strawberries are covered with leaves or mulch in early winter to keep them from being injured by freezing and thawing, it is the general plan to take off this covering as soon as the first spring days come. But if more than one bed is in charge and it is desired to have a succession of fruit, it is better to leave the covering on later on one of the beds so that the plants in it may not make so early a start as the other. Those who have not experimented in this way would hardly believe what a difference this makes. When soil is covered with leaves or straw it no longer thaws out in spring, and plants in it do not start to grow till this occurs and the ground becomes warm. A strawberry bed kept covered until the latter part of April would not ripen its fruit as soon as another one given every chance from the first. We should say that there would be a full week's difference between them, and if the sort uncovered last happened to be a naturally later kind, there would be still more difference. It is something that can be easily tried by those who cover their beds, as all should who desire their plants to be in the best condition. What a power shade is in retarding growth is shown in the case of evergreens, the branches of which spread over

the ground. In evergreen forests where the dense branches prevent the sun's rays from reaching the ground ice and snow can often be found fully a month after both have disappeared from ordinary places. It is a good plan to place evergreen branches or twigs of some sort over the plants first, and then add some forest leaves. This makes a shade without the covering pressing too hard upon the plants. Sometimes when leaves for covering press too closely on the plants it is apt to rot the leaves and crown. I am aware that there are those who believe it does no harm to strawberries to lose their leaves, but I am not one of them. Of two beds, one protected in winter to preserve the leaves, and the other left to the mercy of the winter, the one covered will be ever so much better when the growth of spring has been made. Covering should be made ready to be placed over the plants as soon as cold weather sets in, and then when spring comes if desired that a portion of the plants be retarded, the covering must be left on for a few weeks later than usual.

FALL WORK ON THE FRUIT FARM.

If you would insure healthy canes and bearing fruit buds for the year following give the plantation as much winter protection as can be afforded. We must give winter protection if we would secure the best results. If there are any varieties of the small fruits which will do no better by protection than without it, of course it is useless to do this extra work, but we have as yet failed to find any variety that can pass our winters here and come out in spring in good condition. We have had unprotected canes come through the winter and look to be healthy, but crop would be worthless. We know that no variety of small fruit can survive our winters and give a paying crop the following year. We have experimented along this line for the past seven years, and know it to be a fact that canes which have been protected have come out of their winter quarters

in as good condition as when they went in, while canes of the same variety on the same soil and location have been removed from their winter quarters with over half the canes winter-killed. In a climate like ours, where the temperature in winter is so varied, the thermometer dropping to 35 degrees and 40 degrees below zero, it seems absurd to allow canes to go unprotected and then expect a large crop of fruit the next year. If the grower has a variety which does in his estimation well without winter protection, does he know how much better that variety will do with winter protection?

"Experience is a dear teacher" some times but think it would be a profitable one if this experiment was tried. You will ask the question why is it that there are certain growers who do raise small fruits successfully without giving winter protection? If you will look up their location you will find they are situated near a lake or other large body of water and hence their climate is not so varied nor are their winters so cold. The more even the temperature the more successful will one be in the growing of small fruits as regards to winter killing. Why is it that sections of Michigan (in the same latitude that we are in western Wisconsin) raise peaches successfully? If you will notice the charts issued by the U. S. signal service showing the maximum and minimum temperatures by decades for all years you will notice the great extremes of temperatures that certain sections undergo that are situated from large bodies of water and how even a climate those sections are located and surrounded or nearly so by large bodies of water. This is the reason why: The more even the temperature the less loss is there by winter killing of canes. We can readily see then the object in giving winter protection and why it is practiced in some localities and not in others.

The impression has been made on some new beginners in small fruit culture that winter protection was not necessary but no reasons have been given.

The work of laying down and covering canes is done

with ease when once understood. You must handle canes carefully. If canes are planted in hills and in rows as they should be the work is carried on much more rapidly. We begin at the north end of rows after removing wires.

Loosen the dirt well up around the hill. Let one man gather the laterals or arms together and gently pull them forward, at the same time another man with a six tined fork placed on south side of hill is bending the canes in the root. There will be no trouble in bending the canes and with this method can be laid down with ease and rapidity. When the canes are flat or nearly so cover all over with dirt. The next hill is laid over the same as first with the tips of canes lying close to the butts of the hill just laid down.

THE EXPERIMENTAL ORCHARD AT WAUSAU.

By A. D. Barnes, Waupaca.

I visited the above orchard during the past summer and knowing so much of the value and benefits of an experimental orchard our society located at Wausaw last spring on the farm of Mr. Ed. Single, near the city, of which you so industriously superintended the planting, and to which Mr. Single is devoting so much time and attention, makes me bold to say a few words in its praise through these columns. To begin with—the site was well chosen—being a high, dry well exposed site a little sloping to the northeast on good, strong, well tilled soil close by a thoroughly traveled main road just outside the thriving city, on the farm of one of the most enterprising young men of northern Wisconsin. Mr. Single has taken a kindly interest in this enterprise and he is bound that it shall be a success if in his power to make it so. Be it to his credit that he has followed the instructions of the committee to the very letter and most minute detail. This orchard of some six hundred trees of the hardiest varieties of apples, cherries, plums and a few pears was designed and laid out, planted and cared for for the

purpose of demonstrating to the farmers of northern Wisconsin that fruit could be successfully grown in these arctic regions even to a grand success, under thorough care and cultivation, as well as to experiment with new varieties.

The planting and grouping of the different kinds of fruits in straight, even rows. The staking, tying, mulching, protecting and careful cultivating these trees have received has been a thoroughly practical lesson, carefully noted and patterned after by many people already. And I believe the mission of this orchard has been well paid already. Yet the good work has only begun. It may be interesting to the public to know that the trees for this orchard were purchased from or donated principally from the various Wisconsin nursery men and a very few of them came from Iowa and Minnesota. And be it to the credit of the orchard that none of them were raised in the east or south. Hence nearly every tree in the orchard has grown and many of them as much as 16 to 24 inches this season.

This orchard being public property under the control of the State Horticultural Society, with Mr. Single as superintendent in charge, who spares no time nor pains to show it to and instruct the visitor and I verily believe this orchard has already done more good and encouraged more planters than any other station in this state (casting no reflections on the older trial stations in the least, for some of them have set most excellent examples and made practical demonstrations) owing to its central and northern location and the painstaking interest of its operators.

Fearing that I may make this article tedious I will only add that to see is to believe and anyone designing to plant a small orchard in northern Wisconsin will be benefited by visiting this station.

Permit me, Mr. Editor, to suggest that it is my opinion that a small garden of small fruits would be a valuable auxiliary to this orchard and should be attached next spring.

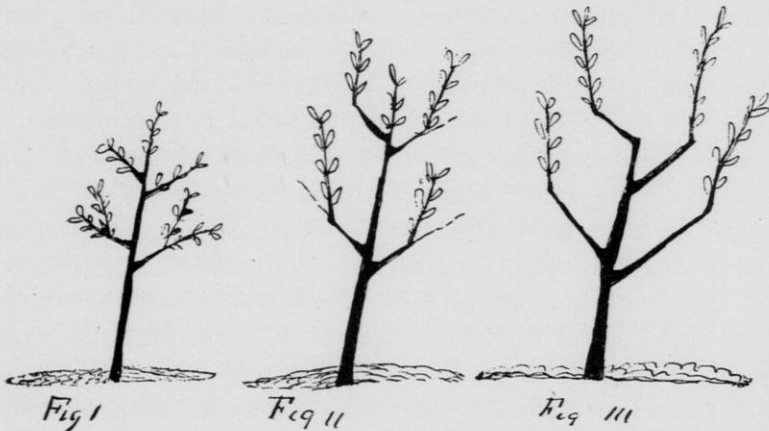
TOP WORKING ILLUSTRATED.

By A. J. Philips, West Salem, Wis.

It is a noticeable fact that at all the annual meetings, held up to this time in the Northwestern States, this subject has been discussed and recommended in stronger terms than at any previous meeting of which we have any recollection. It is growing in favor by experimenters, who have found it to be the sure way to increase hardiness,—increase both longevity, and productiveness, providing a suitable stock has been selected. With the writer it is no longer an experiment, as different varieties with him have been fruiting from one to twenty years—and for several years past half the trees set have been of a variety to be used for top working, with such kinds as Jonathan, Wealthy, Utter, Scott's Winter, Ben Davis, Grimes' Golden, and Malinda.

As I have many trees now of different year's work I give cuts of three to show how the work is done, or properly speaking, one tree in three different years, as I have them. This one is Wealthy, and the stock is Virginia Crab. Fig. I. represents two buds put in the previous fall. They have started to grow, but for fear of too large a growth the Virginia limbs are allowed to remain the first season. Fig. II. represents the second season just at the time the limbs are cut off, with two grafts well started in the top. Fig. III. the third year, shows all the original top cut out. In a future number, if desired, I may show the growth of three more years and at the end of which time the limbs have healed over smooth, and as usual at this time they begin to bear, the limbs begin to droop instead of the upright form, they show in these cuts. The reader will notice the strong union at the trunk, which is one of the main points of value in the Virginia, one which has been thoroughly tested during the past ten days in my own orch-

ard. When during an all day heavy rain it froze as it fell and loaded the trees heavily with ice. Several trees with crotches split down under the heavy weight, but not one top worked tree have I yet found that is injured. To-day, January 8th, I have been through the orchard, and as I sit writing near the window I look out on the grandest sight I ever beheld—the evergreens are so loaded they bend their limbs to the ground. Some of the apple trees, especially McMahan are drooping too, while Haas and others stand upright. The sun is shining and the crystals of ice are glistening under its rays, no two alike. The beautiful crystals are from three-fourths to an inch in thickness,



looking like a Leghorn chicken's comb. And were I to say that one hundred tons of ice were hanging on my apple and evergreen trees would be an under estimate. White and red oaks in the woods that went into winter with their leaves all on, though some of them are six inches in diameter, are so loaded that they have humbled themselves and are bowing to and resting on the ground waiting for warmth sufficient to loosen their loads.

I am thoroughly convinced that next to adapted trees, nothing has confronted me since I commenced apple tree planting that is of as much importance as top working. I believe the experiments in this line if rightly and carefully carried on in the new trial orchard will be of more value

to the Northern Wisconsin tree planter than any other branch of the business. That it hastens bearing with some of the tardy varieties, I am sure, as I had fine Malindas last season, three years from the graft. That it increased size—I think my apples at the fair last fall were sufficient testimony, and I can show and I think convince any visitor to my orchard that it more than doubles the life of some of our semi-hardy varieties. And I am sure as Mr. Kellogg claims in last month's Magazine, that the Virginia keeps off to quite an extent blight from varieties that are inclined to it. I find it difficult to give any fixed rules for the care of these trees during this change. To visit them, live with them and watch them all I can is the only way. Some buds and grafts grow too fast, and part of the old top must be left for a while. Others need to be encouraged and the old top must be cut out. I enjoy being among them and I enjoy teaching and showing any one how to do the work, and show them the results of many years work. I have some trees worked over three and four years ago that I call models. I omitted to say in the list that I mentioned that I am more than pleased with the trees and fruit of my top worked N. W. Greenings, my Cook apple of Oconto is a wonderful grower, also Ruth or Wrightman of Waupaca, but I must close this article which has been written in answer to many inquiries I have received from subscribers on this subject.

JAPAN LILIES.

By Walter J. Moyle.

Of all the foreign lilies of to-day, in our estimation, the Japan Lilies stand pre-eminent, combining as they do those two most essential qualities, great beauty of flowers and vigor of bulb and plant. In the catalogue the reader will note that they are classed as hardy; this may be true with a few varieties, such as the Speciosum, Rubrum, Alba, Elegans, and the old tiger lily Tigrinum.

Any one who has grown the Tiger and Elegan lilies is willing to vouch for their hardiness, but not the Speciosum and its varieties, or the most beautiful of all Japan lilies Glorious old Auratum. After a great many years' experience with Wisconsin weather we make a practice of protecting all our Japan lilies. Even the old Tiger, if you give him good winter protection and a rich bed to sleep in when he comes into bloom, will astonish the natives.

The Elegans, while very robust and beautiful, makes too short a growth to ever become very popular, ranging as they do from one to two feet high. However, we advise every true lover of the noble lily to have at least a few in his collection. But the lily that deserves a prominent place in every garden is Speciosum. This is an old standard lily, and as far back as our memory goes, in grandmothers garden stood a wonderful clump of Speciosum Rubrum, yet I venture to say that you will not find this lily in one out of fifty gardens in Wisconsin to day.

New varieties are being constantly added to the list. Let us in the near future see all the following varieties nodding their stately heads in our flower gardens. Speciosum Rubrum, Alba, Punctatum, Melpomene, and Opal. Bulbs of these can now be procured at prices within the reach of all.

Last and greatest of them all is the glorious old Auratum. If properly treated, it can be successfully grown in the largest portion of our state. After losing a great many bulbs, we have at last succeeded in getting it to grow.

We might also add to our list Batemanii; it is an extremely hardy and very beautiful lily from the land of the industrious little Japanese. The Auratum may be successfully grown in pots sunk in the garden in the summer and lifted and placed in the cellar during winter.

It would require a volume to describe the proper construction of a lily bed. These things should be borne in mind: A well drained soil, above all things, of a humus, sandy character into which thoroughly decomposed barnyard manure has been mixed. A protected and partially shaded location is preferable. Remember that all lilies require good protection during winter.

WINTER CARE OF HOUSE PLANTS.

By Wm. Toole.

The more nearly to ideal summer conditions we can furnish for our indoor plants the greater will our success be. Taking for granted that now, Dec. 15th, all plants have been potted in good soil and are in fairly good shape, we must consider to what extent circumstances are under our control. We must, if possible, avoid sudden and extreme changes of temperature. If plants have been kept very warm a sudden chill will cause more injury than would happen to those which have never been so warm. If the stove is far away from the plants, all the better, and generally an east window is better than one to the south, because sometimes in winter, with sunshine and stove the plants are between two fires and may be very much dried in a short time. Much of the living of our plants is from the air, and they need a change whenever it can be given without too sudden lowering of temperature. If, fortunately you have such plants Primula and Cyclamen for winter blooming give all the light possible without full exposure to sunshine. Geraniums, Petunias, such plants as delight in summer sunshine need the same in winter, but if the heat comes very strong through the glass drop the curtain for a little while. Begonias bloom all the better if not given too much sunshine.

If your surroundings are such as to make it impossible to raise plants, it is well to inquire if such conditions are best for human beings. Watering requires our greatest care, yet all that is required is to give a good soaking, and then do not water again until it is needed, which is as soon as the surface of the soil in the pot is a little dry. Some kinds of plants use more water than others. The umbrella plants can hardly be kept too wet, and should have a saucer under the pot, kept filled with water. The Marguerite daisy uses a great deal of water, and should be placed in a saucer, but not kept so wet as the umbrella plant. Some-

times some particular plant dries out more quickly than an other of the same kind. In such case the fault is imperfect potting, and the plant should be taken out and replanted, using care to crowd the earth with a stick between the plant and the sides of the pot, having crumbled away the ball of earth as much as possible without injuring the roots.

Manure tea should be used with care for plants which have filled the pots with roots, and the growth will be more bushy and colors richer. Sickly plants should be repotted after removing all decayed roots and surplus soil. Use pots not too large and keep from strong sunshine until new growth starts. If large pots must be used let the plants be to one side of the pot. In vacant ground grow a few oats or something to keep soil from souring. Lettuce, cress, or some other salad might be grown to keep the soil sweet.

Insects are always troublesome, and tobacco tea will kill most of them, if made strong and applied so it will surely soak the insect. Sometimes it is necessary to use a small brush to sop the liquid in among the young leaves. Scale should scraped or washed off before tea is applied. Kerosene emulsion is good, but inconvenient to prepare. For red spiders use Persian insect powder, or still better, the California grown article. Make a heaping teaspoonful into thick paste with hot water, then mix with half a gallon of cold water. With this sponge off the insects, and from underside of leaves, and do so often. If numerous small flies are about the plants you may expect that there are little white worms about the roots. Lime water will kill these and also angle worms in the soil, not milk of lime, but lime water.

OUR ADVANCEMENT IN HORTICULTURE IN WISCONSIN.

By B. F. Adams.

The first objects that engage the attention of those who occupy wild regions are shelter from the elements and the necessaries to sustain life. The struggle to obtain these is sometimes protracted by poverty, adverse seasons, sickness and other causes. It is not strange that during the first decade of the settlement of Wisconsin, little was accomplished in horticulture, for the pioneers were nearly all busy in constructing rude dwellings, clearing land of forests and changing prairies into productive fields. A few orchards were planted by citizens who came from the eastern and middle States, using the varieties that had flourished at their former homes. A few enthusiastic fruit men succeeded in growing some apples in the early forties and occasionally a sanguine man planted peach trees. All had limited knowledge of this climate, but later gained considerable.

Chester May, who lived on the west side of lake Koshkonnong, a short distance below Fort Atkinson, grew a small peach orchard which bore one crop, and not long afterwards died. It served him to make a peach banquet for his widely scattered neighbors, and its untimely end caused him to discontinue peach growing in that locality. A persistent Ohioan, named Foster, of Cottage Grove, Dane county, experimented longer, and ten years later (1853) was rewarded with a full crop of peaches from a group of thickly planted trees. His theory was "the group system for peaches", but his group died the following season, and for more than forty years since this event the writer has not seen a peach growing in Wisconsin until the present season. A neighbor who planted, three or four years ago, a dozen peach pits on a lot in Wingra Park, one mile south of lake Mendota, harvested one peach. Two nursery trees (Crosby) were also set about the same time

on another lot, one of which produced fifteen peaches, the cost of which is represented in about the the same number of dollars.

Since 1836, and probably far back of that date, periods of from three to five years of mild winters have prevailed in Wisconsin, followed invariably by seasons of greater severity. All time and work spent in trying to grow pdaches here must be a labor of love. This climate is not the home of any variety of peach now known to the public. All the apple orchards in Wisconsin planted previous to 1856, were more or less damaged by cold, heat, and violent wind storms. Multitudes of the trees perished later. Small fruit then received little attention. The Winnebago Indians picked wild blackberries in the woods and cranberries on the marshes, and sold them to the whites; this was the extent of their horticultural work, and it was appreciated by the settlers after they had experimented in gathering these fruits, fighting mosquitoes, tearing their clothing in the woods, and wetting their feet on the marshes. The Indians would cheerfully do all this work and sell the fruit for fifty cents and one dollar per bushel. Our progress in horticulture really began when the Wisconsin Fruit Growers' Association was organized, now merged in the State Horticultural Society. For fifteen years afterwards our progress was slow but some advancement was made. Gradually the importance of hardiness in trees as well as quality in fruit, became apparent to all. More systematic methods were adopted to obtain better results in orcharding, localities, conditions, adaptation of varieties; the merits of foreign sorts were freely discussed, also seed planting of best known hardy varieties. The search for such as would endure our climate, extended over this continent, Europe. and, I may add, later to China and Japan. A few fruits of foreign origin have proved valuable for Wisconsin and are here to remain. But every passing year now strengthens my belief in the statement made by the late M. P. Wilder, "our great reliance for the production of new fruits, adapted

to cold climates must ever be from the seed, either by natural or cross fertilization". Our progress, though not entirely satisfactory, is certainly encouraging. Those who have spent the greater part of their lives here must have been gratified in looking at the apple crop of Wisconsin in 1896. Small fruits were not extensively cultivated here previous to 1858. Thurlow Weed Brown was one of the pioneers in this business, cultivating in 1862 seven acres; two of strawberries and five of raspberries. With proper care all the small fruits have in recent years been grown in Wisconsin for market in large quantities, but in some parts of it more winter protection is required than in other sections. For general fruit growing purposes, the lake shore district has some advantages over all others. With increasing population, wealth and culture, come more diversified tasks and greater activities in the various lines of horticultural work. The flower garden has become a necessary ornament to a well ordered home. The public park with its fountains, lawns, and winding aisles, ornamented with trees, the cemetery made beautiful with shady groves, and the graves of loved ones adorned with flowery tributes, placed there by kindreds and friends, all illustrate our advancement in the horticultural art in its broadest sense.

The establishment of a State Experimental Station at the State University with fine horticultural equipments and an able corps of professors has awakened high hopes of greater progress. Time will test the value of our trial station. What will be the future of Wisconsin horticulture? Methinks an answer comes from some veteran pioneer. Its interests are now intrusted to another generation with enlightened judgment and renewed energy. Let the good work be pushed forward, and in coming years abundant harvests will be gathered.

HORTICULTURAL NOTES.

Jonathan Periam.

The apple crop of the United States, and especially of the west, is without doubt, greater than ever before known. Notwithstanding the vast waste contingent on great crops the markets of Chicago have been literally over-stocked; good varieties, including Greenings, Northern Spy and Belle Flower Greenings selling by retail grocers as low as eighty cents a barrel. For fruit out of condition for the table and cooking, the price was anywhere to suit the views of city cider and vinegar makers. What the price must have been by the car load to dealers is not made public. A good story was lately told by the newspapers on one of the enlightened aldermen, who took his "much needed" vacation with a fruit grower in Michigan. His first surprise was to see the ground strewn with the earlier ripening varieties. "What will you do with these apples?" "Let them lay," said the orchardist. "But," rejoined the civic solon, who votes for all the street railway steals, gas and any other "go" that puts money in his purse. "If I had a good lot of apples I could give some of them to my constituents", "Have as many as you like", rejoined his apple-raising friend. Here was patronage without cost. He gave a most liberal order and went home rejoicing at the wonderful stroke of luck he had. In due course the apples arrived, nicely barreled, carefully labelled and directed. Solon was overjoyed; but when he ordered them sent to the directions given, he was rather shocked, but upon reflection thought it would have been hardly the fair thing for his friend to have lost the freight as well as the apples and labor. Wagons were summoned and the friends--they were legion--of the alderman, got them by barrels full, and were unanimous in declaring that they would vote for the incumbent of the "Steenth" ward as long as they lived. But alas! along came a bill for assorting, barreling, marking, loading, hauling, etc. This was distressing. The citizen "got warm under the collar," and at once rushed over to his lawyer, asking

"What can I do?" "Pay the bill" said the lawyer. "You have no contract. It is a bill of items. You have received the fruit and disposed of it." At last the philosophy of the gambler came to him, and he replied to the lawyer: "To think of me being guyed like that by a hayseed." Yet many people think that a granger has neither sense of business nor of humor. Heavy as the apple crop is, those who have honestly sorted apples of good varieties next spring will get fair prices. The incidental waste in every agricultural product, when very low prices rule, is proverbial. But beware trying to sell knotty, wormy, or in any way undesirable fruit. They will not come near to paying the freight, let alone the labor, barreling and cartage, to say nothing of profit. Hundreds of thousands of wagon loads of apples will have absolutely gone to waste before December has gone out for want of means or inclination to turn them into cider, and subsequently vinegar. Yet guaranteed cider vinegar fluctuates less in price than almost any other commercial commodity. There is one gain in the present glut of apples. The generally ever-present Ben Davis — that has only one commending quality, it will grow and bear crops — is relegated to a back seat. Not only are the markets of the west filled with the choicest cooking fruits, but every citizen may have the choicest dessert fruits on his table daily.

REPORT OF THE RUSHFORD HORTICULTURAL SOCIETY'S CHRYSANTHEMUM SHOW.

C. E. Floyd.

Early in the year 1895, the Rushford Horticultural Society conceived the idea of holding a chrysanthemum show, and in November of that year their efforts were crowned with a very successful exhibition. The members, pleased and elated to a very high degree, determined that another year they would outdo themselves and go still deeper into the mysteries and pleasures of horticulture. Accordingly

great preparations were made that the second annual chrysanthemum show would be an improvement, and contain as many features as possible of interest and profit. The display of chrysanthemums was very creditable and showed that the previous year's experience had been of great value. There was a good display of carnations, geraniums and various foliage plants. The large hall was well filled with gorgeous and many-hued beauties, lining the sides and forming beautiful pyramids in the center. There was also a fine exhibit of fruit, consisting of over one hundred plates of apples of very excellent specimens, including some new varieties of great promise.

The show of vegetables, grain, etc., was also good. There were also exhibits of canned fruits, jellies, fancy work, etc. The management got out very neat and attractive catalogues, securing advertising enough to pay for them.

There were two evening entertainments which for lack of room were held in the church. The program consisted of songs, essays, recitations, etc.

An admission fee was charged, which enabled the society to pay their premium list of over thirty dollars. There has been nothing in which the people of our village have taken a greater interest, and it has become an event to be looked forward to. We think these exhibitions of great benefit, increasing our membership, adding interest to our meetings throughout the year, showing its beneficent effects in more beautiful flower beds and finer fruit orchards.

A LESSON IN BUDDING.

Our illustration shows a lesson in budding nursery trees, as given to the second year students in the Short Course in Agriculture, at the University of Wisconsin. Readers of the Transaction who desire to become acquainted with this method of propagating trees and shrubs, and who are unable to attend the "Short Course", may gain some useful hints by studying this picture carefully.

Budding is usually performed toward the latter end of summer when growth is beginning to decline, but before it has



so far declined as to prevent the bark of young trees from separating readily from the wood. The buds are taken from young shoots of the current season's growth, only those that are hard and plump being selected. It is customary to cut the shoots containing the buds,—“bud-sticks” as they are called,—on the same day they are to be inserted, and to prevent them from withering in the least, they are trimmed at once and rolled in a damp cloth. The trimming consists in cutting off the leaves, leaving a short bit of the leaf-stem (petiole) attached to the branch to serve as a handle while inserting the bud. The trees to be budded, which are called stocks, are usually seedlings of one or two season's growth.

though with Marianna plum stocks, which are now quite largely used in propagating the plum in some sections, the stocks are grown from cuttings.

The lower branches of the stock are cut off up to three inches or more from the ground and a smooth place is selected for the bud,—usually on the northeast side of the stock, as that is the part least exposed to the sun. With the budding knife, which may be purchased of most of our extensive seedsmen, a T-shaped cut is made on the stock, just deep enough to reach through the bark and about two inches above the ground. Then a bud is cut from the bud-stick by inserting the knife blade about one-fourth of an inch above the top of the bud, at such an angle that the back of the blade nearly touches the bark of the stock. The right-hand student in the picture is in the act of cutting a bud. The blade is passed down just behind the bud, being inserted deep enough so as to touch the wood, but not deep enough to remove much of it, and then turned a little so as to run out about a fourth of an inch below the bud.

With the ivory end of the budding knife, the “lips” of bark in the angles of the T cut are next loosened from the wood, as is being done by the central student in the picture, when the bit of bark bearing the bud is slipped down behind these lips, using the stub of the leaf-stem left on it for a handle, until the top end of the bit of bark is just below the horizontal cut of the T. The bud, of which the apex should of course point upward, is then visible between the lips of the stock. The next operation which is being performed by the left hand student in the picture is that of tying the bud. For this purpose, an oriental grass called “raffia”, which may be ordered through the larger seedsmen is now chiefly used. This should be moistened a little before use. A bit of raffia is held as is shown by the student across the lower end of the T cut, and just below the inserted bud. The ends are then crossed on the opposite side of the stock, brought forward and crossed again just above the bud, entirely covering the horizontal cut of the T, and pressing the lips down snugly over the bud.

Then bring the ends behind again, and tie a half knot, drawing them up moderately tight.

If the bud "takes" it will grow fast to the stock in a very few days. In about ten days the raffia should be taken off, by cutting it on the opposite side of the stock from which the bud was inserted.

SKETCH OF A. G. TUTTLE.

By his friend J. S. Stickney.

The subject of this sketch was born in Watertown, Conn., Dec. 30th, 1814. Moved with his parents to Northfield, Conn., in 1825, where in 1838 he was married to Miss Elizabeth F. Clark, thereby securing his greatest treasure, who through all these years has, as the musicians say, "played him an excellent second."

They began married life in New Haven in the mercantile business.

He came to Madison, Wis., in 1846, and in 1847 he opened a store in Portage City, the first one there. This was not a profitable venture, and in the spring of 1848 he moved to Baraboo, where in the aut he was joined by his wife and son. His trade was largely in lumbermen's supplies and was closed in 1853. The following year he purchased his present farm and at once commenced planting fruit trees.

This very naturally led to the nursery business, which he commenced in 1858.

In these five years he found and took up *his life work*, doubtless giving to it his whole mind and heart, as he had never done to selling goods.

The writer first met him at a state fair in Madison where he had a grand display of apples. This fruit and his confident enthusiasm led me, and doubtless hundreds of others, to plant orchards. If we overdid things, and fell short of some of our anticipations, it was not his fault, and the general influence was progressive and good. Failure from

climatic or other causes, of any of his favorite varieties never discouraged, but only stimulated, him to search for something hardier and better.

On this line came the Russian fruits, in 1866, his first move being to plant a trial orchard of several hundred trees. Young trees of the most worthy kinds, developed by these trials, he has disseminated freely at very moderate prices, instead of making them the means of especial gain. Indeed this generous, public-spirited policy has marked all his horticultural work.

He holds large interests in cranberries, and in their booming days was well at the front in developing them, but drouths and fires have largely cancelled his efforts, and now, at four scores past, he is perfectly justified in sending his sons to the front. It was a pleasure to meet him at our last state fair, with one of his largest and best displays of fruit, just as confident and hopeful for the fruit interests of Wisconsin as in his youth.

It ought to be, and doubtless is a great comfort to him to know that the good influence of his exhibits, his teaching, and his good work will go on and on like an expanding wave for many years—after his hands are folded to rest.

When, as secretary of the State Horticultural society, I decided to publish in our annual report the portrait and sketch of our honored life member and ex-president of our society, Mr. A. G. Tuttle, I at once wrote to his life-long friend, Mr. J. S. Stickney, to write the sketch knowing that would be agreeable to Mr. Tuttle and his family. Mr. Tuttle has visited my orchard and I have many things there to remember him by; his interest in the Russian apples has in no wise abated, especially in the Longfield. He was as enthusiastic in showing his favorites at Milwaukee last fall as he was at Madison the fall he made his first large show there, which drew out so much praise from all who saw it, and which made him a life member of the state agricultural society. His show of fine apples at Milwaukee before 1870 — was the first incentive the writer had

to attempt to grow an orchard in Wisconsin. I think in our magazine and in our annual report we should publish the pictures and sketches of our old workers — and let them know their life work is appreciated, and not wait until they leave us before we say some kind words about them. I take this time to thank Mr. Stickney for his kindness in writing the above sketch.

A. J. Philips, Secretary.

In Memoriam.

E. W. DANIELS.

E. W. DANIELS, OF AURORAVILLE, Waushara County, Wis., was, I learn from his daughter, Mrs. D. W. Cate, born in Hartford, Conn., in Nov., 1810, and died in the spring of 1894. He was one of Wisconsin's pioneer fruit growers—becoming interested and planting apple trees as early as 1855 and '56—and during his life sold from his fine orchard many hundred bushels of apples in the country north of where he lived. About twenty years ago he discovered and secured in the northern part of Waupaca county, near the village of Iola, the well known seedling now called the "Northwestern Greening." He at once was impressed with its value as a winter apple for Wisconsin, and began propagating and disseminating it with a vigor seldom equalled by any man. Mr. Northup, a very successful fruit grower of Rock county, Wis., said to the writer a few years ago, "The old man's persistency in selling me ten of those trees, gives me now after several years of bearing the most profitable trees in my orchard, McMahan and Wealthy not excepted." His daughter now writes me that all that is left of their once fine orchard are the Duchess and Northwestern and a few top-grafted trees. She further says: "We had an abundance of the N. W. Greening apples last year when there were hardly any apples in our neighborhood." "We have," she says, "only about twenty bearing trees of that variety, but we prize them because they are to be depended on; for awhile we paid little attention to his talk about it, setting it down as his hobby. Now we realize that to bring anything to success it must be made a hobby." I recollect visiting Uncle Daniels a few weeks before his death—then 84 years of age, his sight was nearly gone, his hearing dull—still when I told him who I was he began at once to talk of his favorite tree as vigorous as when I first met him in Milwaukee over twenty years ago. He told his daughter to bring me his last offering of six nice N. W. apples to take to the Pine River Institute, he said, to help me talk on apples. "Oh!" he said, "I wish I could see to show you my trees." This tree is gaining friends fast and I doubt not will prove for many years to come a monument to the memory of Uncle Daniels.

SECRETARY.

PHINEAS CROSBY.

PHINEAS CROSBY was born in Hopkinton, N. H., Aug. 21, 1819. He was married at Endfield, N. H., May 17, 1843, and died March 31, 1896. He went to Oshkosh, Wisconsin, and was engaged in the lumbering business there for eight years. From there he went to Clinton, Wis., where he resided until his death. He followed the lumber business there for some 12 years, after which he became interested in the gardening business and the growing of small fruits, bringing to light some very fine seedling strawberries. This work was the delight of his life; his whole heart was devoted to his work, always active in promoting the work in which he was engaged until the last few years of his life, when his health failed him. He always took great pride in showing his new and tried fruits to all that came to see him. Mr. Crosby by his honest dealings with his neighbors won many friends where he lived so many years, and by his death the community lost a good citizen, one who was always ready to lend a helping hand to those in want.

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