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Seventh annual report of the Wisconsin Agricultural Experiment Association : Madison, Wis., February 11, 12, 1909. Address of president, secretary's report with papers and addresses given by members o...

Wisconsin Agricultural Experimental Association
Madison: Democrat Printing Co., State Printer, 1909

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Annual Display of Grain and Forage Plants made by the Wisconsin Experiment Association at the State Fair.

SEVENTH ANNUAL REPORT

OF THE

WISCONSIN

Agricultural Experiment Association

Madison, Wis., February 11, 12, 1909.

Address of President, Secretary's Report with Papers and Addresses given by Members of the Association and Others Interested in Progressive Agriculture

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Compiled by

R. A. MOORE, Secretary.

MADISON
DEMOCRAT PRINTING CO., STATE PRINTER
1909

"The man who seeks one thing in life, and but one,
May hope to achieve it before life be done;
But he who seeks all things, wherever he goes,
Only reaps from the hopes which around him he sows
A harvest of barren regrets."

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LETTER OF TRANSMITTAL.

WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION.
Madison, Wis., 1909.

To His Excellency, JAMES O. DAVIDSON,
Governor of the State of Wisconsin:

SIR—I have the honor to submit for publication, as provided by law, the Seventh Annual Report of the Wisconsin Agricultural Experiment Association, showing the receipts and disbursements the past year, also outlines for experiments, and addresses and discussions given at the annual meeting at Madison, February 11—12, 1909.

Respectfully submitted,

R. A. MOORE,
Secretary.

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Wisconsin Seed Grain Growers—continued.

OFFICERS, 1909

President—C. P. Norgord.....Madison
Vice President—A. G. Austin.....Janesville
Secretary—R. A. Moore.....Madison
Treasurer—H. N. Longley.....Dousman
Clerk and Stenographer—Idalyn Bibbs.....Madison

COMMITTEES.

Program:	Officers of the association.
Executive:	Presidents and Secretaries of the County orders of the Wisconsin Experiment Association.
Resolutions:	H. P. Howell.....Sparta A. J. Meyer.....Howell, Mich. H. A. Main.....Ft. Atkinson Wm. F. Renk.....Sun Prairie
Co-operative Experiments:	Farm Crops.....R. A. Moore Soils.....A. R. Whitson Farm Engineering.....C. A. Ocock Bacteriology.....M. P. Ravenel Horticulture.....E. P. Sandsten

CONSTITUTION AND BY-LAWS

CONSTITUTION

Article I.—Name

This organization shall be known as the Wisconsin Agricultural Experiment Association.

Article II.—Object

The object of this association shall be to promote the agricultural interests of the state.

1st. By carrying on experiments and investigations that shall be beneficial to all parties interested in progressive farming;

2d. To form a more perfect union between the former and present students of the Wisconsin College of Agriculture, so as to enable them to act in unison for the betterment of rural pursuits in carrying on systematic experiments along the various lines of agriculture;

3d. By growing and disseminating among its constituency new varieties of farm seeds and plants.

4th. By sending literature bearing upon agricultural investigations to its membership, and

5th. By holding an annual meeting in order to report and discuss topics and experiments beneficial to the members of the association.

Article III.—Membership.

Section I. All former, present and future students and instructors of the Wisconsin College of Agriculture shall be entitled to become members of this association.

Sec. II. Honorary membership may be conferred upon any one interested in progressive agriculture by a majority vote at any annual or special meeting of the association.

Article IV.—Dues.

A fee of fifty cents shall be collected from each member annually.

Article V.—Officers.

The officers of this association shall consist of a president, vice-president, secretary, and treasurer, whose terms of office shall be one year or until their successor are elected.

Article VI.—Duties of Officers.

Section I. It shall be the duty of the president to preside at all meetings of the society and enforce the observance of such rules and regulations as will be for the best interest of the organization; to appoint all regular committees as he may deem expedient for the welfare of the association.

Sec. II. In the absence of the president, the vice president shall preside and perform all duties of the president.

Sec. III. It shall be the duty of the secretary to keep all records of the association; to report the results of all co-operative experiments carried on by its membership and the experiment station, plan the experimental work for the members of the association, and labor for the welfare of the society in general.

Sec. IV. The treasurer shall collect fees, keep secure all funds of the association and pay out money on the written order of the secretary signed by the president. He shall furnish bonds in the sum of two thousand dollars with two sureties, for the faithful performance of his duties.

Article VII.—Amendments.

This constitution may be amended at any annual meeting by a two-thirds vote of the members of the association present.

Amendment No. 1.—Adopted Feb. 9, 1906.

Any person residing within the state having completed a course in agriculture in any college equivalent to that given by the Wisconsin University may become a member of this association under the same regulation as students from the Wisconsin College of Agriculture.

Amendment No. 2.—Adopted Feb. 11, 1909.

Any County Agricultural School within the state may be admitted to membership of the Experiment Association upon request by the principal of such school and the payment of an annual fee of $1.00.

BY-LAWS.

Article I. The officers of this association shall be elected by ballot at the annual meeting.

Art. II. The president and secretary shall be ex-officio members of the executive committee.

Art. III. This association shall be governed by Robert's Rules of Order.

Art. IV. All members joining at the organization of this association shall be known as charter members.

Art. V. The time and place of the annual meeting shall be determined by the executive and program committees.

Constitution adopted and organization effected Feb. 22, 1901.

MEMBERSHIP—1909.

[Arranged in alphabetical order.]

Names.	Post-Office Address.
Aarness, O. C.	Cashton.
Aavang, H. O.	Barneveld.
Aberg, Jacob	De Soto.
Accola, John	Madison.
Accola, Lawrence	Steuben.
Achen, Wm.	Bristol.
Adams, A. E.	Eden.
Adams, Jay	Waukesha, R. 5.
Adams, Lester B.	Lowell.
Adams, M. J.	Waukesha.
Adams, Richard F.	Campbellsport.
Aderhold, H. F.	Athens.
Adland, P. H.	Franksville, R. 10.
Ahlers, Walter	Grafton.
Akins, Clyde E.	Warren, Ill.
Alberts, Will	New Richmond.
Allen, Arthur J.	Wales, R. 31.
Allen Chas. L.	Eau Claire.
Allen, E. G.	Barron.
Almon, Perry T.	Weyauwega.
Altpeter, Edw.	Ft. Atkinson.
Anaoker, Bernhard.	Portage.
Anderson, A. W.	Portage.
Anderson, Alfred	Denmark.
Anderson, H. C.	Cambridge, R. 3.
Anderson, Theo.	Waterville, Iowa.
Andrews, A. L.	So. Wayne.
Andrews, Geo.	Livingston.
Angvick, Lars	Cottage Grove.
Anthes, Henry	Jefferson.
Antholt, Chas.	Brussels.
Anthony, D. C.	Oregon.
Arms, Edward	Fountain City.
Arnold, Arthur A.	Kiel.
Arnott, Grace M.	Stevens Point.
Aschbrenner, H. H.	Startford.
Ashuum, C. S.	Waupaca, R. 2.
Aslakson, Alfred	Mt. Horeb, R. 4.
Austin, Alva G.	Janesville.
Austin, Alvina L.	Evansville.
Austin, Clifford P.	Janesville.
Austin, Elmer E.	Brodhead.
Austin, Geo. M.	Janesville.
Austin, W. B.	Janesville.
Austin, Wilbur D.	Janesville.
Axley, Walter	Cleveland, R. 1.
Babcock, C. L.	Milwaukee. 404 Colby-Abbott Bldg.
Babcock, J. G.	Evansville.
Backhaus, F. G.	Kewaskum.
Baer, A. C.	West Bend.
Baesemann, Otto	Edgar.
Bailey, Alfred B.	Jim Falls.
Bailey, H. E.	River Falls.
Baird, J. W.	Waukesha.
Baird, Robert L.	Waukesha.
Baird, Will L.	Waukesha.
Bannen, R. E.	Boscobel.
Barker, E. S.	Janesville.
Barnes, Amy B.	Waupun.
Barron, R. E.	Platteville.
Barstow, J. E.	Randolph.
Bartlett, Geo. W.	Menomonee Falls.
Bartleson, Harvey.	Pine River, R. 1.
Bartlett, Ray	Barron.
Bast, Paul J.	Rockfield.
Basse, Wm. H.	West Allis, R. 5
Batten, Sidney	Hudson.
Bauer, Adolph H.	Manitowoc, R. 2.
Beach, Glenn H.	Loyal.
Bean, R. R.	DeSoto.
Bechtolt, A. B.	Browntown.
Bechtolt, J. D.	Browntown.
Beck, J. D.	Madison.
Becker, Harry J.	Ft. Atkinson.
Behm, Walter	Manitowoc.
Behrens, Berh.	Grafton.
Beilke, Walter	Fairwater.
Bekken, Oscar	Bloomer.
Belda, Wm. F.	DeForest.
Bendickson, I. E.	Cambridge.
Benedict, E. L.	Beloit.
Bennett, C. S.	Somers, Montana.
Bennett, H. G.	Cherry Valley, Ill.
Bennett, Wm. L.	Stanton.
Benson, Ed. E.	Mt. Horeb, R. 5.
Berg, Carl	Tigerton.
Berg, Jacob	So. Germantown.
Berg, Julius	Sturgeon Bay, R. 3.
Berge, William	Cambridge.
Berns, Xavier	Guttenberg, Iowa.
Bestul, Martin J.	Scandinavia.
Beule, E. A.	Beaver Dam.
Bewick, Wm. M.	Sun Prairie.
Bewick, W. W.	Madison, 824 W. Johnson St.
Biglow, L. F.	Brooklyn.
Bilderbach, Wm.	Mondovi.
Bille, J.	Waupaca.
Bingham, D. E.	Sturgeon Bay.
Bingham, E. L.	Milton.
Birkinbine, F. P.	Sun Prairie.
Birrenkott, Mick T.	Klevenville.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Bixby, Phil T.....	Appleton, R. 1.
Blakely, Albert	Neenah.
Blackwell, Leslie C.	Waukesha.
Blank, George A....	Grafton.
Block, Albert F.....	Markesan.
Blodgett, G. R.....	Neenah, R. 9.
Blonien, Peter	Elkhart.
Blumer, Ezra, Jr....	Monroe.
Boeder, Otto	Wilton.
Bohl, Anton	Beaver Dam.
Bohl, Jos. N.....	Snohomish, Wash., R. 3.
Boller, J. F.....	Nashotah.
Bollig, F. A.....	Black Earth.
Bonsack, H. M.....	La Crosse.
Bonsack, Theo.	West Salem.
Bonzelet, J. P.....	Eden.
Booth, Lester G.....	Cuba City.
Borck, Sam	No. Freedom.
Boss, S. J., Jr.....	Oshkosh.
Boss, U. C.....	Oshkosh.
Boston, W. J.....	Stevens Point.
Boucsein, Gust L...	Detroit Harbor.
Boudnik, John	Kewaunee, R. 7.
Bowman, Wallace...	Detroit Harbor.
Boyce, Charlotte ...	Dane.
Boyd, James T.....	Waukesha, R. 7.
Bradley, J. Frank...	Somers.
Brandt, Chas., Jr...	West Salem.
Brehm, Ed. A.....	Colby.
Bremer, Paul H.....	Cedarburg, R. 1.
Brickson, Abram ..	McFarland.
Brickson, Andrew ..	Cottage Grove.
Brigham, Chas. I....	Blue Mounds.
Briggs, E. T.....	Fond du Lac, R. 7.
Briggs, Lynn W.....	Peebles.
Briggs, J. W.....	Peebles.
Bristol, Wm. A.....	Oakfield.
Britzke, Paul	London.
Brodt, Clarence D..	Bridgeport.
Bromley, Fred G...	Whitewater, R. 4.
Brook, J. W.....	Salem.
Brooks, Ed. J.....	Watertown.
Brooks, Homer H...	Hopkinton, Ia.
Brown, Abbott	Waterloo.
Brown, E. D.....	West Salem.
Brown, William	Spring Valley.
Brue, N. H.....	DeForest.
Brueckner, H. C....	Ft. Atkinson.
Brueckner, Justus..	Ft. Atkinson.
Bruhn, John F.....	Two Rivers, R. 1.
Brunner, R. W.....	Hudson.
Bryant, Clinton A..	Hazel Green.
Bryant, R. J.....	Hazel Green.
Bryson, Donald	Elizabeth, Ill.
Buehler, J. G.....	Richland Center.
Bullamore, R. G.....	Kenosha.
Bullamore, Roy	Kenosha.
Burce, Ruth	Eau Claire.
Burgess, A. J.....	Milwaukee. 1102 Grand Ave.
Burris, F. E.....	Kendall, R. 5.
Buschman, Hugo ...	Forestville.
Bussey, W. P.....	Omro.
Bussewitz, Orla J...	Juneau.
Bussewitz, Raymond	Reeseville.
Cade, Jos. M.....	Viroqua.
Caig, Ernest M.....	Milton Junction.
Cairns, J. H.....	Montello.
Caldo, Leslie	Janesville.
Caldwell, John	Mazomanie.
Call, Henry	West Prairie.
Capener, W. R.....	Baraboo.
Cardenas, F. F.....	Satillo, Coah., Mexico.
Carey, W. H.....	Argyle.
Carlson, Axel T.....	Augusta, R. 4.
Carlson, Nels P.....	Hudson, R. 1.
Carmody, Daniel ...	Mt. Ida.
Carmody, P. J.....	Mt. Ida.
Carncross, J. E.....	Okee.
Carrow, Herman ...	Stanton.
Cassidy, Wm. S.....	Whitewater.
Cate, Geo.	Stevens Point.
Chamberlain, Geo...	Windsor.
Chappel, Steve J....	Dodgeville.
Charles, Edw. S.....	Madison, 432 Francis St.
Charles, Fred	Woodstock, Ill.
Chase, A.	Knapp.
Chase, Albert L.....	Milton.
Chase, J. P.....	Sun Prairie.
Chatterton, Ray W.	Basco.
Cherveny, Wenzel ..	Kewaunee, R. 2.
Chetlain, Louis A,.	Galena, Ill.
Chipman, W. R.....	Morrisonville.
Chrislaw, A. M.....	Rice Lake.
Chrislaw, Geo. O...	Menomonie, R. 7.
Chrisler, Harley ...	Lodi.
Christ, Albert	Cambridge.
Christensen, C. A. M	Walsh.
Christensen, Johan.	West Prairie.
Christensen, John L.	Hartland.
Christensen, P. W..	Marshfield.
Christianson, And..	Deerfield.
Christianson, Irvin.	Deerfield.
Christianson, W. O.	Chippewa Falls, R. 6.
Christoph, Theo. F..	Chilton.
Chrysler, Harvey ..	Osseo.
Churchill, Arthur ..	Janesville, R. 7.
Chynoweth, H. W..	Madison.
Clark, Chas. F.....	Babcock.
Clark, W. E.....	Stevens Pt., R. 1.
Clausing., Adolph ..	Thiensville.
Clavadatscher, T....	Sauk City.
Clayton, A. W.....	Madison.
Clusen, Reinhold ..	Manitowoc, R. 6.
Coates, Clinton J...	Elkhorn.
Cobb, Homer A.....	Sun Prairie.
Cobleigh, Rollo S...	Delton.
Coburn, Ora	Whitewater.
Coffin, Russell H....	Rockford, Ill.
Coleman, Chas. H...	Perry Center, N. Y.
Collentine, Arthur..	Monroe.
Collins, D. W.....	Luxemburg.
Colloday, W. E.....	Stoughton.
Conant, W. A.....	Temple, New. H.
Cook, Geo. L.....	Burlington.
Cook, Irving O.....	Nashotah.
Coon, Leslie	Osseo.
Cooper, Maurice W.	Edgerton.
Cornelius, E. C.....	Monroe.
Costello Dan	Fond du Lac, R. 5.
Craig, Geo. D.....	Oconomowoc.
Cross, A. J.....	Allenville.
Cubela, Jos. M.....	Muscoda.
Curran, W. F.....	Taylor.
Curtis, J. C.....	New Lisbon.
Curtis, Ray	Poynette.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Curtiss, Mark	Trevor.
Curtiss, W. R.	Trevor.
Cusack, M. E.	Darien.
Dach, C. B.	Viroqua.
Daellenbach, Chris.	Abbotsford.
Daley, E. S.	DeForest.
Daley, Julius	DeForest.
Daley, O. S.	DeForest.
Daley, S. S.	DeForest.
Dalton, Ernest	Pardeeville, R. 1.
Dalton, Roy	Pardeeville, R. 1.
Daly, Richard C.	Washburn.
Dance, George	Brookfield.
Dance, James	Brookfield.
Danielson, K. O.	Mt. Horeb.
Davidson, W. L.	Verona.
Davies, Elias	Markesan.
Davis, J. C.	Oshkosh.
Davis, J. L.	De Soto.
Davis, Llewellyn	Mineral Point.
Davison, R. W.	Sun Prairie.
Dean, C. E.	Madison, 503 West Doty.
DeForest, Theo. R.	Ann Arbor, Mich.
Defnet, Jule J.	Casco, R. 2.
Delcorps, Louis	Sturgeon Bay.
Delwiche, E. J.	Ashland.
Dennerlein, A. J.	Plymouth.
Dennison, Nicholas.	No. Milwaukee, R. 10.
Dettinger, Wm. F.	Hixton, R. 1.
Dettwiler, John	Monroe.
Dexter, Walter S.	Kenosha.
Dhein, Henry	Rockfield.
Dibble, Roy A.	Menomonee Falls.
Diderrich, N. A.	No. Milwaukee, R. 10.
Dieter, Bert	Livingston.
Dieter, Wm. A.	Montfort.
Dietrich, John J.	Black River Falls.
Dietz, Ed.	Greenville.
Dineen, C. F.	Pewaukee.
Dineen, Michael	Blue Mounds.
Dirks, Arthur	Waupun.
DiVall, W. F.	Montfort.
Doerfer, Wm.	Madison, R. 6.
Doerschuk, John J.	Shanesville, Ohio.
Dolplin, Clarence	Cobb.
Donahue, Michael J.	Madison, R. F. D.
Donaldson, H. A.	Eau Claire, R. 6.
Donovan, Frank	Van Dyne.
Dopp, Paul B.	Oconomowoc.
Dougan, W. J.	Beloit, R. 30.
Dowig, Neli	Soldiers Grove.
Draves, Henry F.	Montfort.
Dreger, Emil L.	Madison, R. 7.
Dunbar, Geo. W.	River Falls.
Dunbar, G. W., Sr.	River Falls.
Dunbar, Harold	River Falls.
Dunbar, Harry D.	Elkhorn.
Durand, Mrs. S. S.	Lake Bluff, Ill.
Durnford, G. A.	Rockbridge.
Eagan, J. J.	Wautoma, R. 6.
Eastman, J. S.	Madison.
Ebert, Francis E.	Tomah.
Edmundson, Mrs. Ethel	Madison.
Eggler, Victor H.	La Crosse.
Egre, John S.	Cambridge.
Einfeldt, Albert	Greenwood.
Eisenman, Ben	Mishicot.
Eleveljem, O. J.	McFarland.
Eley, T. B.	Madison, R. F. D.
Ellickson, A. C.	Arlington.
Ellis, E. J.	Evansville.
Ellsworth, Raymond	Tavera.
Elver, E. C.	McFarland.
Emery, George	Logansville.
Emery, Sydney	Edgerton.
Emmert, H. L.	Johnsons Creek.
Engebretson, Albert	West Salem.
Engebretson, E. S.	West Salem.
Engel, Geo. H.	Fountain City.
Engleman, John	Hixton.
Erdall, M. N.	Deerfield.
Erickson, Clarence	South Wayne.
Erickson, Louis E.	Kewaunee.
Ernst, Claude	Thompson, Ohio.
Ernst, John A.	Milwaukee, 921 Island Ave.
Eskil, Odin	Iron Mountain, Michigan.
Evans, W. D.	Pickett.
Evenson, Fred.	DeSoto, R. 2.
Faast, Ben F.	Eau Claire.
Falarsh, Frank	Peshtigo, R. 2.
Farwell, Roy R.	Ridgeway.
Fay, Albert	New Richmond.
Felland, Geo.	Madison, R. 1.
Fellows, Samuel W.	Rockford, Ill.
Fernald, Paul E.	West Oldtown, Me.
Fetting, Edwin	Alma.
Finegan, Louis	Sparta.
Finsnes, A. I.	Chippewa Falls.
Fish, Esli	Janesville, R. 7.
Fisher, Will J.	Fond du Lac.
Fitzsimmons, Ira A.	Mineral Point.
Fleishauer, C. K.	Arkansaw.
Florin, Emil J.	Cochrane.
Florin, Henry	Cochrane.
Follstad, Anton	Elcho.
Ford, J. F.	Mazomanie.
Foth, F. D.	Norwalk.
Frauenheim, O. R.	Random Lake.
Frederickson, Fred.	Spring Green.
Freeman, G. A.	Sparta.
Frey, E. J.	Mt. Hope.
Fuiten, B. H.	New Richmond.
Fuller, Horace	North Lake.
Fuller, Leroy	Lake Geneva.
Fuller, S. L.	Milwaukee, 126 26th St.
Gade, Adolph	Reedsburg.
Gaffney, Ellery	Oxford.
Gallagher, J. F.	Reedsburg.
Gamerdinger, John.	Kendall.
Gapen, C. E.	Monroe.
Garey, James	Grimms.
Garside, Harry R.	Cedar Grove.
Gasser, Geo. W.	Spring Green.
Gay, John	Madison.
Gehrand, Arthur A.	Rochester.
Geller, H. W.	Woodbine, N. J.
Gensmann, Edw. D.	Schleisingerville.
George, W. R.	Sterling, Ill.
Geraldson, Mervin.	Manitowoc, R. 4.
Gerking, F. W.	Elk Mound.
Germanson, Herbert	Luck.
Ghastin, Floyd	Twin Bluffs.
Ghastin, Wm. J.	Twin Bluffs.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Gibbard, Peter J....	Ripon.
Giebel, Karl	Fond du Lac.
Gigstad, Benneth ...	Valders.
Gillette, Rufus A....	Verona.
Gillies, J. H.....	Stoughton.
Glindinning, H. L...	Shullsburg, R. 2.
Gloeckler, Theo.	Portage.
Godfrey, Burt K....	Janesville, R. 1.
Goechs, Wm.	Madison, R. 1.
Goetsch, A. A.....	Juneau.
*Goldsmith, Wm. E.	Waupaca.
Gorges, H. F.....	New London.
Gould, G.	Peshtigo.
Gould, M. M.....	Peshtigo.
Graber, Edward ...	Mineral Point.
Graber, L. F.....	Mineral Point.
Grady, Geo.	Oregon.
Graham, P. S.....	Fennimore.
Grand, Geo. W.....	Independence.
Grandine, Morton D	North Crandon.
Graser, Adam H....	Waukesha.
Grass, Frank	Burlington.
Grassman, Irwin ...	Kendall.
Graul, Edward J....	Independence.
Graves, D. W.....	Baraboo.
Grebe, Fred P.....	Fox Lake.
Greene, J. I.....	Clinton.
Greengo, A. L.....	Menomonee Falls.
Grenzow, Jesse H...	Juda.
Gridley, Ben.	Wauwatosa.
Grimth, Jas.	Spencer.
Grimth, James	Ridgeway.
Grimsned, J. A.....	Coon Valley.
Grinde, L. S.....	Morrisonville.
Griswold, H. W.....	West Salem.
Groth, C. A.....	Cedarburg.
Grove, Christian ...	Columbus, R. 6.
Grover, Albert	Columbus, R. 6.
Grub, C. H.....	Baraboo.
Guenther, Nelson W	So. Milwaukee.
Guilford, W. S.....	Twin Falls, Idaho.
Gullickson, Gustave	Nelsonville.
Gullickson, Thos. O.	Nelsonville.
Gunderson, Clifford	Manitowoc, R. 4.
Guptill, L. R.....	New Auburn.
Gustafson, Theo....	Stockholm, R. 1.
Gustaveson, Chas...	Manitowoc.
Guttenberg, F., Jr.	Jefferson.
Haas, Geo. H.....	Meriden, Conn.
Haevers, Martin	Luxemburg, R. 4.
Hagestad, A. C.....	Ettrick.
Hall, Frank	Hartland, R. 21.
Hall, W. H.....	Wonewoc.
Halley, Guy R.....	Rockford, Ill., R. 2.
Halsted, N. W.....	Lena.
Halverson, Almer ..	Cato, R. 1.
Halvorson, Theo. ...	Kennan.
Hamburg, J. F.....	Baraboo.
Hamilton, T. S.....	Westfield.
Hanchett, W. H....	Sparta.
Hanifin, Leo	Grand Rapids.
Hanna, O. O.....	Mt. Horeb.
Hansen, Carl F.....	Sparta.
Hansen, Harry	Camp Douglas.
Hansen, J. K.....	Stevens Point, R. 5.
Hansen, Warner ...	Manitowoc.
Hanson, Carl H.....	Elk Mound.
Hanson, Carl O.....	Hollandale.
Hanson, Elmer	Waupaca, R. 2.
Hanson, Henry O...	Spring Valley.
Hanson, N. P.....	Amherst Jct., R. 2.
Hardy, John	Wauwatosa.
Harrington, C. E....	Verona, R. 1.
Harrington, Myron.	Waupaca.
Harris, A. M.....	Plainfield.
Harris, Ben F.....	Delavan.
Harris, Ruthven E..	Warrens.
Harrison, Geo.....	Chippewa Falls, Care State Farm.
Hart, C. B.....	Brookfield.
Hart, William C....	Brookfield, R. 2.
Hargrave, Robt.....	Ripon.
Harvey, C. B.....	Wonewoc.
Haskins, Leon O....	Montello, R. 3.
Hass, Reinhold.....	La Crosse, R. 1.
Hasz, Theodor.....	Logansville.
Hatch, L. M.....	Big Bay, Mich.
Hauck, Nathan.....	Alton, Calif.
Haus, Enoch.....	Stoughton.
Hausch, Albert.....	Baraboo.
Hawkins, A. B.....	Farley, Iowa.
Hayes, Edwin.....	Buffalo, N. Y., 593 W. Ferry St.
Hayes, Thomas, Jr..	Richfield.
Haylett, Henry O...	Waukesha.
Heasty, Ralph.....	Sparta.
Hecker, Paul.....	New Richmond.
Hecketsweiler, O. J.	Alma Center.
Hedlund, Adolph...	Clayton.
Heineck, W. E.....	Madison, 243 W. Gilman.
Heinke, Alvin E....	Stratford.
Heinze, Louis.....	Prescott.
Hegge, Julius.....	Galesville.
Heinrich, Otto W...	New London.
Heling, Paul.....	Menomonee Falls.
Hemingway, Geo. L.	Hanover.
Hemker, Fritz H....	West Salem.
Hendricks, J. H.....	Campbellsport.
Henke, Louis.....	Lowell.
Henning, Walter ...	Mazomanie.
Henrichs, Ernest....	Reedsburg.
Herdrich, S. F.....	Adell.
Hermann, F. F.....	Osseo.
Herold, Rudolph, Jr.	Stoddard.
Herrbold, J. W.....	Sturgeon Bay.
Herwig, Richard....	Delton.
Herwig, Theo.	Delton, R. 1.
Hicken, Alfred B....	Pewaukee.
Hickcox, J. Gilbert.	Whitefish Bay.
Hicks, S. E.....	Almond.
Hildemann, Alex. E.	Belle Plaine.
Hill, C. C.....	Tomah.
Hill, Chas. T.....	Brookfield.
Hill, Otto C.....	Mt. Horeb.
Hill, J. Thos.....	Brookfield.
Hillier, H. B.....	Brownsdale, Minn.
Hintz, Geo. E.....	Oakfield, R. 26
Hintz, Wm. F.....	Oakfield, R. 26.
Hirsch, B.	Washburn, R. 1.
Hitchcock, Clarence	Sparta.
Hitchcock, H. R.....	Pecatonica, Ill.
Hjelle, Ole K.....	Soldiers Grove.
Hoard, L. R.....	Cataract.
*Hobein, F. W.....	Barrington, Ill.
Hocks, Walter	Sturgeon Bay.
Hoefner, Herbert ..	Manitowoc.
Hoeft, Chas. A.....	Oshkosh, Lenwood Farm.
Hoffman, Conrad ..	Phillips.
Hoffman, Jacob	Algoma.

* Deceased.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Holcomb, W. R.....	Excelsior, Minn.
Holloway, Ed. M...	Union Grove, R. 8.
Holloway, John W.	Union Grove.
Holmen, O.	Belleville.
Holmes, U. C.....	Evansville.
Holscher, A. C.....	Cottage Grove.
Holterman, R. K....	Fond du Lac, R. 5.
Holzhuter, Walter..	Marshall.
Hood, D. L.....	Spring Green.
Hopkins, Andrew ..	Madison.
Hopkins, B. F.....	Morrisonville.
Hoppert, Martin J..	Sheboygan, R. 4.
Hougan, Halvor O..	Stoughton.
Hougen, S. O.....	Junction City.
Houghton, F. T.....	Reedsburg.
Houslet, Neal	Packwaukee.
Hoxsey, Edward ...	Serena, Ill.
Hoxsey, Frank	Serena, Ill.
Howe, John	Comstock.
Howe, T. R.....	Sun Prairie.
Howell, H. P.....	Sparta.
Howitt, Chas. H....	Randolph.
Howland, H. H.....	Waupun.
Huckstead, A. A....	Neillsville.
Hughes, Jas.	Neillsville, R. 1.
Huhn, William	Cleveland.
Hunter, Hobart R..	Fond du Lac, 232 E. 2nd St.
Hustad, K. E.....	Rice Lake.
Hustad, Milon	Rice Lake.
Ihrig, J. J.....	Oshkosh.
Illian, W. L.....	Adell.
Imholt, B. A.....	Houlton.
Iverson, C. M.....	Browntown.
Ives, L. W.....	Granton.
Jackson, H. H.....	Oshkosh, 104 Main St.
Jacobs, A. F.....	Coloma, R. 1.
Jacobs, S. M.....	Janesville.
Jahnke, J. F.....	Pepin.
James, Geo. A.....	Richland Center.
Jamison, Clarence ..	Appleton, R. 2.
Jamison, Robert ...	Appleton, R. 2.
Jamison, W. G.....	Appleton.
Janecek, Cyril	Bloom City.
Jaquish, J. E.....	Twin Bluffs.
Jeffery, H. B.....	Menomonee Falls.
Jelinek, Benjamin...	Milwaukee, 935 Feutonia Ave.
Jens, Otto A.....	Waukesha.
Jensen, Peter	Argyle.
Jerdee, Alfred O....	Deer Park.
Jerdee, Perry S.....	Deronda.
Jochman, Peter	Greenville.
Johannes, Albert ...	Two Rivers, R. 2.
Johnson, Billie	Strongs Prairie.
Johnson, E. T.....	Soldiers Grove.
Johnson, C. G.....	Welcome.
Johnson, J. E.....	Ferryville.
Johnson, L. M.....	Ashland.
Johnson, Sam	Westfield.
Johnston, Frank R..	Appleton, R. 6.
Johnston, Oney	Appleton.
Joice, George	Waterloo.
Jones, Albert	Dousman.
Jones, C. A.....	Iron River.
Jones, E. F.....	Sun Prairie.
Jones, John G.....	Beaver Dam.
Jones, O. R.....	Beaver Dam.
Jones, R. G.....	Columbus.
Jones, S. R.....	Leon.
Jones, Seneca T.....	Watertown, R. 1.
Jones, Tommy O....	Rewey.
Joos, Frank B.....	Fountain City.
Jorenby, Carl	Blanchardville.
Judd, Jasper	Endeavor.
Judd, Jesse L.....	Endeavor.
Jung, A. E.....	Randolph.
Jungbluth, Wm. J..	West Allis, R. 5.
Kaiser, W.	Louisburg.
Kalouner, Edward..	Antigo, R. 5.
Kaltenberg, A.	Waunakee.
Kammlade, S. G.....	Bangor.
Kastein, Herman ...	Waupun.
Katel, W. C.....	Kewaunee.
Katerndahl, Carl ...	Stevens Point, 123 Dixon St.
Kaul, E. H.....	Waukesha, R. 7.
Kaupunger, G. F...	Stoughton.
Keenan, W. M., Jr..	McFarland.
Kendell, Geo. W....	Sun Prairie.
Kent, H. W.....	Rusk.
Kent, J. S.....	Rusk.
Keogh, Luke F.....	Rozellville.
Keuler, Aaron F....	Helenville.
Keuler, Harry	Helenville.
Kieffer, Mike	Fredonia.
Kielsmeier, R. C....	Timothy.
Kimble, N. G.....	Milton Junction.
King, William	Jim Falls.
Kinstler, C. L.....	Washburn.
Kircher, H. W.....	Chilton, R. 3.
Kirst, Ernest J.....	Tomah.
Kitchen, Jos. H.....	Eldorado.
Kittlerm, Knut	Mt. Horeb.
Klann, Adolph	Hayton, R. 1.
Klassy, H. C., Jr....	Monticello, R. 3.
Klatt, Ernest.	Beaver Dam.
Klein, W. C.....	Orfordville.
Klement, Otto C.....	Ft. Atkinson.
Klemm, Louis J.....	Welcome.
Klovdahl, J. J.....	Wittenberg.
Klumb, Albert	Rockfield.
Klumb, Hugo G....	Kewaskum.
Klumb, Oscar	Rockfield.
Klussendorf, F. E...	Phillips, R. 1.
Knapton, W. E.....	Downing.
Kneeland, Peter ...	Windsor.
Kneipp, William ...	Weyauwega.
Knoke, Hugo	Readfield.
Knospe, Chas. G....	Alma.
Knudsen, Henry ...	Mt. Horeb.
Knutson, Ed. A.....	Manitowoc.
Knuteson, E. L.....	Wautoma.
Kocmich, Ed.	Kewaunee, R. 2.
Koenecke, Ed. H...	Reedsburg.
Koenigs, Phillip ...	Fond du Lac.
Kolb, Ed.	Cleveland, R. 2.
Koll, C. A.....	Eau Claire.
Koltes, Jos. F.....	Dane.
Konz, John, Sr.....	Fairchild.
Koss, Otto W.....	Medina.
Kramer, Henry F...	Bloomer.
Kressin, Gustav R..	Cedarburg.
Kroeger, B. C.....	Milwaukee, 403 1st Ave.
Krofta, Rudolph ...	Kewaunee, R. 2.
Krueger, Alexander.	Watertown, R. 2.
Krueger, H. E.....	Beaver Dam.
Kruschke, Geo. H..	New Richmond.
Kruse, William	Whitewater, R. 4

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Kuehn, Chas. A.....	Brandon.
Kuhlman, Arthur H	Lowell.
Kuhtz, Harvey A...	Waukesha.
Kundert, Wm.	Monroe.
Kunkel, Arthur	Manawa.
Kurtze, Otto C.....	West Allis.
Lachmund, Robert..	Sauk City.
Landgraff, Henry ..	Endeavor.
Larsen, A. C.....	Madison, 330 W. Wash. Ave.
Larson, Albert	Madison, R. 1.
Larson, Chas. L.....	Brown City, Mich.
Larson, Eli	Sawyer.
Larson, J. M.....	Wautoma.
Larson, Lewis	Madison, R. 1.
Larson, LeRoy	Iola.
Lathers, Chas. F....	Beloit.
Latta, F. L.....	Clinton Jct.
Lawrence, F. W.....	Bangor.
Lawrence, W. J.....	DeSoto.
Lawson, W. A.....	Rosendale.
Lawton, A. R.....	Viola.
Lebeis, F. J.....	Bloomer, R. 5.
Ledger, David	Lake Geneva.
Lee, E. W.....	Granton.
Lee, L.	Leon.
Lee, N. A.....	Deerfield.
Lee, Oliver	Klevenville.
Lee, P. A. G.....	Deerfield.
Lee, Royal D.....	Arkdale.
Lee, Severt A.....	Deerfield.
Lehmann, Theo. ...	Watertown.
Lemke, Albert	Clintonville.
Leonard, M. J.....	Plymouth.
Leonard, Wm. R....	Jefferson.
Letts, E. F.....	Appleton.
Leverich, J. W.....	Sparta.
Lewis, E. H.....	Whitewater.
Lewis, Lester M....	Monticello R. 1.
Lewis, Lloyd	Stevens Point.
Lewison, Thomas ..	Viroqua.
Ley, John P.....	Dodgeville.
Ley, Nicholas	Dodgeville.
Liebe, John H.....	Grand Rapids, R. 7.
Lindas, Theo. A....	Marshall.
Lindberg, Clint. H..	Dresser Jct.
Lindemer, Geo. H..	Juneau, R. 2.
Linse, Chas.	La Crosse.
Linton, Gilbert A...	Ft. Atkinson.
Livingston, E. C....	Randolph.
Lloyd, Evan B.....	Cambria.
Loewe, Arthur P....	Milwaukee, R. 8.
Logan, Ralph G.....	New Palestine, Ind
Longley, H. N.....	Dousman.
Lord, Karl W.....	Richland Center.
Lowell, Lloyd S....	Sharon.
Luebke, H. W.....	Watertown, R. 1.
Luetscher, Irvin ...	Plain.
Lunde, Gunder.....	Stoughton.
Lunde, K. I.....	Edgerton.
Lythjohan, Carl	Cottage Grove.
MacLean, George ..	Madison, R. 6.
MacVannel, A. P....	St. Marys Ont., Canada.
McAdam, C.	Wausau.
McCarthy, Geo.	Fredonia.
McCauley, Rex	Osseo.
McClurg, Walter ...	Viroqua.
McConnell, F. J.....	Darlington.
McConnell, Oren ...	McFarland.
McCormick, Fred ..	Fond du Lac.
McCoy, Geo. L.....	Evansville.
McDermid, J. A.....	Eau Claire.
McDonald, James P.	Sparta.
McDowell, David P.	Packwaukee.
McElroy, W. H.....	Pardeeville.
McGeachie, E. P....	Winnebago, Ill.
McGinnis, Chas.	Baraboo.
McIntyre, Ivan	Ft. Atkinson.
McLean, Donald ...	Denver, Colo., 704 Equitable Blk.
McLeod, H. S.....	Sturgeon Bay.
McMillan, H. N.....	Medford.
McMillen, Carl	Endeavor, R. 1.
McMillen, R. A.....	Endeavor.
McNown, J. H.....	Mauston.
Mack, Warren	Whitewater.
Maeder, J. W.....	Oregon.
Mahoney, David ...	Juneau.
Mahr, Henry	Caledonia.
Mandt, Lawrence ..	Sun Prairie.
Marken, Otis A.....	Valders.
Marken, Richard L.	Valders.
Markey, W. E.....	Madison.
Markham, F. C.....	Independence.
Marshall, A. C.....	Omro.
Marshall, W. S.....	Delton.
Marston, Albert	Beloit, R. 30.
Marston, Roy C.....	Beloit.
Martin, Arthur W..	River Falls.
Martiny, L. P.....	Chippewa Falls.
Marty, Matthias ...	Monticello.
Mathews, Lee G....	Brandon.
Mathews, Milton D.	Helenville, R. 1.
Mathis, Adolph	Lansing, Ia., R. 1.
Matthys, Walter ...	Barron.
Mattison, Thomas..	Blair.
Mau, H. G.....	Brodhead.
Maug, Arthur J.....	Ripon.
Mayo, John H., Jr..	Eau Claire.
Meacham, C.	Downing.
Mead, R. E.....	New Lisbon.
Meekin, H. W.....	Fond du Lac.
Meier, E. F.....	Eden, R. 36.
Melby, Dytinus ...	Spooner.
Merkel, Henry	Appleton, R. 3.
Merrill, W. M.....	Taylor.
Messerschmidt, Sam	Flat Rock, Ohio.
Messner, Edwin F..	Oakfield.
Meurer, Paul	Genoa Jct.
Meyer, Alfred J....	Oakwood, R. 18.
Meyer, A. H.....	Grafton.
Meyer, A. J.....	Howell, Mich., R. 7.
Meyer, Wm.	Ellsworth, Minn.
Michels, Henry	Malone.
Michels, Math.	Peebles..
Mickelson, Thomas.	Deerfield.
Mielke, F. L.....	Windsor.
Mielke, J. E.....	Basco.
Mihills, D. R.....	Fond du Lac.
Mihills, G. N.....	Fond du Lac.
Milkee, George E...	Newbury.
Miller, A. H.....	Waupun.
Miller, A. J.....	Milltown.
Miller, Geo. C.....	Milwaukee, 232 Grove St.
Miller, H. C.....	Allenville.
Miller, Louis A.....	Sparta.
Mills, Roscoe C.....	Appleton, R. 2.
Miritz, O. F.....	Fond du Lac.
Mistele, Wm.	Kendall.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Mitchell, Dean	Brookfield.
Mitchell, Edw. H.	Delavan.
Mitchell, Geo.	Cottage Grove.
Mitchell, J. T.	Cottage Grove.
Mitwede, Henry	Waukesha.
Moen, Gilbert T.	Eleva.
Moen, Herman	Cambridge.
Montague, C. R.	No. Prairie.
Moore, Harry G.	McFarland.
Moore, Henry G.	Mauston.
Moore, R. A.	Madison.
Morgan, Chas.	Albany.
Morgan, Mrs. H. H.	Madison, 10 Langdon St.
Morris, Geo. C.	Madison, 722 W. Johnson.
Morris, Leslie D.	Waukesha.
Morrissey, J. H.	Arena.
Morse, W. A.	Camden, N. Y.
Moseley, A. G.	Cataract.
Moseley, H. B.	Beloit.
Mower, H. Payson.	Wauwatosa.
Muehleisen, G.	Tell.
Mueller, Edw. O.	Appleton.
Mueller, Math. J.	Urbana, Ill., Care Exp. Sta.
Mueller, Walter E.	La Crosse, 625 Cass St.
Mulder, B. W.	Midway.
Myrick, M. O.	Bristol.
Nace, Franklin	Iola.
Naef, Jacob	Riley.
Nagle, Lee	Bridgeport.
Napier, J. M.	Madison.
Nathen, Paul R.	Kendall.
Nau, Ray H.	Franksville.
Nedgwood, R. E.	Shawano.
Nelen, Jac	De Forest.
Nelson, Carl	Greenwood.
Nelson, Emil	River Falls.
Nelson, Martin	Milton.
Nelson, Nels J.	River Falls.
Nelson, Osan	La Crosse.
Nelson, Wm.	Milltown.
Neprud, Nels O.	Coon Valley.
Neuberger, Wm. F.	Reeseville.
Neystrom, Archie	Maiden Rock.
Nicolaus, Chas. A.	Waukesha.
Nicolaus, D. C.	East Troy.
Nichols, Harry	Stoughton.
Nieman, Walter	Hamburg, R. 1.
Nies, Peter	Greenleaf.
Nordlie, C. K.	Rockdale.
Norgord, C. P.	Madison.
Norman, Frank	Helenville.
Norrbom, C. G.	Eland, R. 1.
Norsman, Jerome O.	Morrisonville.
Northrup, H. R.	Chicago, Ill., 667 Winthrop Ave.
Northrup, Jesse	Waupun.
Northway, Morris J.	Kenosha.
Nourse, Glen	Sextonville.
Nuttleman, Alfred.	West Salem.
Nuttleman, Fred.	West Salem.
Ochsner, A. C.	Plain.
O'Connell, Jas.	Hartford.
O'Connor, Edw. F.	Lodi, R. 1.
Oestreich, L. J.	Kewaunee.
Ogle, James L.	Waldo.
Ohman, Alfred	Deerfield.
Ohman, S. S.	Deerfield.
Ohnstad, K. O.	Stoughton.
Oleson, Janes P.	Ripon.
Oliver, C. S.	Eau Claire.
Olsen, Clarence	Westby.
Olson, Gilbert C.	Westby.
Olson, Nels E.	Iola.
Oltery, Henry	Fond du Lac.
Oosterhuis, A. C.	Sheboygan Falls.
Osterday, E. G.	Stockton, Ill.
Otis, Frank D.	Madison, 814 W. Johnson St.
Orth, A. F.	Muscoda.
Orvis, L. C.	Salem.
Otterholt, Henry	Chetek, R. 1.
Owen, Thos. M.	Portage.
Owens, H. C.	Fox Lake, R. 2.
Pabst, Fred	Oconomowoc.
Paddock, Alvin D.	Salem.
Page, G. F.	Berlin.
Palfrey, John	Omro.
Palmer, Levi	Verona.
Parsch, Gustav A.	Wausau.
Parrott, Alfred	Endeavor.
Patric, Wm.	Waupun.
Patterson, Harley	Cottage Grove.
Patterson, J. L.	Glen Haven.
Paulson, H. E.	Hollandale.
Paulson, J. E.	Manitowoc.
Paulson, P. A.	Hudson.
Pearson, Clarence	LaValle, R. 4.
Peck, Edward	Edgerton.
Pederson, Cornelius	Cato.
Pederson, Peter	Eleva, R. 3.
Peebles, E. C.	Peebles.
Peebles, John	Oconomowoc, R. 26.
Peebles, S. S.	Peebles.
Peik, Arthur	Chilton.
Peik, Edmund	Edgerton, Care Emery Farm.
Perry, Will H.	Gratiot.
Persen, Alfred	Bryant.
Peters, Ezra	Sharon.
Peterson, August	Stanton.
Peterson, Conrad T.	Grantsburg.
Peterson, Eni	Amery, R. 4.
Peterson, Henry N.	New Holstein.
Peterson, James	Pine River.
Peterson, John H.	Cashton.
Peterson Perry O.	Amherst, R. 2.
Peterson, Peter	Walworth.
Peterson, William.	Curtiss, R. 2.
Peters, John	Madison, R. 7.
Petrie, Merton E.	Elkhorn.
Phillips, Jesse	Elizabeth, Ill.
Pierce, Henry	Milton Junction.
Pierner, Fred	No. Milwaukee.
Pierner, John W.	Thiensville.
Pierstorff, Henry M.	Madison.
Pinkerton, Altai J.	Waupaca.
Piper, Harry	Sharon.
Pirner, Fred	Sugar Bush, R. 26.
Pluntz, Guy	Alma.
Pope, Roy W.	Sun Prairie.
Popp, Arthur	Jefferson, R. 2.
Porter, J. K. P.	Evansville.
Porter, L. W.	Evansville.
Porter, W. L.	Fond du Lac.
Post, H. L.	Sextonville.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.
Poston, R. H.	Duluth, Minn., Care Duluth Stock Farm.
Poulter, C. J.	Cumberland.
Poulter, Charley	Cumberland.
Precourt, L. A.	Plover, R. 1.
Preston, Wm. N.	Juda.
Price, Fred	Bristol, R. 31.
Pritzl, John A.	Cato.
Puls, John	Hartford, R. 4.
Purinton, C. G.	Monticello.
Raaum, Peter	Ferryville, R. 2.
Radermacher, John.	Middleton.
Raftery, Agnes	Windsor.
Raichle, Carl	Galesville.
Raisler, Theo.	Welcome.
Raltzman, A. L.	Reedsburg.
Randall, S. M.	Waupun.
Rasey, Edwin L.	Beloit, R. 27.
Rasmussen, Fred	Neenah, R. 11.
Rather, Armand P.	Peebles, R. 37.
Rauchenstein, John.	Rice Lake.
Ray, W. F.	Kewaunee, R. 1.
Rector, Carroll V.	Grand Rapids.
Rehbein. A. E.	St. Croix Falls, R. 1.
Rein, Robert	Cleveland, R. 1.
Reindahl, A. K.	Madison.
Reinen, Andrew	Sun Prairie.
Reinhardt, W. H.	Wausau.
Renak, Edward	Racine, R. 2.
Renk, Wm. F.	Sun Prairie.
Rex, Edgar	Burnett.
Rheingans, Ernest C	Baraboo, 401 8th St.
Rhiner, Albert	Riley.
Rhiner, Caspar	Riley.
Rich, O. S.	Baraboo.
Rich, W. V.	Baraboo.
Richardson, G. J.	Spring Grove, Ill.
Riederer, Blasius	Cato.
Riek, Anthony	Plain.
Riemon, Elmer	Ripon.
Robers, Wm. J.	Burlington.
Roberts, A. C.	Pardeeville.
Roberts, F. W.	Woodworth.
Roberts, Jack	Waukesha.
Roberts, Wm. E.	Randolph.
Robinson, A. S.	Lake Geneva.
Robinson, Earl P.	Markesan.
Robson, Melvin	Spring Green.
Rockhill, Wm. E.	Waupun.
Rodewald, W. C.	Baraboo.
Roderick, Lee M.	Juda.
Rodger, Almon	Endeavor.
Rodger, Ray	Endeavor.
Roethel, Herman	Kiel.
Roffers, John H.	Green Bay.
Rolfson, Clarence E.	Waterford, R. 25.
Rood, Henry	South Wayne.
Rood, Minnick	South Wayne.
Root, Alvin	Fond du Lac.
Rorer, Wm. A.	Mt. Gretna, Pa.
Rorge, A. J.	Stoughton.
Rorge, A. O.	Stoughton.
Rosenow, Arthur	Alma.
Rosenow, Arthur	Oconomowoc.
Rosenow, H. E.	Oconomowoc.
Rosenow, H. G.	Waumandee.
Rosenow, L. J.	Waumandee.
Rosenow, Wm. F.	Waumandee.
Rosholt, Jacob A.	Scandinavia.
Royston, Thomas	Mazomanie.
Ruhrmann, B. J.	Cross Plains.
Runde, Aloysius	Cuba City.
Runde, Aug.	Sinsinawa.
Runde, Martin C.	Cuba City.
Rundell, Dale E.	Livingston.
Rusch, E. W.	Reedsburg.
Rusink, H. G.	Waupun.
Ruskell, L. E.	Belmont.
Rust, Shirley H.	Mukwonago.
Ruste, C. O.	Blue Mounds.
Ryan, Gerald	Sun Prairie.
Ryan, George	Brookfield, R. 12.
Ryan, Malachi	So. Kaukauna.
Sackett, Clyde	Cumberland.
Salzman, Ed.	Kiel.
Sandman, W. D.	Holmen.
Sargent, Roy E.	Warren, Ill.
Savage, A. F.	Quincy, Florida.
Schaefer, Erwin S.	Black Hawk.
Schaefer, Henry G.	Glenbeulah.
Schaefer, R. J.	Appleton.
Schafer, Chas. H.	Waukesha, R. 7.
Schiller, Claude E.	Beaver Dam.
Schley, E. G.	Waukesha.
Schmit, Albert	Appleton.
Schmit, A. W.	Appleton.
Schmit, Geo.	Greenville.
Schmit, Wm. F.	Appleton.
Schmitz, Edw. H.	Lone Rock.
Schmitz, Hubert	Lone Rock.
Schottler, C. J.	So. Germantown.
Schneider, G. P.	Walsh.
Schroeder, Chris	Racine.
Schroeder, F. C.	Hartland, box 146.
Schroeder, H. F.	Jim Falls.
Schroeder, Robert	Morrisonville.
Schuette, H. W.	Reedsburg.
Schulte, Peter J.	Cleveland.
Schultz, Nelson F.	West Bend, R. 3.
Schultz, Walter W.	Neillsville.
Schumann, Hugo	Beaver Dam.
Schwandt, Wm.	Stanton.
Schwantes, E. F.	Coalburg, Ohio.
Schwartz, J. A.	Troy Center.
Sebion, Cornelius	Westby.
Sebion, Tennis	Westby.
Semb, T. A.	Madison, R. 6.
Sette, O. E.	Juneau.
Shannon, W. J.	Oconomowoc.
Sharpee, Carl	Columbus.
Sharpee, Endre A.	Rio.
Sharpee, J. A.	Rio.
Sharpee, P. A.	Morrisonville.
Sheen, Clarence J.	Trevor.
Sheen, W. J.	Trevor.
Sheldon, Ben. F.	Brandon.
Shepard, R. A.	Columbus.
Showers, M. W.	Mazomanie.
Sias, Benj.	Sparta.
Siegert, A.	Junction City.
Siepert, F. W.	Chippewa Falls.
Siggelkow, M. E.	Baraboo.
Silver, C. R.	Belleville.
Simonson, S. K.	Deerfield.
Sims, O. F.	Melrose.
Simmons, Will	Cuba.
Skare, Albert	McFarland.
Skewes, Edwin B.	Union Grove.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.	Names.	Post-Office Address.
Sleep, S. S.	Hartland, R. 21.	TeSelle, Clarence J.	Sheboygan Falls.
Smedsrud, M. C.	Hollandale.	Thacher, Ed. F.	Zenda.
Smiley, Jas. B.	Albany.	Thacher, Louis E.	Zenda.
Smith, C. A.	Amherst.	Thieleke, Ed. A.	Kiel, R. 2.
Smith, Elmer J.	Brandon.	Thielke, Emil	Madison, R. 6.
Smith, Fred	River Falls.	Thiers, L. M.	Kenosha.
Smith, Harvey G.	Brandon.	Thom, J. A.	Bristol, R. 30.
Smith, Jesse	Loyal.	Thoma, Ernest	Sugar Bush.
Smith, J. G.	Farmington, Minn.	Thomas, Roy E.	Dodgeville.
Smith, L. E.	Beloit, R. 3.	Thompson, Adolph.	Black River Falls.
Smith, R. M.	Elroy.	Thompson, A. L.	Blair.
Smith, Russell	Crystal Lake, Ill.	Thompson, Alfred	Delavan.
Smith, Samuel A.	Oakfield.	Thompson, G. G.	Blanchardville.
Smith, Seymour	Oshkosh.	Thompson, Melvin.	Mt. Horeb.
Smithback, Marvin.	Cambridge.	Thompson, R. K.	Bottinau, N. D.
Smithwick, M. W.	Kewaunee.	Thompson, Theo.	Curtiss.
Snell, Earl D.	Downing.	Thompson, T., Jr.	Wadena, Iowa.
Snyder, Clyde L.	Footville.	Thorp, Eugene	Monroe.
Snyder, Elmer G.	Clinton.	Thorpe, J. R.	Tavera.
Snyder, R. B.	Clinton.	Thorstad, Harlan	Deerfield
Solem, Edward	Wonewoc.	Thorstad, N. H.	Deerfield.
Solberg, Louis	Viroqua.	Tice, Ray W.	Redgranite.
Sorein, Erick	West Prairie.	Tice, Roy	Redgranite.
Sorenson, Camille	Sturgeon Bay.	Tjugum, E. E.	Sun Prairie.
Sorensen, Hilbert	Marinette.	Tochterman, C., Jr.	Monroe.
Spartz, N. A.	Union Grove.	Toepfer, Otto R.	Madison, R. 7.
Spencer, Earl H.	Waupaca, R. 3.	Tomkins, O. Scott.	Bass Lake.
Spencer, Hardy	Baraboo.	Toole, W. A.	Baraboo.
Staley, John N.	Hillsboro.	Treleven, Guy T.	Omro.
Stauchfield, S. C.	Fond du Lac.	Trewartha, Edw. J.	Hazel Green.
Stauffacher, A. J.	Monroe, R. 6.	Trumpy, Fred.	Clarno.
Steensland, August.	Hollandale.	Tschudy, Benj. O.	Monroe, R. 5.
Stegne, Chris.	Viroqua.	Tubbs, Herbert	Seymour.
Steidtmann, Edwin.	Merrimac.	Turgasen, J. H.	Richland Center.
Steiner, W. H.	Brownsville.	Tyler, James G.	Valders.
Steinhoff, W. J.	Platteville.		
Steusby, Anton	Cottage Grove.	Uhlin, Albin	Clayton, R. 1.
Steusby, Edw. P.	Cottage Grove.	Uhlin, Frank E.	Clayton, R. 1.
Stevens, Ernest	Eau Galle.	Uhrenoldt, Jens	Leonard.
Stevenson, Carl	Soldiers Grove.	Ulrich, Erwin C.	Horicon.
Stevenson, J. W.	Winnebago, Minn.	Umlauft, Rudolph.	Dorchester.
Stewart, Blaine G.	Antigo.	Unger, Edw.	No. Milwaukee, R. 9.
Stewart, Geo. L.	Lodi.		
Stewart, J. H.	Wales.	Upton, Harold F.	Jim Falls.
Stienstra, S. J.	Swedeborg, Mo.	Usher, Earl	South Wayne.
Stivarius, Geo. A.	Fennimore.	Usher, J. M.	South Wayne.
Stone, A. L.	Madison.	Utgaard, Peter W.	Cylon.
Stone, Riley	Reedsburg.		
Straka, E. E.	Kellnersville.	Van Buskirk, G. W.	Plover.
Straug, Frank	Lone Rock.	Van Loon, John	La Crosse.
Strommen, Anton A.	Blanchardville.	Veium, Tollef	Stoughton, R. 3.
Strommen, Geo. K.	Cambridge.	Vine, Callice H.	Marquette.
Stromstad, P. L.	Coon Valley.	Voigt, Alvin	Oconomowoc, R. 26.
Stroup, Fred P.	Fond du Lac.	Vonder Ohe, Wm.	Reedsburg.
Strowig, Wm. A.	Cleveland.	Von Lanyi, Oscar.	St. Louis, Mo., 3420 Pine St.
Stuber, John H.	Cochrane.		
Stuesser, Eugene	Richfield.		
Suhr, Adolph A.	Cochrane.	Waclti, John	Monroe.
Suhr, Otto A.	Cochrane.	Wagner, Arthur L.	Haven.
Sullivan, Jas. A.	Grimms.	Wagner, Raymond.	Stevens Point.
Swan, Earling	Milwaukee, Sation B, R. 6.	Wahler, Adolph	Woodford.
		Wait, S. R.	Oshkosh.
Swan, L. W.	Mukwonago.	Walker, Ray C.	Plainville.
Swartz, Peter C.	Waukesha.	Wall, Floyd	Weyauwega.
Swenson, O. S.	Nelsonville.	Ward, Chas. E.	Ft. Atkinson.
Swerig, Carl	Stoughton.	Ward, Harold L.	Ft. Atkinson.
		Ward, Harold	Brodhead.
Taege, John	Appleton, R. 4.	Ward, Robert W.	Ft. Atkinson, R. 1.
Tanner, A. V.	Omro, R. 24.	Warmington, Prent.	Honey Creek.
Tauscher Bros.	Monroe.	Warzynakoski, A.	Oakwood R. 18.
Tempero, Roy J.	Menomonee Falls.	Wayne, Joseph	Boscobel.
Tenney, Horatio	Livingston.	Wehrwein, Walter.	Manitowoc, R. 2.

MEMBERSHIP, 1909.—Continued.

Names.	Post-Office Address.	Names.	Post-Office Address.
Weir, W. W.....	Mukwonago, R. 39.	Winge, Wm.	Wild Rose.
Weirich, Martin J..	Baraboo.	Winnebago County Agr. School	Winneconne.
Welsh, S. L.....	Tavera.	Wischhoff, Edwin ..	Reedsburg.
Wernick, Wm. H....	DeForest.	Wittenberg, E. F...	Middleton.
West, H. P.....	Ripon.	Woldt, Hugo	Jackson.
West, W. B.....	Neillsville.	Wood, Calvin D.....	Oshkosh, R. 4.
Wetzel, Alvin	Brookfield, R. 12.	Wrabetz, Frank	Madison, R. 6.
Wetzel, Henry	Brookfield.	Wright, Geo. T.....	Eau Claire.
Whelan, John V.....	Mondovi.	Wright, John	Whitewater.
White, Arthur	Rockford, Ill., 503 Church St.	Wrolstad, Alfred M.	Amherst Jct.
White, F. G.....	Oregon.	Wulff, Fred	Grafton.
Whitehead, H. W...	Leon.	Wulff, William	Grafton.
Whittaker, H. E....	Fond du Lac.	Wunsch, Hugo E....	Haven.
Wichern, L. M.....	Baraboo.	Wussow, Chas.	Seymour.
Wied, Edward	Waupaca.	Wyman, A. E.....	Eau Claire.
Wiegand, Otto R....	Cleveland.	Zahrt, F. H.....	Hortonville.
Wigen, Andrew	Quarry.	Zerbel, L. R.....	Madison.
Wilkinson, Edw. ...	Wilton.	Ziemer, Joseph	Jackson.
Wilkowske, Hugo ..	Mishicot.	Ziemer, Paul	Jackson.
Williams, Arthur R.	Waukesha.	Zillmer, Wm. C.....	Brookfield.
Willmarth, E. E....	Sun Prairie.		

HONORARY MEMBERS.

Ames, W. L.	Oregon
Babcock, Dr. S. M.	Madison
Cary, Prof. C. P.	Madison
Emery, Prof. J. Q.	Madison
Hays, W. M., Ass't Secretary Agr.	Washington, D. C.
Henry, Dr. W. A.	Madison
Karel, Hon. A. L.	Kewaunee
Lehmann, Mrs. Eva.	Woodland
McCormick, G. W.	Menominee, Mich.
McKerrow, Supt. Geo.	Pewaukee
Newman, Geo. N.	Ladysmith
Philips, A. J.	West Salem
Renk, Katharine.	Sun Prairie
Russell, Dr. H. L.	Madison
Schauer, Hon. A. G.	Kewaunee
Toole, William	Baraboo
True, Hon. John M.	Madison
Utsunomiya, S. T.	Sapporo, Hokkaido, Japan

MEMBERSHIP—1909.

[Arranged by counties.]

ADAMS COUNTY.

Johnson, Billie.....Strongs Prairie
Lee, Royal D.....Arkdale
Rodger, Almon .....Endeavor
Rodger, Ray .....Endeavor
Walker, Ray C.....Plainville

ASHLAND COUNTY.

Delwiche, E. J.....Ashland
Johnson, L. M.....Ashland

BARRON COUNTY.

Allen, E. G.....Barron
Bartlett, Ray .....Barron
Chrislaw, A. M.....Rice Lake
Howe, John.....Comstock
Hustad, K. E.....Rice Lake
Hustad, Milon.....Rice Lake
Matthys, Walter .....Barron
Otterholt, Henry.....Chetek, R. 1
Poulter, C. J.....Cumberland
Poulter, Charley.....Cumberland
Rauchenstein, John .....Rice Lake
Sackett, Clyde .....Cumberland

BAYFIELD COUNTY.

Daly, Richard C.....Washburn
Hirsch, B.....Washburn, R. 1
Jones, C. A.....Iron River
Kinstler, Clarence L.....Washburn

BROWN COUNTY.

Anderson, Alfred .....Denmark
Nies, Peter .....Greenleaf
Roffers, John H.....Green Bay

BUFFALO COUNTY.

Arms, Edward.....Fountain City
Bilderbach, Wm.....Mondovi
Engel, Geo. H.....Fountain City
Fetting, Edwin.....Alma
Florin, Emil J.....Cochrane
Florin, Henry.....Cochrane
Joos, Frank B.....Fountain City
Knospe, Chas. G.....Alma
Muehleisen, Gottlieb .....Tell
Pluntz, Guy .....Alma
Rosenow, Arthur .....Alma
Rosenow, H. G.....Waumandee
Rosenow, L. J.....Waumandee
Rosenow, Wm. F.....Waumandee
Suhr, Adolph A.....Cochrane
Suhr, Otto A.....Cochrane
Stuber, John H.....Cochrane
Whelan, John V.....Mondovi

BURNETT COUNTY.

Peterson, Conrad T.....Grantsburg

CALUMET COUNTY.

Christoph, Theo. F.....Chilton
Kircher, H. W.....Chilton, R. 3
Peik, Arthur.....Chilton
Peterson, Henry N.....New Holstein

CHIPPEWA COUNTY.

Bailey, Alfred B.....Jim Falls
Bekken, Oscar .....Bloomer
Christiansen, W. O.Chippewa Falls, R. 6
Finsnes, A. I.....Chippewa Falls
Guptill, L. R.....New Auburn
Harrison, Geo...Chippewa Falls, in care of State Farm
King, William .....Jim Falls
Kramer, Henry F.....Bloomer
Lebeis, F. J.....Bloomer, R. 5
Martiny, L. P.....Chippewa Falls
Schroeder, Herman F.....Jim Falls
Siepert, F. W.....Chippewa Falls
Upton, Harold F.....Jim Falls

CLARK COUNTY.

Beach, Glenn H.....Loyal
Daellenbach, Chris.....Abbotsford
Einfeldt, Albert .....Greenwood
Huckstead, A. A.....Neillsville
Hughes, Jas.....Neillsville, R. 1
Ives, L. W.....Granton
Lee, E. W.....Granton
Nelson, Carl.....Greenwood
Peterson, William.....Curtiss
Schultz, Walter W.....Neillsville
Smith, Jesse.....Loyal
Thompson, Theo.....Curtiss
Umlauft, Rudolph .....Dorchester
West, W. B.....Neillsville

MEMBERSHIP, 1909.—Continued.

COLUMBIA COUNTY.

Anaoker, Bernhard.....Portage
Anderson, Adolph W.....Portage
Carncross, J. E.....Okee
Chipman, W. R.....Morrisonville
Chrisler, Harley.....Lodi
Curtis, Ray .....Poynette
Dalton, Ernest.....Pardeeville, R. 1
Dalton, Roy.....Pardeeville, R. 1
Ellickson, A. C.....Arlington
Gloeckler, Theo.....Portage
Grover, Albert.....Columbus, R. 6
Grove, Christian.....Columbus, R. 6
Jones, R. G.....Columbus
Livingston, E. C.....Randolph
Lloyd, Evan B.....Cambria
McElroy, W. H.....Pardeeville
O'Connor, Edw. F.....Lodi, R. 1
Owen, Thos. M.....Portage
Roberts, A. C.....Pardeeville
Sharpee, Carl .....Columbus
Sharpee, Endre A.....Rio
Sharpee, J. A.....Rio
Shepard, R. A.....Columbus
Stewart, Geo. L.....Lodi

CRAWFORD COUNTY.

Bannen, R. E.....Boscobel
Brodt, Clarence D.....Bridgeport
Dowig, Neli.....Soldiers Grove
Hjelle, Ole K.....Soldiers Grove
Johnson, E. T.....Soldiers Grove
Johnson, J. E.....Ferryville
Lawrence, W. J.....DeSoto
Nagle, Lee.....Bridgeport
Raaum, Peter.....Ferryville, R. 2
Stevenson, Carl.....Soldiers Grove

DANE COUNTY.

Accola, John .....Madison
Anderson, H. C.....Cambridge
Angvick, Lars.....Cottage Grove
Anthony, D. C.....Oregon
Aslakson, Alfred.....Mt. Horeb, R. 4
Beck, J. D....Madison, 2202 W. Lawn St.
Belda, Wm. F.....De Forest
Bendickson, I. E.....Cambridge
Benson, Ed E.....Mt. Horeb, R. 5
Berge, William .....Cambridge
Bewick, Wm. M.....Sun Prairie
Bewick, W. W.....Madison, 824 W. Johnson St.
Birkinbine, Frank P.....Sun Prairie
Birrenkott, Mick T.....Klevenville
Bollig, F. A.....Black Earth
Boyce, Charlotte .....Dane
Brickson, Abram .....McFarland
Brickson, Andrew.....Cottage Grove
Brigham, Chas. I.....Blue Mounds
Britzke, Paul .....London
Brue, N. H.....De Forest
Chamberlain, Geo.....Windsor
Charles, Edw. S.Madison, 432 Francis St.
Chase, J. P.....Sun Prairie
Chatterton, Ray W.....Basco
Christianson, Andrew .....Deerfield
Christianson, Irvin .....Deerfield
Chynoweth, H. W.....Madison
Clayton, A. W.....Madison
Cobb, Homer A.....Sun Prairie
Colloday, W. E.....Stoughton
Daley, E. S.....De Forest
Daley, Julius.....De Forest
Daley, O. S.....De Forest
Daley, S. S.....De Forest
Danielson, K. O.....Mt. Horeb
Davidson, W. L.....Verona
Davison, R. W.....Sun Prairie
Dean, C. E.....Madison, 503 W. Doty
Dineen, Michael .....Blue Mounds
Doerfer, Wm.....Madison, R. 6
Donahue, Michael J....Madison, R. F. D.
Dreger, Emil L.....Madison, R. 7
Eastman, J. S.....Madison
Edmundson, Mrs. Ethel F.....Madison
Egre, John S.....Cambridge
Eleveljem, O. J.....McFarland
Eley, T. B.....Madison, R. F. D.
Elver, E. C.....McFarland
Erdall, M. N.....Deerfield
Felland, Geo.....Madison, R. 1
Ford, J. F.....Mazomanie
Gay, John.....Madison
Gillette, Rufus A.....Verona
Gillies, J. H.....Stoughton
Goechs, Wm.....Madison, R. 1
Grady, Geo.....Oregon
Grinde, L. S.....Morrisonville
Hanna, O. O.....Mt. Horeb
Harrington, C. E.....Verona, R. 1
Heineck, W. E.....Madison, 243 W. Gilman St.
Henning, Walter.....Mazomanie
Hill, Otto C.....Mt. Horeb
Holmen, O.....Belleville
Holscher, A. C.....Cottage Grove
Holzhuter, Walter .....Marshall
Hopkins, Andrew W.....Madison
Hopkins, B. F.....Morrisonville
Hougan, Halvor O.....Stoughton
Hougen, S. O.....Stoughton
Howe, T. R.....Sun Prairie
Jones, E. F.....Sun Prairie
Kaltenberg, Anthony.....Waunakee
Kaupunger, Gilman F.....Stoughton
Keenan, Wm. M., Jr.....McFarland
Kendell, Geo. W.....Sun Prairie
Kittlerm, Knut .....Mt. Horeb
Kneeland, Peter .....Windsor
Knudsen, Henry .....Mt. Horeb
Koltes, Jos. F.....Dane
Larsen, A. C.....Madison, 330 W. Wash. Ave.
Larson, Albert .....Madison, R. 1
Larson, Lewis.....Madison, R. 1
Lee, N. A.....Deerfield
Lee, Oliver.....Klevenville
Lee, P. A. G.....Deerfield
Lee, Severt A.....Deerfield
Lindas, Theo. A.....Marshall
Lunde, Gunder .....Stoughton
Lunde, K. I.....Edgerton
Lythjohan, Carl .....Cottage Grove
MacLean, George.....Madison, R. 6
Maeder, J. W.....Oregon
Mandt, Lawrence .....Sun Prairie
Markey, W. E.....Madison
McConnell, Oren .....McFarland
Michelson, Thomas .....Deerfield
Mielke, F. L.....Windsor
Mielke, J. E.....Basco
Mitchell, Geo.....Cottage Grove
Mitchell, J. T.....Cottage Grove
Moen, Herman.....Cambridge
Moore, Harry G.....McFarland

MEMBERSHIP, 1909.—Continued.

Moore, R. A.....Madison
Morgan, Mrs. H. H.....Madison, 10 ....Langdon St.
Morris, Geo. C.....Madison, 722 W. Johnson St.
Naef, Jacob .....Riley
Napier, J. M.....Madison
Nellen, Jac.....De Forest
Nichols, Harry .....Stoughton
Nordlie, C. K.....Rockdale
Norgord, C. P.....Madison
Norsman, Jerome O.....Morrisonville
Ohman, Alfred .....Deerfield
Ohman, S. S.....Deerfield
Ohnstad, K. O.....Stoughton
Otis, Frank D..Madison, 814 W. Johnson
Palmer, Levi .....Verona
Patterson, Harley.....Cottage Grove
Peters, John.....Madison
Pierstorff, Henry H.....Madison
Pope, Roy W.....Sun Prairie
Radermacher, John .....Middleton
Raftery, Agnes .....Windsor
Reindahl, A. K.....Madison
Reinen, Andrew .....Sun Prairie
Renk, William F.....Sun Prairie
Rhiner, Albert .....Riley
Rhiner, Caspar .....Riley
Rorge, A. J.....Stoughton
Rorge, A. O.....Stoughton
Royston, Thomas .....Mazomanie
Ruhrmann, B. J.....Cross Plains
Ruste, C. O.....Blue Mounds
Ryan, Gerald .....Sun Prairie
Schroeder, Robert.....Morrisonville
Semb, T. A.....Madison, R. 6
Sharpee, P. A.....Morrisonville
Showers, M. W.....Mazomanie
Silver, C. R.....Belleville
Simonson, S. K.....Deerfield
Skare, Albert .....McFarland
Smithback, Marvin .....Cambridge
Steusby, Anton.....Cottage Grove
Steusby, Edward P.....Cottage Grove
Stone, A. L.....Madison
Strommen, Geo. K.....Cambridge
Swerig, Carl .....Stoughton
Thielke, Emil.....Madison, R. 6
Thompson, Melvin.....Mt. Horeb
Thorstad, Harlan.....Deerfield
Thorstad, N. H.....Deerfield
Tjugum, E. E.....Sun Prairie
Toepfer, Otto R.....Madison, R. 7
Veium, Tollef.....Stoughton, R. 3
Wernick, Wm. H.....De Forest
White, F. G.....Oregon
Willmarth, E. E.....Sun Prairie
Wittenburg, E. F.....Middleton
Wrabetz, Frank.....Madison, R. 6
Zerbel, L. R.....Madison

DODGE COUNTY.

Adams, Lester B.....Lowell
Barnes, Amy B.....Waupun
Barstow, J. E.....Randolph
Beule, E. A.....Beaver Dam
Bohl, Anton .....Beaver Dam
Brooks, Ed. J.....Watertown
Brown, Abbott .....Waterloo
Bussewitz, Orla J.....Juneau
Bussewitz, Raymond.....Reeseville
Craig, Geo. D.....Oconomowoc
Dirks, Arthur.....Waupun
Goetsch, A. A.....Juneau
Grebe, Fred P.....Fox Lake
Henke, Louis .....Lowell
Howitt, Chas. H.....Randolph
Howland, Howard H.....Waupun
Joice, George .....Waterloo
Jones, John G.....Beaver Dam
Jones, O. R.....Beaver Dam
Jung, A. E.....Randolph
Klatt, Ernest.....Beaver Dam
Krueger, H. E.....Beaver Dam
Kuhlman, Arthur H.....Lowell
Lehmann, Theo.....Watertown
Lindemer, Geo. H.....Juneau, R. 2
Luebke, H. W.....Watertown, R. 1
Mahoney, David.....Juneau
Neuberger, Wm. F.....Reeseville
Owens, H. C.....Fox Lake, R. 2
Randall, S. M.....Waupun
Rex, Edgar .....Burnett
Roberts, Wm. E.....Randolph
Rockhill, Wm. E.....Waupun
Rusink, H. G.....Waupun
Schiller, Claude E.....Beaver Dam
Schumann, Hugo.....Beaver Dam
Sette, O. E.....Juneau
Steiner, W. H.....Brownsville
Ulrich, Erwin C.....Horicon

DOOR COUNTY.

Antholt, Chas.....Brussels
Berg, Julius.....Sturgeon Bay, R. 3
Bingham, D. E.....Sturgeon Bay
Boucsein, Gust L.....Detroit Harbor
Bowman, Wallace.....Detroit Harbor
Buschman, Hugo.....Forestville
Delcorps, Louis.....Sturgeon Bay
Herrbold, J. W.....Sturgeon Bay
Hocks, Walter.....Sturgeon Bay
Larson, Eli.....Sawyer
McLeod, H. S.....Sturgeon Bay
Sorenson, Camille.....Sturgeon Bay

DUNN COUNTY.

Chase, A.....Knapp
Chrislaw, Geo. O.....Menomonie, R. 7
Gerking, F. J.....Elk Mound
Hanson, Carl H.....Elk Mound
Kent, H. W.....Rusk
Kent, J. S.....Rusk
Knapton, W. E.....Downing
Meacham, C.....Downing
Snell, Earl D.....Downing
Stevens, Ernest.....Eau Galle

EAU CLAIRE COUNTY.

Allen, Chas. L.....Eau Claire
Burce, Ruth.....Eau Claire
Carlson, Axel T.....Augusta, R. 4
Donaldson, H. A.....Eau Claire, R. 6
Faast, Ben F.....Eau Claire
Koll, C. A.....Eau Claire
Konz, John, Sr.....Fairchild
Mayo, John H., Jr.....Eau Claire
McDermid, J. A.....Eau Claire
Oliver, C. S.....Eau Claire
Wright, Geo. T.....Eau Claire
Wyman, A. E.....Eau Claire

MEMBERSHIP, 1909.—Continued.

FOND DU LAC COUNTY.

Adams, A. E.....Eden
Adams, Richard F.....Campbellsport
Beilke, Walter.....Fairwater
Bonzelet, J. P.....Eden
Briggs, E. T.....Fond du Lac, R. 7
Briggs, Lynn W.....Peebles
Briggs, J. W.....Peebles
Bristol, Wm. A.....Oakfield
Costello, Dan.....Fond du Lac, R. 5
Donovan, Frank.....Van Dyne
Fisher, Will J.....Fond du Lac
Gibbard, Peter J.....Ripon
Giebel, Karl.....Fond du Lac
Hargrave, Robt.....Ripon
Hendricks, J. H.....Campbellsport
Hintz, Geo. E.....Oakfield, R. 26
Hintz, Wm. F.....Oakfield, R. 26
Holterman, R. K....Fond du Lac, R. 5
Hunter, Hobart R....Fond du Lac, 232 E. 2nd St.
Kastein, Herman.....Waupun
Kitchen, Jos. H.....Eldorado
Koenigs, Phillip.....Fond du Lac
Kuehn, Chas. A.....Brandon
Lawson, W. A.....Rosendale
McCormick, Fred.....Fond du Lac
Mathews, Lee G.....Brandon
Maug, Arthur J.....Ripon
Meekin, H. W.....Fond du Lac
Meier, E. F.....Eden, R. 36
Messner, Edwin F.....Oakfield
Michels, Henry.....Malone
Michels, Math.....Peebles
Mihills, D. R.....Fond du Lac
Mihills, G. N.....Fond du Lac
Miller, A. H.....Waupun
Miritz, O. F.....Fond du Lac
Northrup, Jesse.....Waupun
Oleson, Janes P.....Ripon
Oltery, Henry.....Fond du Lac
Patric, Wm.....Waupun
Peebles, E. C.....Peebles
Peebles, S. S.....Peebles
Porter, W. L.....Fond du Lac
Rather, Armand P.....Peebles, R. 37
Riemon, Elmer.....Ripon
Root, Alvin.....Fond du Lac
Sheldon, Ben F.....Brandon
Smith, Elmer J.....Brandon
Smith, Harvey G.....Brandon
Smith, Samuel A.....Oakfield
Stauchfield, S. C.....Fond du Lac
Stroup, Fred P.....Fond du Lac
West, H. P.....Ripon
Whittaker, H. E.....Fond du Lac

FOREST COUNTY.

Grandine, Morton D.....No. Crandon

GRANT COUNTY.

Accola, Lawrence.....Steuben
Andrew, Geo.....Livingston
Barron, R. E.....Platteville
Booth, Lester G.....Cuba City
Bryant, Clinton A.....Hazel Green
Bryant, R. J.....Hazel Green
Carmody, Daniel.....Mt. Ida
Carmody, P. J.....Mt. Ida
Cubela, Jos. M.....Muscoda
Draves, Henry F.....Montfort
Dieter, Bert.....Livingston
Dieter, Wm. A.....Montfort
Di Vall, W. F.....Montford
Frey, E. J.....Mt. Hope
Graham, P. S.....Fennimore
Kaiser, W.....Louisburg
Orth, A. F.....Muscoda
Patterson, J. L.....Glen Haven
Runde, Aloysius.....Cuba City
Runde, Aug.....Sinsinawa
Runde, Martin C.....Cuba City
Rundell, Dale E.....Livingston
Simmons, Will.....Cuba
Steinhoff, W. J.....Platteville
Stivarius, Geo. A.....Fennimore
Tenney, Horatio.....Livingston
Trewartha, Edw. J.....Hazel Green
Wayne, Joseph.....Boscobel

GREEN COUNTY.

Austin, Elmer E.....Brodhead
Bechtolt, A. B.....Browntown
Bechtolt, J. D.....Browntown
Biglow, L. F.....Brooklyn
Blumer, Ezra, Jr.....Monroe
Collentine, Arthur.....Monroe
Cornelius, E. C.....Monroe
Dettwiler, John.....Monroe
Gapen, C. E.....Monroe
Grenzow, Jesse H.....Juda
Iverson, C. M.....Browntown
Klassy, Henry C., Jr....Monticello, R. 3
Kundert, Wm.....Monroe
Lewis, Lester M.....Monticello, R. 1
Marty, Matthias.....Monticello
Mau, H. G.....Brodhead
Morgan, Chas.....Albany
Preston, Wm. N.....Juda
Purinton, C. G.....Monticello
Roderick, Lee M.....Juda
Smiley, Jas. B.....Albany
Stauffacher, A. J.....Monroe, R. 6
Strommen, Anton A.....Blanchardville
Tauscher Bros.....Monroe
Thompson, Gilbert G.....Blanchardville
Thorp, Eugene.....Monroe
Toenterman, C., Jr.....Monroe
Trumpy, Fred.....Clarno
Tschudy, Benj. O.....Monroe, R. 5
Waelti, John.....Monroe
Ward, Harold.....Brodhead

GREEN LAKE COUNTY.

Block, Albert F.....Markesan
Davies, Elias.....Markesan
Page, G. F.....Berlin
Robinson, Earl P.....Markesan
Vine, Callice H.....Marquette

IOWA COUNTY.

Aavang, H. O.....Barneveld
Caldwell, John.....Mazomanie
Chappel, Steve J.....Dodgeville
Davis, Llewellyn.....Mineral Point
Dolplin, Clarence.....Cobb
Farwell, Roy R.....Ridgeway
Fitzsimmons, Ira A.....Mineral Point
Graber, Edward.....Mineral Point
Graber, Laurence F.....Mineral Point

MEMBERSHIP, 1909.—Continued.

Griffith, James.....Ridgeway
Hanson, Carl O.....Hollandale
Jones, Tommy O.....Rewey
Ley, John P.....Dodgeville
Ley, Nicholas.....Dodgeville
Morrissey, J. H.....Arena
Paulson, H. E.....Hollandale
Smedsrud, Melvin C.....Hollandale
Steensland, August.....Hollandale
Thomas, Roy E.....Dodgeville

JACKSON COUNTY.

Curran, W. F.....Taylor
Dettinger, Wm. F.....Hixton, R. 1
Dietrich, John J.....Black River Falls
Engleman, John.....Hixton
Hecketsweiler, O. J.....Alma Center
Merrill, W. M.....Taylor
Sims, O. F.....Melrose
Thompson, Adolph....Black River Falls

JEFFERSON COUNTY.

Altpeter, Edw.....Ft. Atkinson
Anthes, Henry.....Jefferson
Becker, Harry J.....Ft. Atkinson
Brueckner, H. C.....Ft. Atkinson
Brueckner, Justus.....Ft. Atkinson
Christ, Albert.....Cambridge
Emmert, H. L.....Johnson Creek
Guttenberg, Frank, Jr.....Jefferson
Jones, Seneca T.....Watertown, R. 1
Krueger, Alexander....Watertown, R. 2
Keuler, Aaron F.....Helenville
Keuler, Harry.....Helenville
Klement, Otto C.....Ft. Atkinson
Leonard, Wm. R.....Jefferson
Linton, Gilbert A.....Ft. Atkinson
Mathews, Milton D.....Helenville, R. 1
McIntyre, Ivan.....Ft. Atkinson
Norman, Frank.....Helenville
Popp, Arthur.....Jefferson, R. 2
Ward, Chas. E. .....Ft. Atkinson
Ward, Harold L.....Ft. Atkinson
Ward, Robert W.....Ft. Atkinson, R. 1

JUNEAU COUNTY.

Curtis, J. C.....New Lisbon
Hall, W. H.....Wonewoc
Hansen, Harry.....Camp Douglas
Harvey, Caleb B.....Wonewoc
Mead, R. E.....New Lisbon
McNown, J. H.....Mauston
Moore, Henry G.....Mauston
Smith, R. M.....Elroy
Solem, Edward.....Wonewoc

KENOSHA COUNTY.

Achen, Wm.....Bristol
Bradley, J. Frank.....Somers
Brook, J. W.....Salem
Bullamore, R. G.....Kenosha
Bullamore, Roy.....Kenosha
Curtiss, Mark.....Trevor
Curtiss, W. R.....Trevor
Dexter, Walter S.....Kenosha
Holloway, John W.....Union Grove
Myrick, M. O.....Bristol
Northway, Morris J.....Kenosha
Orvis, L. C.....Salem
Paddock, Alvin D.....Salem
Price, Fred.....Bristol, R. 31
Roberts, F. W.....Woodworth
Sheen, Clarence J.....Trevor
Sheen, W. J.....Trevor
Thiers, L. M.....Kenosha
Thom, J. A.....Bristol, R. 30

KEWAUNEE COUNTY.

Boudnik, John.....Kewaunee, R. 7
Cherveny, Wenzel.....Kewaunee, R. 2
Collins, D. W.....Luxemburg
Defnet, Jule J.....Casco, R. 2
Erickson, Louis E.....Kewaunee
Haevers, Martin.....Luxemburg, R. 4
Hoffman, Jacob.....Algoma
Katel, W. C.....Kewaunee
Kocmich, Ed.....Kewaunee, R. 2
Krofta, Rudolph.....Kewaunee, R. 2
Oestreich, L. J.....Kewaunee
Ray, W. F.....Kewaunee, R. 1
Smithwick, M. W.....Kewaunee

LA CROSSE COUNTY.

Bonsack, H. M.....La Crosse
Bonsack, Theo.....West Salem
Brandt, Chas., Jr.....West Salem
Brown, E. D.....West Salem
Eggler, Victor H.....La Crosse
Engebretson, Albert.....West Salem
Engebretson, Edwin S.....West Salem
Griswold, H. W.....West Salem
Haas, Reinhold.....La Crosse, R. D. 1
Hemker, Fritz H.....West Salem
Kammlade, Stephen G.....Bangor
Lawrence, F. W.....Bangor
Linse, Chas.....La Crosse
Mueller, Walter E.....La Crosse, 626 Cass St.
Mulder, B. W.....Midway
Nelson, Osan.....La Crosse
Nuttleman, Alfred.....West Salem
Nuttleman, Fred.....West Salem
Sandman, W. D.....Holmen
Van Loon, John.....La Crosse

LA FAYETTE COUNTY.

Andrews, A. L.....South Wayne
Carey, W. H.....Argyle
Erickson, Clarence.....South Wayne
Glindinning, H. L.....Shullsburg, R. 2
Jensen, Peter.....Argyle
Jorenby, Carl.....Blanchardville
McConnell, F. J.....Darlington
Perry, Will H.....Gratiot
Rood, Henry.....South Wayne
Rood, Minnick.....South Wayne
Ruskell, L. E.....Belmont
Usher, Earl.....South Wayne
Usher, J. M.....South Wayne
Wahler, Adolph.....Woodford

LANGLADE COUNTY.

Follstad, Anton.....Elcho
Kalouner, Edward.....Antigo, R. 5
Person, Alfred.....Bryant
Stewart, Blaine G.....Antigo
Tomkins, O. Scott.....Bass Lake

MEMBERSHIP, 1909.—Continued.

MANITOWOC COUNTY.

Arnold, Arthur A.....Kiel
Axley, Walter.....Cleveland, R. 1
Bauer, Adolph H.....Manitowoc, R. 2
Behm, Walter.....Manitowoc
Bruhn, John F.....Two Rivers, R. 1
Clusen, Reinhold.....Manitowoc, R. 6
Eisenman Ben.....Mishicot
Garey, James.....Grimms
Geraldson, Mervin.....Manitowoc, R. 4
Gigstad, Benneth.....Valders
Gunderson, Clifford.....Manitowoc, R. 4
Gustaveson, Chas.....Manitowoc
Halverson, Almer.....Cato, R. 1
Hansen, Warner.....Manitowoc
Hoefner, Herbert.....Manitowoc
Huhn, William.....Cleveland
Johannes, Albert.....Two Rivers, R. 2
Kielsmeier, Rudolph C.....Timothy
Klann, Adolph.....Hayton, R. 1
Knutson, Ed A.....Manitowoc
Kolb, Ed.....Cleveland, R. 2
Marken, Otis A.....Valders
Marken, Richard L.....Valders
Paulson, J. E.....Manitowoc
Pederson, Cornelius .....Cato
Pritzl, John A.....Cato
Rein, Robert.....Cleveland, R. 1
Riederer, Blasius.....Cato
Roethel, Herman.....Kiel
Salzman, Ed.....Kiel
Schulte, Peter J.....Cleveland
Straka, E. E.....Kellnersville
Strowig, Wm. A.....Cleveland
Sullivan, Jas. A.....Grimms
Thieleke, Ed. A.....Kiel, R. 2
Tyler, James G.....Valders
Wehrwein, Walter.....Manitowoc, R. 2
Wiegand, Otto R.....Cleveland
Wigen, Andrew.....Quarry
Wilkowske, Hugo.....Mishicot

MARATHON COUNTY.

Aderhold, H. F.....Athens
Aschbrenner, H. H.....Stratford
Baesemann, Otto.....Edgar
Brehm, Ed. A.....Colby
Griffith, Jas.....Spencer
Heinke, Alvin E.....Stratford
Keogh, Luke F.....Rozellville
McAdam, C.....Wausau
Nieman, Walter.....Hamburg, R. 1
Parsch, Gustav A.....Wausau
Reinhardt, Walter H.....Wausau

MARINETTE COUNTY.

Christensen, C. A. M.....Walsh
Falarsh, Frank.....Peshtigo, R. 2
Gould, G.....Peshtigo
Gould, M. M.....Peshtigo
Schneider, Gottlieb P.....Walsh
Sorensen, Hilbert.....Marinette

MARQUETTE COUNTY.

Cairns, J. H.....Montello
Gaffney, Ellery.....Oxford
Hamilton, T. S.....Westfield
Haskins, Leon O.....Montello, R. 3
Houslet, Neal.....Packwaukee
Johnson, Sam.....Westfield
Judd, Jasper.....Endeavor
Judd, Jesse L.....Endeavor
Landgraff, Henry.....Endeavor
McDowell, David P.....Packwaukee
McMillen, Carl.....Endeavor, R. 1
McMillen, R. A.....Endeavor
Parrott, Alfred.....Endeavor

MILWAUKEE COUNTY.

Babcock, C. L.....Milwaukee, 404 Colby-Abbott Bldg.
Basse, Wm. H.....West Allis, R. 5
Burgess, A. J.....Milwaukee, 1102 Grand Ave.
Dennison, Nicholas.No. Milwaukee, R. 10
Diderrich, N. A.....No. Milwaukee, R. 10
Ernst, John A.....Milwaukee, 921 Island Ave.
Fuller, S. L.....Milwaukee, 126 25th St.
Gridley, Ben.....Wauwatosa
Guenther, Nelson W.....So. Milwaukee
Hardy, John.....Wauwatosa
Hickcox, J. Gilbert.....Whitefish Bay
Jelinek, Benjamin.....Milwaukee, 935 Feutonia Ave.
Jungbluth, Wm. J.....West Allis, R. 5
Kroeger, Bernard C.....Milwaukee, 403 1st Ave.
Kurtze, Otto C.....West Allis
Loewe, Arthur P.....Milwaukee, R. 8
Mahr, Henry.....Caledonia
Meyer, Alfred J.....Oakwood, R. 18
Miller, Geo. C..Milwaukee, 232 Grove St.
Mower, H. Payson.....Wauwatosa
Pierner, Fred.....No. Milwaukee
Pierner, John W.....Thiensville
Swan, Earling...Milwaukee, Station B, R. 6
Unger, Edw.....No. Milwaukee, R. 9
Warzynakoski, Arthur....Oakwood, R. 18

MONROE COUNTY.

Aarness, O. C.....Cashton
Boeder, Otto.....Wilton
Ebert, Francis E.....Tomah
Finegan, Louis.....Sparta
Foth, F. D.....Norwalk
Freeman, G. A.....Sparta
Gamerdinger, John.....Kendall
Grassman, Irwin.....Kendall
Hanchett, W. H.....Sparta
Hansen, Carl F.....Sparta
Harris, Ruthven E.....Warrens
Heasty, Ralph.....Sparta
Hill, C. C.....Tomah
Hitchcock, Clarence.....Sparta
Hoard, L. R.....Cataract
Howell, H. P.....Sparta
Jones, S. R.....Leon
Kirst, Ernest J.....Tomah
Lee, L.....Leon
Leverich, J. W.....Sparta
McDonald, James P.....Sparta
Miller, Louis A.....Sparta
Mistele, Wm.....Kendall
Moseley, A. G.....Cataract
Nathen, Paul R.....Kendall
Peterson, John H.....Cashton
Sias, Benjamin.....Sparta
Whitehead, H. W.....Leon
Wilkinson, Edw.....Wilton

MEMBERSHIP, 1909.—Continued.

OCONTO COUNTY.

Halsted, N. W.....Lena

OUTAGAMIE COUNTY.

Bixby, Phil T.....Appleton, R. 1
Dietz, Ed.....Greenville
Jamison, Clarence.....Appleton, R. 2
Jamison, Robert.....Appleton, R. 2
Jamison, W. G.....Appleton
Jochman, Peter.....Greenville
Johnson, C. G.....Welcome
Johnston, Frank R.....Appleton, R. 6
Johnston, Oney.....Appleton
Koss, Otto W.....Medina
Letts, E. F.....Appleton
Merkel, Henry.....Appleton, R. 3
Mills, Roscoe C.....Appleton, R. 2
Mueller, Edw. O.....Appleton
Pirner, Fred.....Sugar Bush, R. 26
Ryan, Malachi.....So. Kaukauna
Schaefer, R. J.....Appleton
Schmit, Albert.....Appleton
Schmit, A. W.....Appleton
Schmit, Geo.....Greenville
Schmit, Wm. F.....Appleton
Taege, John.....Appleton, R. 4
Thoma, Ernest.....Sugar Bush
Tubbs, Herbert.....Seymour
Wussow, Chas.....Seymour
Zahrt, F. H.....Hortonville

OZAUKEE COUNTY.

Ahlers, Walter.....Grafton
Behrens, Bernhard.....Grafton
Blank, George A.....Grafton
Bremer, Paul H.....Cederburg, R. 1
Clausing, Adolph.....Thiensville
Kieffer, Mike.....Fredonia
McCarthy, Geo.....Fredonia
Meyer, A. H.....Grafton
Wulff, Fred.....Grafton
Wulff, William.....Grafton

PEPIN COUNTY.

Fleishauer, C. K.....Arkansaw
Gustafson, Theodore.....Stockholm, R. 1
Jahnke, J. F.....Pepin

PIERCE COUNTY.

Bailey, H. E.....River Falls
Brown, William.....Spring Valley
Dunbar, Geo. W.....River Falls
Dunbar, Geo. W., Sr.....River Falls
Dunbar, Harold.....River Falls
Hanson, Henry O.....Spring Valley
Heinze, Louis.....Prescott
Martin, Arthur W.....River Falls
Nelson, Emil.....River Falls
Nelson, Nels J.....River Falls
Neystrom, Archie.....Maiden Rock
Smith, Fred.....River Falls

POLK COUNTY.

Germanson, Herbert .....Luck
Hedlund, Adolph.....Clayton
Jerdee, Perry S.....Deronda
Lindberg, Clinton.....Dresser Jct.
Miller, A. J.....Milltown
Nelson, Wm.....Milltown
Peterson, Eni.....Amery, R. 4
Rehbein, A. E.....St. Croix Falls, R. 1
Uhlin, Albin.....Clayton, R. 1
Uhlin, Frank E.....Clayton, R. 1

PORTAGE COUNTY.

Arnott, Grace M.....Stevens Point
Boston, W. J.....Stevens Point
Cate, Geo.....Stevens Point
Clark, W. E.....Stevens Point, R. 1
Gullickson, Gustave.....Nelsonville
Gulickson, Thos. O.....Nelsonville
Hansen, J. K.....Stevens Point, R. 5
Hanson, N. P.....Amherst Jct., R. 2
Haus, Enoch.....Junction City
Hicks, S. E.....Almond
Katerndahl, Carl.....Stevens Point, 126 Dixon St.
Lewis, Lloyd.....Stevens Point
Peterson, Perry O.....Amherst, R. 2
Precourt, L. A.....Plover, R. 1
Siegert, A.....Junction City
Smith, C. A.....Amherst
Swenson, O. S.....Nelsonville
Van Buskirk, G. W.....Plover
Wagner, Raymond.....Stevens Point
Wrolstad, Alfred M.....Amherst Jct.

PRICE COUNTY.

Halvorson, Theo.....Kennan
Hoffman, Conrad.....Phillips
Klussendorf, Fred E.....Phillips, R. 1

RACINE COUNTY.

Adland, P. H.....Franksville, R. 10
Cook, Geo. L.....Burlington
Gehrand, Arthur A.....Rochester
Grass, Frank.....Burlington
Holloway, Ed. M.....Union Grove, R. 8
Nau, Ray H.....Franksville
Renak, Edward.....Racine, R. 2
Roberts, Wm. J.....Burlington
Rolfson, Clarence E.....Waterford, R. 25
Schroeder, Chris.....Racine
Skewes, Edwin B.....Union Grove
Spartz, N. A.....Union Grove

RICHLAND COUNTY.

Buehler, J. G.....Richland Center
Durnford, G. A.....Rockbridge
Ellsworth, Raymond.....Tavera
Ghastin, Floyd.....Twin Bluffs
Ghastin, Wm. J.....Twin Bluffs
James, Geo. A.....Richland Center
Janecek, Cyril.....Bloom City
Jaquish, J. E.....Twin Bluffs
Lawton, A. R.....Viola
Lord, Karl W.....Richland Center
Nourse, Glen.....Sextonville
Post, H. L.....Sextonville
Schmitz, Edw. H.....Lone Rock
Schmitz, Hubert.....Lone Rock
Straug, Frank.....Lone Rock
Thorpe, J. R.....Tavera
Turgasen, J. H.....Richland Center
Welsh, S. L.....Tavera

MEMBERSHIP, 1909.—Continued.

ROCK COUNTY.

Austin, Alva G.....Janesville
Austin, Alvina L.....Evansville
Austin, Clifford P.....Janesville
Austin, Geo. M.....Janesville
Austin, W. B.....Janesville
Austin, Wilbur D.....Janesville
Babcock, J. G.....Evansville
Barker, E. S.....Janesville
Benedict, E. L.....Beloit
Bingham, E. L.....Milton
Caig, Ernest M.....Milton Jct.
Caldo, Leslie.....Janesville
Chase, Albert L.....Milton
Churchill, Arthur.....Janesville, R. 7
Cooper, Maurice W.....Edgerton
Dougan, W. J.....Beloit, R. 30
Ellis, E. J.....Evansville
Emery, Sydney.....Edgerton
Fish, Esli.....Janesville, R. 7
Godfrey, Burt K.....Janesville, R. 1
Green, J. I.....Clinton
Hemingway, Geo. L.....Hanover
Holmes, U. C.....Evansville
Jacobs, S. M.....Janesville
Kimble, N. G.....Milton Jct.
Klein, W. C.....Orfordville
Lathers, Chas. F.....Beloit
Latta, F. L.....Clinton Jct.
McCoy, Geo. L.....Evansville
Marston, Albert.....Beloit, R. 30
Marston, Roy C.....Beloit
Moseley, H. B.....Beloit
Nelson, Martin.....Milton
Peck, Edward.....Edgerton
Peik, Edmund.....Edgerton, care of Emery Farm
Pierce, Henry.....Milton Jct.
Porter, J. K. P.....Evansville
Porter, L. W.....Evansville
Rasey, Edwin L.....Beloit, R. 27
Smith, L. E.....Beloit, R. 3
Snyder, Clyde L.....Footville
Snyder, Elmer G.....Clinton
Snyder, R. B.....Clinton

ST. CROIX COUNTY.

Alberts, Will.....New Richmond
Batten, Sidney.....Hudson
Bennett, Wm. L.....Stanton
Brunner, R. W.....Hudson
Carlson, Nels P.....Hudson, R. 1
Carrow, Herman.....Stanton
Fay, Albert.....New Richmond
Fuiten, B. H.....New Richmond
Hecker, Paul.....New Richmond
Imholt, B. A.....Houlton
Jerdee, Alfred O.....Deer Park
Kruschke, Geo. H.....New Richmond
Paulson, P. A.....Hudson
Peterson, August.....Stanton
Schwandt, Wm.....Stanton
Utgaard, Peter W.....Cylon

SAUK COUNTY.

Borck, Sam.....North Freedom
Capener, W. R.....Baraboo
Clavadatscher, T.....Sauk City
Cobleigh, Rollo S.....Delton
Emery, George.....Logansville
Frederickson, Fred.....Spring Green
Gade Adolf.....Reedsburg
Gallagher, J. F.....Reedsburg
Gasser, Geo. W.....Spring Green
Graves, D. W.....Baraboo
Grub, C. H.....Baraboo
Hamburg, J. F.....Baraboo
Hasz, Theodor.....Logansville
Hausch, Albert.....Baraboo
Henrichs, Ernest.....Reedsburg
Herwig, Richard.....Delton
Herwig, Theo.....Delton, R. 1
Hood, D. L.....Spring Green
Houghton, F. T.....Reedsburg
Koeneeke, Edward H.....Reedsburg
Lachmund, Robert.....Sauk City
Luetscher, Irvin.....Plain
Marshall, W. S.....Delton
McGinnis, Chas.....Baraboo
Ochsner, A. G.....Plain
Pearson, Clarence.....La Valle, R. 4
Raltzman, A. L.....Reedsburg
Rheingans, Ernest C.Baraboo, 401 8th St.
Rich, O. S.....Baraboo
Rich, W. V.....Baraboo
Riek, Anthony.....Plain
Robson, Melvin.....Spring Green
Rodewald, Walter C.....Baraboo
Rusch, E. W.....Reedsburg
Schaefer, Erwin S.....Black Hawk
Schuette, Herman W.....Reedsburg
Siggelkow, M. E.....Baraboo
Spencer, Hardy.....Baraboo
Steidtmann, Edwin.....Merrimac
Stone, Riley.....Reedsburg
Toole, W. A.....Baraboo
Vonder Ohe, Wm.....Reedsburg
Weirich, Martin J.....Baraboo
Wichern, L. M.....Baraboo
Wischhoff, Edwin.....Reedsburg

SAWYER COUNTY.

Uhrenholdt, Jens.....Leonard

SHAWANO COUNTY.

Berg, Carl.....Tigerton
Nedgwood, R. E.....Shawano
Norrbom, C. G.....Eland, R. 1
Hildemann, Alex E.....Belle Plaine
Klovdahl, J. J.....Wittenberg

SHEBOYGAN COUNTY.

Blonien, Peter.....Elkhart
Dennerlein, Arthur J.....Plymouth
Frauenheim, O. R.....Random Lake
Garside, Harry R.....Cedar Grove
Hedrich, S. F.....Adell
Hoppert, Martin J......Sheboygan, R. 4
Illian, W. L.....Adell
Leonard, M. J.....Plymouth
Ogle, James L.....Waldo
Oosterhuis, Alvin C.....Sheboygan Falls
Schaefer, Henry G.....Glenbeulah
TeSelle, Clarence J.....Sheboygan Falls
Wagner, Arthur L.....Haven
Wunsch, Hugo E.....Haven

MEMBERSHIP, 1909.—Continued.

TALYOR COUNTY.

McMillan, H. N.....Medford

TREMPEALEAU COUNTY.

Chrysler, Harvey.....Osseo
Coon, Leslie.....Osseo
Grand, Geo. W.....Independence
Graul, Edward J.....Independence
Hagestad, A. C.....Ettrick
Hegge, Julius.....Galesville
Hermann, F. F.....Osseo
McCauley, Rex.....Osseo
Markham, F. C.....Independence
Mattison, Thomas.....Blair
Moen, Gilbert T.....Eleva
Pederson, Peter.....Eleva, R. 3
Raichle, Carl.....Galesville
Thompson, A. L.....Blair

VERNON COUNTY.

Aberg, Jacob.....De Soto
Bean, R. R.....De Soto
Burris, F. E.....Kendall, R. 5
Cade, Jos. M.....Viroqua
Call, Henry.....West Prairie
Christensen, Johan.....West Prairie
Dach, C. B.....Viroqua
Davis, J. L.....De Soto
Evenson, Fred.....De Soto, R. 2
Grimsned, J. A.....Coon Valley
Herold, Rudolph, Jr.....Stoddard
Lewison, Thomas.....Viroqua
McClurg, Walter.....Viroqua
Nathen, Paul R.....Kendall
Neprud, Nels O.....Coon Valley
Olsen, Clarence.....Westby
Olson, Gilbert C.....Westby
Sebion, Cornelius.....Westby
Sebion, Tennis.....Westby
Solberg, Louis.....Viroqua
Sorein, Erick.....West Prairie, R. 1
Staley, John N.....Hillsboro
Stegne, Chris.....Viroqua
Stromstad, P. L.....Coon Valley

WALWORTH COUNTY.

Bromley, Fred G.....Whitewater, R. 4
Cassidy, Wm. S.....Whitewater
Coates, Clinton J.....Elkhorn
Coburn, Ora.....Whitewater
Cusack, M. E.....Darien
Dunbar, Harry D.....Elkhorn
Fuller, Leroy.....Lake Geneva
Harris, Ben F.....Delevan
Kruse, William.....Whitewater, R. 4
Ledger, David.....Lake Geneva
Lewis, E. H.....Whitewater
Lowell, Lloyd S.....Sharon
Mack, Warren.....Whitewater
Meurer, Paul.....Genoa Jct.
Mitchell, Edward H.....Delavan
Nicolaus, D. C.....East Troy
Peters, Ezra.....Sharon
Peterson, Peter.....Walworth
Petrie, Merton E.....Elkhorn
Piper, Harry.....Sharon
Robinson, A. S.....Lake Geneva
Schwartz, J. A.....Troy Center
Thacher, Ed F.....Zenda
Thacher, Louis E.....Zenda
Thompson, Alfred.....Delavan
Warmington, Prentice.....Honey Creek
Wright, John.....Whitewater

WASHBURN COUNTY.

Melby, Dytinus.....Spooner

WASHINGTON COUNTY.

Backhaus, F. G.....Kewaskum
Baer, A. C.....West Bend
Bast, Paul J.....Rockfield
Berg, Jacib.....South Germantown
Dhein, Henry.....Rockfield
Gensmann, Edward D...Schleisingerville
Groth, C. A.....Cedarburg
Hayes, Thomas, Jr.....Richfield
Klumb, Albert.....Rockfield
Klumb, Hugo G.....Kewaskum
Klumb, Oscar.....Rockfield
Kressin, Gustav R.....Cedarburg
Milkee, George E.....Newbury
O'Connell, Jas.....Hartford
Puls, John.....Hartford, R. 4
Schottler, C. J.....South Germantown
Schultz, Nelson F.....West Bend, R. 3
Stuesser, Eugene.....Richfield
Woldt, Hugo.....Jackson
Ziemer, Joseph.....Jackson
Ziemer, Paul.....Jackson

WAUKESHA COUNTY.

Adams, Jay.....Waukesha, R. 5
Adams, M. J.....Waukesha
Allen, Arthur J.....Wales, R. 31
Baird, J. W.....Waukesha
Baird, Robert L.....Waukesha
Baird, Will L.....Waukesha
Bartlett, Geo. W.....Menomonee Falls
Blackwell, Leslie C.....Waukesha
Boller, J. F.....Nashotah
Boyd, James T.....Waukesha, R. 7
Christensen, John L.....Hartland
Cook, Irving O.....Nashotah
Dance, George.....Brookfield
Dance, James.....Brookfield
Dibble, Roy A.....Menomonee Falls
Dineen, C. F.....Pewaukee
Donp, Paul B.....Oconomowoc
Fuller, Horace.....North Lake
Graser, Adam H.....Waukesha
Greengo, A. L.....Menomonee Falls
Hall, Frank.....Hartland, R. 21
Hart, C. B.....Brookfield
Hart, William C.....Brookfield, R. 2
Haylett, Henry O.....Waukesha
Heling, Paul.....Menomonee Falls
Hicken, Alfred B.....Pewaukee
Hill, Chas. T.....Brookfield
Hill, J. Thos.....Brookfield
Jeffery, H. B.....Menomonee Falls
Jens, Otto A.....Waukesha
Jones, Albert.....Dousman
Kaul, E. H.....Waukesha, R. 7
Kuhtz, Harvey A.....Waukesha
Longley, H. N.....Dousman
Mitchell, Dean.....Brookfield
Mitwede, Henry.....Waukesha
Montague, C. R.....North Prairie
Morris, Leslie D.....Waukesha
Nicolaus, Chas. A.....Waukesha
Pabst, Fred.....Oconomowoc
Peebles, John.....Oconomowoc, R. 26

MEMBERSHIP, 1909.—Continued.

Roberts, Jack.....Waukesha
Rosenow, Arthur.....Oconomowoc
Rosenow, H. E.....Oconomowoc
Rust, Shirley H.....Mukwonago
Ryan, George.....Brookfield, R. 12
Schafer, Chas. H.....Waukesha, R. 7
Schley, E. G.....Waukesha
Schroeder, F. C.....Hartland, Box 146
Shannon, W. J.....Oconomowoc
Sleep, S. S.....Hartland, R. 21
Stewart, J. H.....Wales
Swan, L. W.....Mukwonago
Swartz, Peter C.....Waukesha
Tempero, Roy J.....Menomonee Falls
Voigt, Alvin.....Oconomowoc, R. 26
Weir, W. W.....Mukwonago, R. 39
Wetzel, Alvin.....Brookfield, R. 12
Wetzel, Henry.....Brookfield
Williams, Arthur R.....Waukesha
Zillmer, Wm. C.....Brookfield

WAUPACA COUNTY.

Almon, Perry T.....Weyauwega
Ashuum, C. S.....Waupaca, R. 2
Bestul, Martin J.....Scandinavia
Bille, J.....Waupaca
*Goldsmith, Wm. E.....Waupaca
Gorges, H. F.....New London
Hanson, Elmer.....Waupaca, R. 2
Harrington, Myron.....Waupaca
Heinrich, Otto W.....New London
Klemm, Louis J.....Welcome
Kneipp, William.....Weyauwega
Knoke, Hugo.....Readfield
Kunkel, Arthur.....Manawa
Larson, LeRoy.....Iola
Lemke, Albert.....Clintonville
Nace, Franklin.....Iola
Olson, Nels E.....Iola
Pinkerton, Altai J.....Waupaca
Raisler, Theo.....Welcome
Rosholt, Jacob A.....Scandinavia
Spencer, Earl H.....Waupaca, R. 3
Wall, Floyd.....Weyauwega
Wied, Edward.....Waupaca

WAUSHARA COUNTY.

Bartleson, Harvey.....Pine River, R. 1
Eagan, J. J.....Wautoma, R. 6
Harris, A. M.....Plainfield
Jacobs, A. F.....Coloma, R. 1
Knuteson, Ernest L.....Wautoma
Larson, J. M.....Wautoma
Peterson, James .....Pine River
Tice, Ray W.....Redgranite
Tice, Roy.....Redgranite
Winge, Wm.....Wild Rose

WINNEBAGO COUNTY.

Blakely, Albert.....Neenah
Blodgett, Gordon R.....Neenah, R. 9
Boss, S. J., Jr.....Oshkosh
Boss, U. C.....Oshkosh
Bussey, W. P.....Omro
Cross, A. J.....Allenville
Davis, J. C.....Oshkosh
Evans, W. D. .....Pickett
Hoeft, Chas. A.Oshkosh, Lenwood Farm
Ihrig, J. J.....Oshkosh
Jackson, H. H.....Oshkosh, 104 Main St.
Marshall, A. C.....Omro

Miller, H. C.....Allenville
Palfrey, John.....Omro
Rasmussen, Fred.....Neenah, R. 11
Smith, Seymour.....Oshkosh
Tanner, A. V.....Omro, R. 24
Treleven, Guy T.....Omro
Wait, S. R.....Oshkosh
Winnebago County Agricultural School. .....Winneconne
Wood, Calvin D.....Oshkosh, R. 4

WOOD COUNTY.

Christensen, Peter W.....Marshfield
Clark, Chas. F.....Babcock
Hanifin, Leo.....Grand Rapids
Liebe, John H.....Grand Rapids, R. 7
Rector, Carroll V.....Grand Rapids

* Deceased.

NON-RESIDENT MEMBERS.

CALIFORNIA.

Hauck, Nathan.....Alton

CANADA.

MacVannel, A. P.....St. Marys, Ontario

COLORADO.

McLean, Donald.....Denver, 704 Equitable Blk.

CONNECTICUT.

Haas, Geo. H.....Meriden

FLORIDA.

Savage, A. F.....Quincy

IDAHO.

Guilford, W. S.....Twin Falls

ILLINOIS.

Akins, Clyde E.....Warren
Bennett, H. J.....Cherry Valley
Bryson, Donald.....Elizabeth
Charles, Fred.....Woodstock
Chetlain, Louis A.....Galena
Coffin, Russell H.....Rockford
Durand, Mrs. S. S.....Lake Bluff

MEMBERSHIP, 1909.—Continued.

Fellows, Samuel M.....Rockford
George, W. R.....Sterling
Halley, Guy R.....Rockford, R. 2
Hitchcock, H. R.....Pecatonica
*Hobein, F. W.....Barrington
Hoxsey, Edward.....Serena
Hoxsey, Frank.....Serena
McGeachie, E. P.....Winnebago
Mueller, Math. J...Urbana, care of Exp. Station
Northrup, H. R.....Chicago, 667 Winthrop Ave.
Osterday, E. G.....Stockton
Phillips, Jesse.....Elizabeth
Richardson, G. J.....Spring Grove
Sargent, Roy E.....Warren
Smith, Russell.....Crystal Lake
White, Arthur..Rockford, 503 Church St.

INDIANA.

Logan, Ralph G.....New Palestine

IOWA.

Anderson, Theo.....Waterville
Berns, Xavier.....Guttenberg
Brooks, Homer H.....Hopkinton
Hawkins, A. B.....Farley
Mathis, Adolph.....Lansing, R. 1
Thompson, T., Jr.....Wadena

MAINE.

Fernald, Paul E.....West Oldtown

MEXICO.

Cardenas, F. F.....3er Victoria, No. 15, Saltillo, Coah.

MICHIGAN.

De Forest, Theo. R.....Ann Arbor
Eskil, Odin.....Iron Mountain
Hatch, L. M.....Big Bay
Larsen, Chas. L.....Brown City
Meyer, A. J.....Howell, R. 7

MINNESOTA.

Hillier, H. B.....Brownsdale
Holcomb, W. R.....Excelsior, R. D.
Meyer, William.....Ellsworth
Poston, R. H.....Duluth, Duluth Stock Farm
Smith, J. G.....Farmington
Stevenson, J. W.....Winnebago

MISSOURI.

Stienstra, S. J.....Swedeborg
Von Lanyi, Oscar.St. Louis, 3420 Pine St.

MONTANA.

Bennett, C. S.....Somers

NEW HAMPSHIRE.

Conant, W. A.....Temple

NEW JERSEY.

Geller, H. W.....Woodbine

NEW YORK.

Coleman, Chas. H.....Perry Center
Hayes, Edwin..Buffalo, 593 W. Ferry St.
Morse, W. A.....Camden

NORTH DAKOTA.

Thompson, R. K.....Bottineau

OHIO.

Doerschuk, John J.....Shanesville
Ernst, Claude.....Thompson
Messerschmidt, Samuel H.....Flat Rock
Schwantes, Edw. F.....Coalburg

PENNSYLVANIA.

Rorer, Wm. A.....Mt. Gretna

WASHINGTON.

Bohl, J. N.....Snohomish, R. 3, Box 47

*Deceased.

EIGHTH ANNUAL MEETING

OF THE

Wisconsin Agricultural Experiment Association.

The officers and members of the Association extend a cordial invitation to all interested in progressive farming to attend its meetings and take part in the discussions.

PROGRAM

THURSDAY, 9 A. M.—Assembly Hall (near Law Building)

Annual Address, of Vice-President.....H. A. Main. Ft. Atkinson
Secretary's Report.....R. A. Moore, Madison
Benefits Derived by the State From the Work of the Experiment Association.....W. H. Hanchett, Sparta
Relation of Members of the Association With Farmers and Seedsmen of the State and the United States.....
H. E. Krueger, Beaver Dam
Wisconsin Select Seed Grains.....Henry Michels, Malone
Why Members of the Association Should Take an Interest in the National Corn Exposition.....H. W. Meekin, Fond du Lac
County Schools of Agriculture.....
C. P. Cary, State Superintendent of Schools, Madison.
Presentation of Silver Trophies given by the Milwaukee Chamber of Commerce and Wisconsin Brewers' Association for the Encouragement of the Growing and Dissemination of Pure Bred Grains.....H. E. Krueger, Beaver Dam

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THURSDAY, 2 P. M.—Assembly Hall (near Law Building)

Election of Officers, Reports of Committees, etc.
Plan of Work for the Coming Year:
Division of Farm Crops.....R. A. Moore
Division of Soils.....A. R. Whitson

Division of Horticulture.....E. P. Sandsten
Division of Farm Mechanics.....C. A. Ocock
Report on the Work Done by Members of the Experiment Association With the Tuberculin Test.....Conrad Hoffman
Report on Farm Weeds.....A. L. Stone
Report of Secretary of the Fond du Lac County Order of the Wisconsin Experiment Association.....Henry Michels
Report of the Secretary of the Dodge County Order of the Wisconsin Experiment Association.....Jos. N. Bohl
Report of the Secretary of the Manitowoc County Order of the Wisconsin Experiment Association.....O. R. Wiegand
Field Beans as a Wisconsin Farm Crop.....R. A. Gillette

Adjournment at 4 P. M., for the purpose of allowing members of the Short Course Alumni to attend Annual Meeting of their organization.

4:15 P. M,, Alumni Meeting, Lecture Room, Agronomy Building.

Alumni Banquet, Baptist Church Parlors, 7 P. M.

FRIDAY, 8:30 A. M.

Assembly Hall (near Law Building)*

Corn Session:

Improvement and Dissemination.....R. A. Moore
Testing Seed Corn.....E. P. Smith
Handling the Soil and Proper Rotation.....C. P. Norgord
Corn Improvement.....Frank B. Joos
Some Corn Problems.....E. D. Funk, President National Corn Association

Curing and Marketing.....H. W. Meekin
General Tests with Pure Bred Varieties. *Silver King (Wisconsin No. 7):*
R. J. Schaeffer, Herman Roethel, H. W. Griswold, R. W. Brunner, R. W. Chatterton, Wm. A. Parsons, Geo. A. Stivarius, Owen R. Jones, Jos. N. Bohl, Lynn W. Briggs, A. G. Austin, Henry Michels.
Golden Glow (Wisconsin No. 12):
Fred P. Grebe, Wm. A. Strowig, Chas. H. Howitt, A. W. Schmidt, A. C. Ochsner, E. E. Straka.
Early Yellow Dent (Wisconsin No. 8):
C. H. Howitt, O. R. Frauenheim, A. J. Blakely, William L. Illian, Hilbert Sorensen.
Clark's Yellow Dent (Wisconsin No. 1):
W. L. Davidson, Gordon Blodgett, Chas. H. Howitt, H. L. Post, H. D. Dunbar.

Wisconsin Pedigree Barley:

Breeding and the Future Work of Dissemination.....E. J. Delwiche

Trial Tests:

Pedigree No. 11.....J. P. Bonzelet

Pedigree No. 10.....W. L. Illian

Pedigree No. 5.....H. E. Krueger

FRIDAY, 2 P. M.

Assembly Hall (near Law Building)

How Members of the Experiment Association can be Helpful in Farmers' Institutes.....Geo. C. McKerrow, Pewaukee

Systematic Farming.....H. P. Howell

Why Members of the Association and General Farmers Should Grow Sugar Beets.....Geo. W. McCormick, Menominee, Mich.

Members of the Association and our Rural Schools, Prof. L. W. Wood, Neillsville

Plant Breeding.....Prof. K. L. Hatch, Winneconne

FRIDAY, 7:30 P. M.

Auditorium, Agricultural Hall

Joint Session of the Experiment Association, Short Course Alumni, and Short Course Literary Society. Long Course and Farmers' Course Students invited to attend.

Instrumental Music.....Short Course Orchestra

Remarks.....Dean H. L. Russel

Vocal Music.....Short Course Quartette

Domestic Economy.....Miss Emma Conley, Wausau

Instrumental Duet, "Rhapsodie Hongroise, No. 2, by Liszt," Mesdames G. C. Humphrey, F. W. Woll

Address, Agricultural Extension.....Prof. G. I. Christie, Lafayette, Ind.

SEVENTH ANNUAL REPORT

OF THE

Wisconsin Agricultural Experiment Association

ADDRESS OF VICE PRESIDENT.

H. A. MAIN, FT. ATKINSON, JEFFERSON COUNTY.

Members of the Wisconsin Agricultural Experiment Association and friends: A few days ago I received notice that our beloved president, Mr. Stone, was still unable to act as president at this our 8th annual meeting and that it would be necessary for me to prepare the usual President's address. Other duties have kept me from giving this as much thought as it should have, but I wish to call a few things to your attention this morning which are of great importance to our state and our Association.

The first thing and one of the most important is in regard to the Bill No. 54, S., introduced in the Senate by Senator Thomas which provides for carrying on demonstration experiments and conducting traveling schools by the College of Agriculture and making an appropriation therefor. The value of such work is unquestioned and has already proven valuable to the agricultural interests. The demonstrations of tuberculosis at our State and County Fairs and the corn contests for boys and girls at our County Fairs are along this line. It is proposed with money appropriated to hold short terms of practical work in grain growing and judging, in animal husbandry, in horticulture, dairy work, soils, etc., at many places in the state. In other words take a short course in agriculture to the farmer. It is also proposed to carry on experiments to ascertain the best and cheapest methods of converting our cut-over lands of northern Wisconsin to tillable fields. This experiment alone is worth to the state more than the appropriation of

$30,000 called for in the bill and then we have all the other good things thrown in for "good measure," so good that it is "running over."

Another bill before the legislature is to compel seed dealers to mark all seeds with the kind of seeds and foreign matter which they contain. As it now stands, he is required to give the percentage of purity and percentage of foreign matter, but is not compelled to tell *what* the foreign matter consists of. For instance, clover seed 80% pure and 20% foreign matter only means that 80% is pure and 20% impure. That 20% may be timothy or it may be something the farmer does not want and would not have if he knew what it was.

Your committee on resolutions have prepared resolutions on both these bills and I hope they will receive your hearty support.

This leads to the thought of how much this association, through its members could effect in legislation favorable to our interests if we only keep posted on matters at our Capitol and let our representatives there know what we would like.

Every member of this association should stand firm by every plan to improve our highways. It is on the highway that we, as farmers, do most of our traveling and why then should they not be as good as possible especially in a rich state like Wisconsin.

And, when we speak of good roads let us not forget to have good roadsides—clean roadsides free from weeds, brush and if we must have road fences let them be well kept and indicative of a well kept farm lying over the fence. Let us clean our roads of that "louse of the country"—gypsies or horse traders—as they usually call themselves. Two years ago a resolution was adopted in our association convention supporting a bill in the legislature in regard to camping on the roadsides. I am informed that the bill now provides that the owner of a farm or a road overseer can compel these traveling camps to move on and that by verbal order only, and to move immediately. Formerly they had to be given a written notice to move and could stay twelve hours after receiving such notice. If the farmers of the state will do what the law allows we can make life so hard for these "movers" by "moving them so often and keep them moving "that they will get tired of moving and decide that it is easier to settle down and earn a living than to pick it up on the road by begging and using the roads for pastures and the fences for places to hitch.

President Stone in his address last year urged the members to be careful that they send out only high-class seeds. If we

do not, we will begin to decay and our usefulness as a pure bred seed state will diminish. Any member of this association who makes a practice of sending out seed that is not what it is represented to be, should be denied the privilege of membership in our association.

I often wonder if it would not mean a great deal to our state if premiums were offered at our State Fair for the best kept and best managed farms in our state. The honor of having the best kept and best managed farm in the state of Wisconsin means a thousand times more than to have the best ten ears of corn in the state. I just throw this out for your consideration because I think at some future time more definite steps should be taken along this line.

There is still another way that our members can be useful to our state and that is by trying to help build up our County Fairs. We should try to improve the exhibits at our respective fairs and, do our best even if that is little, to clean them of sideshows and other things that detract from the real object of our fairs. The present condition of some of our fairs is a blur on our counties.

In closing let me urge you as fellow members of such a great organization to be always for progress and never stand still, for when we cease to make progress we are likely to retrograde.

REPORT OF SECRETARY—1909.

R. A. MOORE, MADISON, DANE CO.

The past year has brought its many rewards to the members of the Wisconsin Experiment Association. Our paid-up membership has advanced from 900 in 1907 to 1,100 in 1908, and we have every reason to feel grateful for the advancement made along all lines.

Our total membership is considerable above the figures given as we have many who let their fees get in arrears and are not counted or listed in the report as members until all fees are paid.

The marked influence upon the general farm conditions of having so large a membership carry on tests with pure bred seed grains and general experiments where the average farmer

can see them is bringing good results throughout our State. Many of our farmers will not read, but they are close observers and will readily banish scrub grains, scrub stock and scrub methods of farming if shown it is wise to do so.

EXHIBITION OF GRAINS GROWN BY THE ASSOCIATION.

The display of seed grains at our Annual Meeting is attended with great success. Never in the history of our state was there an exhibition of grains that equaled in purity and quality that shown the winter of 1908. We trust this year's display will surpass it.

Our display of grains and forage plants at the State Fair attracted wide spread attention of the enormous work the members of the Association were carrying on. The State Fair display has become an annual event and each member of the Association should strive to make it more instructive and better as years go by.

Through an invitation on the part of the National Corn Exposition it was decided that the Experiment Association and College of Agriculture make a joint display at Omaha. This was made possible on account of the willingness on the part of the Exposition to bear the greater part of the financial burden. The Wisconsin display attracted wide spread attention and thousands of farmers and others learned for the first time the true character of the work of the Wisconsin Experiment Association.

Our work is spreading rapidly to other states and like organizations are being launched for the good of agriculture. Scrub grains are to meet their death blow and are being supplemented all over the United States by pure bred barley, corn, oats, wheat, etc.

Approximately two hundred thousand dollars worth of select seed grains were sold by members of the Wisconsin Experiment Association the past year and a great deal of these grains were secured by farmers from other states, who are keen to note the wide spread difference in favor of pure bred seed grains.

It is very gratifying to see the work expand and go beyond the border lines of our state. This leads us to believe that our mission is a wide one and that the call for seed grains will become greater year after year.

Honesty, uprightness, and strict integrity in growing and selling pure bred seed grains will "gain the day" for Wisconsin and our Experiment Association.

From reports received I am able to give the following data regarding tests carried out by individual members of the Association.

CORN

SILVER KING (WISCONSIN NO. 7).

Number members reporting	183
Number counties in the state	71
Number of counties from which reports were received	40
Average per cent germination of the seed	96.6%
Number reporting corn as well matured	146
Number reporting failure to mature	32
Maximum yield (bushels shelled corn per acre)	110
Minimum yield (bushels of shelled corn per acre) (poor land)	14
Average yield per acre (bushels of shelled corn)	56
Average yield per acre any other variety	44
Difference in yield in favor of No. 7 corn	12
Average yield per acre on fall plowed land	58.63
Average yield per acre on spring plowed land	54.76
Number parties planting on fall plowed land	51
Number parties planting on spring plowed land	121

EARLY YELLOW DENT (WISCONSIN NO. 8).

Number members reporting	26
Number counties in the state	71
Number of counties from which reports were received	17
Average per cent of germination of the seed	93.6
Number reporting corn maturing well	24
Number reporting failure to mature	2
Maximum yield per acre (bushels shelled corn)	75
Minimum yield per acre (bushels shelled corn)	20
Average yield per acre (bushels shelled corn)	48.8
Average yield per acre any other variety	46.7

GOLDEN GLOW (WISCONSIN NO. 12).

Number members reporting	12
Number counties from which reports were received	6
Average per cent germination of the seed	98
Number reporting corn as well matured	10
Number reporting failure to mature	2

Maximum yield (bushels shelled corn per acre)	70
Minimum yield (bushels shelled corn per acre)	25
Average yield per acre (bushels of shelled corn)	49.1
Average yield per acre any other variety	57.7
Average yield per acre on fall plowed land	50
Average yield per acre on spring plowed land	48.6
Number parties planting on fall plowed land	2
Number parties planting on spring plowed land	10

BARLEY

ODERBRUCKER (WISCONSIN NO. 55).

Number of parties reporting to date	288
Number counties from which reports have been received	56
Number sowing on fall plowed land	190
Number sowing on spring plowed land	98
Number sowing with drill	127
Number sowing with broadcast seeder	157
Number sowing by hand	4
Number reporting that barley remained erect	259
Number reporting that barley lodged	29
Number reporting that barley rusted badly	0
Number reporting that barley rusted slightly	78
Number reporting that barley did not rust	206
Number reporting that barley developed smut	160
Number reporting that barley was not smutted	112
Average yield of Oderbrucker barley (bushels)	37.2
Average yield of any other variety	31.6
Difference in yield in favor of Oderbrucker barley	5.6

SOY BEANS

Number of members experimenting	20
Number of counties in the state from which reports were received	13
Number members reporting beans as ripening evenly..	11
Number members reporting beans as ripening unevenly	7
Number members planting beans on fall plowed land..	10
Number members planting beans on spring plowed land	10
Number members using bacteria-laden soil	9
Number members reporting nodules on roots of bean plants where soil was inoculated	9
Average yield per acre (bushels)	18.7

WHY GIRLS SHOULD STUDY DOMESTIC SCIENCE.

MISS EMMA CONLEY, WAUSAU, MARATHON CO.

"The history of civilization has been a history of almost unbroken progress. Nearly all progress has come to us through the silent forces of evolution, but whenever evolution has not moved fast enough for enlightened thinkers, seers and prophets they have forced progress through revolution. The progress of the civilized world during the past five hundred years was not rapid enough for the forerunners of advanced thought and so modern history has been a series of revolutions and the revolution of our country is the social. Each revolution has made the other possible by broadening men's minds and making them ready for further progress.

All revolution that has changed the civilized world has been brought about through man. No woman's hand or brain has changed the character of a single age or movement; all revolutions in household affairs have been brought about through men and in those household industries now left in woman's hands no progress has been made—rearing of children and the feeding of the human race. No one dare deny it when I say that the child of today is weaker than the child of yesterday, weak eyed, poor teeth, feeble digestive powers, prone to disease, has no power of endurance. No one dare deny that the cooking of the past produced healthier men and women than does the cooking of today.

"This is not an arraignment of women nor an encomium of men. It is a simple statement of the fact that so long as any industry is learned by intuition and practiced by untrained, unskilled laborers no progress is made; when it becomes a trade, a profession, when skilled labor takes hold of it, it becomes progressive.

"The primitive woman wove bark and grasses and made rude garments, today the countless mills and factories turning out cloth and garments show what man's skilled brain can accomplish. The primitive woman made the crude dishes, the pottery, and decorated it in her own peculiar way; she made the baskets, the rugs; she erected the crude shelters for her family; she planted the first seeds and tilled the soil, she tamed the first domestic animals; she did everything but hunt and carry on war. This was primitive, uncivilized woman, and with the ad-

vance of civilization these industries have passed to man's hands and have become vast businesses.

"Let no one think that the passing of these arts from woman to man is noted with any sign of regret. It is like the passing of the stage coach, the old scythe, or the tallow candle, it is a part of the march of civilization, but the question is, what is left for woman? If anything is left, to progress along that line we must have the light of scientific skilled brain that will lead us to advancement and not to atrophy. All our boasted progress has been brought about by man, and unless woman can arise to her duties, the progress must continue to come through men.

"We women talk about reforming society when we are society, and the most needed reform is in the home. We talk about the liquor habit when science has fully proved that insufficient and ill chosen food villainously cooked is one great cause of man's need for stimulants. We talk about public sanitation, garbage disposal, waste paper boxes, etc., when the sanitation in our own homes is vile because we do not even know what sanitation means, and scarlet fever, diphtheria and tuberculosis are dreaded but expected guests, and cellars are damp and dirty, and sewer gas is always welcome, and the same air is loved because it has remained in the same rooms for so long.

"As I said before, the revolution of our century is the social, and the spirit of our age is social reform. A new science sociology evolved from the old political economy studies society as it has been, as it is, and by its knowledge of past and present marks out the line for future progress.

When we realize that all over the country, from Maine to California, in all grades and classes of schools, from the primary, intermediate, high school and country school of our public school system to the leading universities, as Cornell, Columbia, Leland-Stanford, Chicago, Illinois, Minnesota and Wisconsin, new courses have been added to complement and supplement the old system of education, we know that thinking men and women have come to the realization that something has been lacking in our educational system—a something more important, more vital, more essential to our social and economic welfare that Euclid, Ovid, or Horace, and that something relates to the most sacred institution of civilization.—The Home.

It was found that the root of many social evils was in the home, that something was lacking in many homes, not because of poverty, drunkenness or vice, but because the woman of the home was utterly ignorant of her duties as a homemaker and her daughters were growing up with no more knowledge, and society as a whole was suffering because of this. Something

was lacking in the ideals and education of girls when they no longer cared whether they could make good bread, could look after the household when mother was sick or away on a visit, could help with the darning or mending. Something was wrong when the girls play the piano, draw, paint and do fancy work while mother works in the kitchen.

"There is a class of people who believe that anything American, customs, manners, laws, political and business methods, is as near perfection as anything can be. There is a class of people who believe that all they know is all that is to be known about a subject, that their opinion is the final word. They move in small circles, they do not come into contact with the world of progress, change and growth, and Chinese-like they worship ancestral light. They mistake their ignorance for knowledge and their prejudice for conviction.

The whole progress of evolution in education, religion, industry, society—in all life, in fact—is an unknown quantity to them because in their ignorance they look at the changes that are sweeping all barriers before them with impatience, distrust, and contempt, a new idea is a positive pain. This condition of affairs is found among women oftener than among men, because men come into contact with all the forces of evolution in the business world, and when they do not get into step with it they are swept away. It is just this condition of affairs that makes it impossible for some people to understand what we mean by domestic science. They can not or will not see the forces at work around them. They understand domestic science to mean something for the poor, the ignorant, the outcasts of society, or their misguided neighbors, but never for themselves.

"Whenever a woman is sure that no epidemic, invidious disease, as fever, diphtheria, or tuberculosis, can touch her, that impure water, impure air, defective lighting, poor plumbing have no effect on her; that drunkenness, crime and misery do not concern her; that her own physical condition cannot be improved on in any way; that her child has the the strong, healthy body nature intended him to have; that her home is so restful that she does not have to go away to escape the 'comforts of home' when she is worn out; whenever the family income is judiciously spent; whenever she is sure that her household runs as smoothly as any well managed business, then she has mastered domestic science and her work is to join the little group of reformers who are struggling to improve the human race physically, mentally and morally. If she has not learned any or all of these things then domestic science is for her.

"We meet people who pretend to think that domestic science is all very well for the poor, the ignorant, the servant class, the submerged tenth, but for the parvenu there is that uneasy feeling that any interest in the matter might lead some one to discover that the subtle force of atavism was leading her to take an interest in ancestral pursuits. We meet people who think that a domestic science school is 'just a cookin' school,' a dress making establishment, a place for servants, anything, everything, but what it really is. So at the risk of telling you what you already know, I am going to tell you what domestic science is not.

A domestic science class is not a training school for servants. It is safe to say that not one per cent. of all the girls who take up the work of domestic science in the school will ever become servants. We seem to miss the whole force of the servant question. The work, hours, wages and social position of a servant rank with the unskilled laborer. If she is skilled in any particular line she no longer remains a servant. In our American system of education the daughter of the manufacturer sits beside the day laborer's daughter in the public school, receives the same instruction and has instilled in her mind the same ideas of American independence and equality. She receives the same education and often has the quicker intellect. Educate the girl and you make her free, she will no longer dream of serving, of doing unskilled work. If she is too stupid to feel her heritage, she remains a "hewer of wood,' and she becomes a servant.

Remembering that in America the social ladder is easily mounted, that it is only a question of a generation or two when all Americans started from the same bottom round, that no one is too poor, too ignorant, too lacking in ambition to desire to reach the dizzy heights, we may realize that while we can get servants they will come more and more from the hopelessly ignorant class. When they lose their ignorance they rise above the servants' class and only by keeping them ignorant can we keep them servants in the present sense of the word. Increasing wages will not solve the servant problem. Wages have increased and servants are more and more incompetent. Domestic science will not solve the servant problem, because an educated girl is a skilled laborer and you will never get a skilled laborer to do unskilled work. This is an economic question.

"A domestic science class is not a cooking school. A cooking school is a place where they teach fancy cooking and fancy cooking, highly seasoned foods and indigestible concoctions have filled more sanitariums than has any other evil. Did you ever

stop to think that of all diseases the great majority come through the digestive tract and are wholly due to improper foods?

"A little knowledge of foods would put a quietus on the business of health resorts and water cure sanitariums. But then what would women talk about, if they had no ills? Mrs. Gilman says about the conversation of women: 'They have nothing to bring to each other but personalties, some slight variation in recipes for sponge cake, cures for measles, the endless servant question, or stitches for fancy work. Poor lives, when fancy has no work but in stitches, and no play at all.' It is considered genteel to be sick, and when our friends and neighbors' shortcomings have lost their charm—if they ever do—we have always real or imaginary ills to talk about. It is much easier to take medicine than a course in proper feeding.

"Domestic science classes are not classes for teaching hemstitching, embroidery or Battenburg work. Too many women, now and always, spend their lives taking little stitches in handkerchiefs, ruining nerves and eyesight, while outdoors the sun is shining, the birds are singing, the world is bedecked with hundreds of shades of green, and there is beauty everywhere, while the only beauty they know or see or dream of is in a piece of muslin nine inches square. No wonder women have narrow, circumscribed lives. What broadness of vision can one get by taking stitches so small that they are invisible. 'The hand of the dyer is subdued to what he works in,' and if a woman's work is taking little stitches, can she be expected to rise above little things? Domestic science does not teach fancy stitches. Since civilization began woman has had too much of it. We make things, make them for use, simple, strong, durable, and their beauty is in this. There is no economy in spending weeks in making a basket when we can purchase one much more beautiful for five cents, and the fingers can become just as skillful by using them to lighten mother's burden or by closing the hole in some stockings.

"I shall try to prove to you that every girl and woman should have a course in scientific home making. I do not mean that a girl should have work in domestic science to the exclusion of all other subjects, because she could not. To understand domestic science we must have at least a good general knowledge of the sciences, but I would not stop there. It has often been said that American women are over-educated. On the contrary, American women are under-educated. A man is willing to send his son to college, but in many cases he thinks such education is useless for girls. No one can have too much education. The educated woman can read something more than the fashion

or theater page of a newspaper or a modern novel. The educated woman is in touch with all the questions of the day and is a part of the life of the world, not a butterfly nor a drudge. The educated woman can find pleasure in works of science, philosophy, literature, while the uneducated reads fiction or talks about people. Tennyson says of educated women: 'Knowledge is to them no more a fountain sealed. Drink deep, until the habits of the slave, the sins of emptiness, gossip, spite and slander, die.' So I do not want you to understand that by domestic science I mean a course in a cooking school. I mean as good an education as a woman can get, but with that general education should go work to fit her for her life work. First fit her for her life work, then add the music and the art.

"We can prove that domestic science is needed by all classes of women—the girl who is ambitious for money-making, fame, or to live her own life, who believes in single blessedness, or who prefers to endure present ills than fly to those she knows not of; and the girl who intends to marry. I shall touch on the first class only indirectly today; my purpose is to deal with the girl who intends to marry.

"Nowadays most girls work at something because they do not care to be idle. The girl who intends to marry makes what preparation? Does she study about foods and cooking, about feeding and bringing up children, about prevention of diseases, about spending the family income judiciously, about general household management, about care of herself, and the hundred and one things a housewife and mother should know? No; this girl who intends to marry decides to earn a little money in the meantime, so she spends six months learning to be an indifferent dressmaker—for it takes several years to become skilled—six months learning to be a stenographer, from two to four years after finishing high school to become a teacher, four years for law or medicine. Her life work, by her own choice, needs no preparation; she learns that by 'instinct;' but work she intends to follow for a few years is done in the business world, on business principles, and hence needs from one to four years of preparation and study. Unless she has this, no business man will employ her.

"What kind of business do you think any manufacturer would now have if he knew nothing at all about it? If he just folded his hands and thought: 'I should like to own and manage a large factory. I'll wait, and in the meantime I'll work at the shoe trade. I'll spend four years in the shoe business and then, when the time comes, I'll know all about lumber and the manufactured products. I can go out into the country and be able

to pick up enough ignorant farm hands to do all the work.' Or take the man who decides to be a lawyer eventually, but while waiting learns the blacksmith trade. When he gets ready to practice law he hires a teamster to look after his business and he takes the fees. No human being would expect success under such circumstances. Even a woman can see how ridiculous this is, but all women do just exactly this thing.

"What does the girl of 20 years know about spending the family income—expensive foods, overloaded tables, foods bought out of season, pounds and pounds wasted by poor cooking on 'unlucky' days, no knowledge of food principles so that she may know when the body is properly nourished, adulterated foods and no knowledge of how to detect adulteration. Do you marvel at the results? If a husband cannot manage his business, he fails. If a woman cannot run her business, she blames the 'ignorant servant.' What man would dare to blame the office boy when his business fails. If the woman who bores her friends, acquaintances, and even strangers, with the shortcomings of her servants, could only know that while we listen we are taking her measure, she would not wax so eloquent on the subject. You know there are women who brighten up and start conversation only when the servant question comes up.

"Some of us can conjugate a Latin verb and make a fancy sofa pillow cover, but if the furnace fire burns low do we know enough to open the draft? If the water pipe freezes at the trap, do we know where the trap is? If we leave our house for the summer, do we know how to attend to the pipes so as to prevent ingress of sewer gas? Or can we tighten a screw in a loose lock. All infinitely easier than Battenburg, Euclid or Chopin. There will always be those mysterious visitations of Divine Providence called croup, typhoid fever and diphtheria as long as woman spends no time learning to 'keep house' and four years learning to teach school when she really intends to keep house.

"How many women live their own lives, wear the clothes they would like to and do as they please? The whole life of many women is a struggle to imitate those above them in the social scale, in seeming to be what they are not. Else why this striving to keep up appearances, when the only one deceived by the appearance is the face in one's own mirror. Why this desire for sumptuous apartments, luxury that one cannot afford, and a scale of life that wears one, mind and body, to maintain? Artificial friends, superficial learning, shallow lives, due to their never knowing the shadow from the substance.

LUXURY A FOE TO CULTURE.

"The greatest foe to culture, to refinement, is luxury. It takes more culture to know what we can let go, eliminate, than it does to take things on. Money buys nearly everything, even immortal souls, but it cannot buy health, refinement and culture. These come through elimination, education, training. William Morris says: 'I had thought that civilization meant the attainment of peace and order and freedom, of goodness between man and man, of the love of truth and hatred of injustice, and, by consequence, the attainment of the good life that these things breed, a life free from craven fear—that is what I thought it meant—not more stuffed chairs and more cushions and more carpets and more dainty meat and drink.'

AIR AND SUNSHINE FOES OF DISEASE.

"Why are our bodies weak. Absolute confinement to the house would have exactly the same effect on a man as it has on a woman. Sometimes Nature, in her infinite wisdom, gives a girl her inheritance from her father, a strong, healthy body, and sometimes she bestows on the son the weak constitution of his mother, making him 'mother's own boy.'' By constant outdoor life the boy overcomes this. By continuous indoor life, fear of rain or exercise, or of soiling ruffled dresses, the girl loses her inheritance and becomes like her mother. Shut a man in the house for a day and you can do nothing with him. Send a woman out of doors for a day and she comes back tired out. 'Too much for her system.' Yes, muscles long unused become atrophied. If a musician stops practicing for a week his friends notice the difference in his playing. A singer neglects her voice and it loses its flexibility. A woman neglects to exercise and her muscles become useless. Nature never intended us to be weak; we have made ourselves so. If a woman would live out of doors in the air and sunshine, she would not need medicated baths for run-down nerves. By proper food, exercise, pure air, care of the body, there is no need for sickness and disease. The only excusable sickness would be accidents or the wearing out due to advancing years. The time is coming when it will be considered as great an ignorance or carelessness to be sick as it is now to be unable to read. And domestic science and scientific education for women will bring this about.''

THE POSSIBILITIES IN DAIRY FARMING OPEN TO THE MEMBERS OF THE EXPERIMENT ASSOCIATION.

A. L. GREENGO, MENOMONEE FALLS, WAUKESHA COUNTY.

A possibility is something which may happen and is usually spoken of as being highly probable or barely possible.

Much, I might say all depends upon the graduate, his qualifications and his knowledge of the source of possibilities. Possibilities like happiness emanate from within. The brain is the controlling factor, external conditions only modify. Bacon said that "A wise man will make more opportunities than he finds."

We can increase our direct physical powers only to a limited extent but the brain has invented mechanical devices by which this power or possibilities are increased many times.

Our brain, then, being the controlling factor of our possibilities, we limit those possibilities if we fail to provide food for the nourishment of those brain cells already in existence as well as preventing other cells from forming. This food provided and assimilated, no man can foresee the limitations of our possibilities.

Great possibilities are but aggregations of smaller ones, the smaller paving the way for the greater. They may be likened to a great river system; a comparatively small beginning but each tributary increasing or intensifying the volume of the main.

No great river has ever yet been discovered whose greatness was created of itself. Its greatness lies in its tributaries and in all probabilities none of our graduates ever became great through the seizing of one opportunity. That one may have been the crowning effort but that one was but an aggregation of many others.

I believe that nearly all, if not quite all, the opportunities in the dairy profession radiate from one central point if I may call it so, and that point is *scientific feeding.*

Scientific feeding of the dairy animal is the feeding of that animal so as to enable it to produce to the safe limit of its capacity at the least cost consistent with its present health and future wellbeing.

The best feeder, in my opinion, is the one who gets the most feed suitable for his use for the dollar and then in turn gets the most out of that dollar's worth of feed. In order to get the

most out of that feed he must have stock that will use it with the greatest economy. The ordinary dairy animal is unable to do this work because she is the product of a dwarfed mind and possibilities emanate only from growing minds.

We must breed animals fitted for the work they are expected to do, and each succeeding generation should accomplish better and better work. Thus we see that to follow after opportunities we must become breeders. It is not optional, its imperative, absolutely necessary.

There are times when we may disregard economical production. Mr. Anteen would no doubt have paid a fabulous price for any feed or system of feeding whereby the total amount of butter fat, in the case of his noted Jersey cow Jacob Irene, could have been increased from fifty to seventy lbs. thereby securing for her the world championship.

But we, however, can lay no claim to being good feeders when we, ordinarily, receive but a dollar in return for each dollar spent in feed.

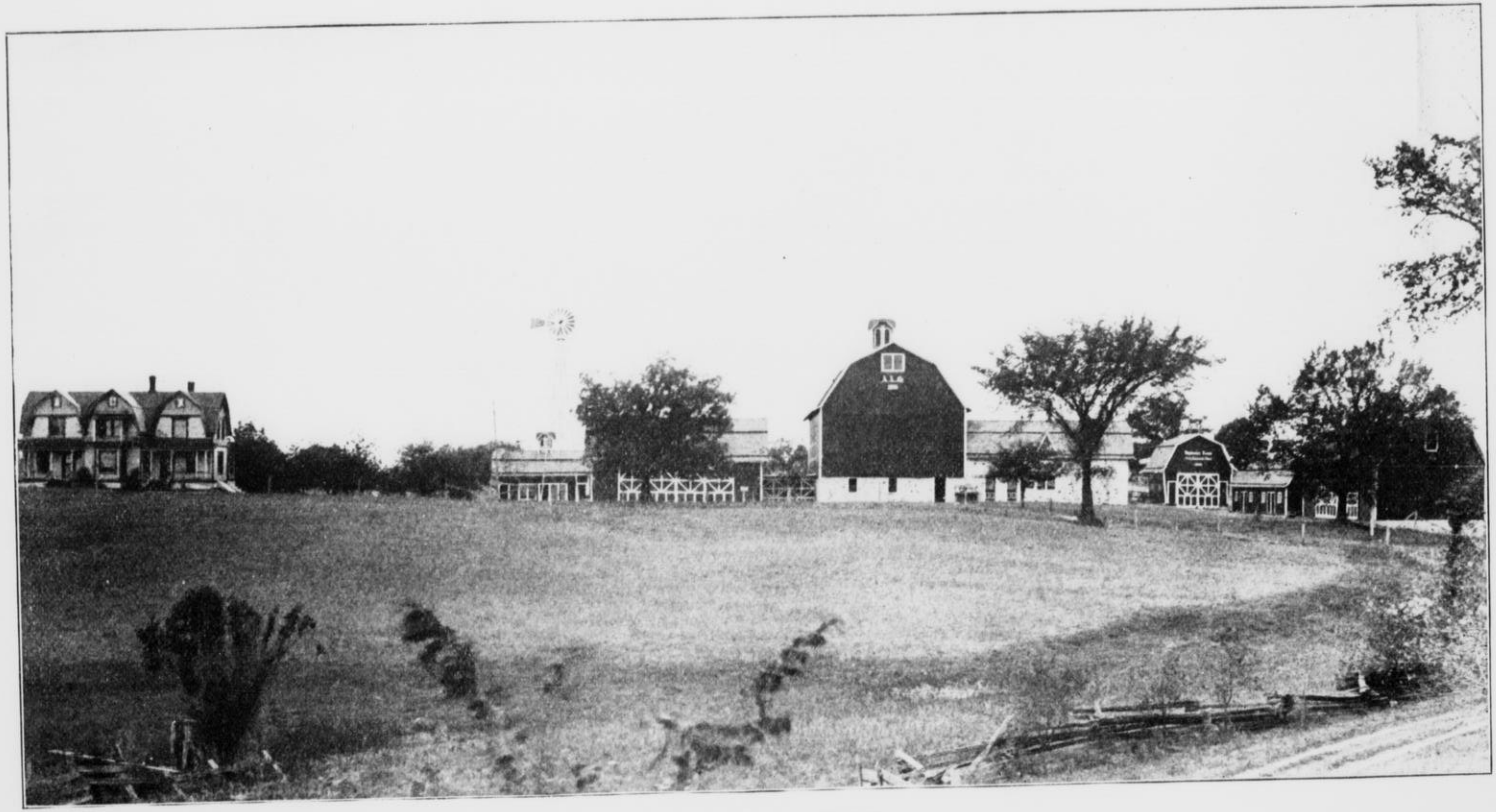
During the month of December, 1908, a herd of nine cows returned for each dollar's worth of food eaten, three dollars and ninety three cents. This was on the sale of the cream and a part of the skim milk, sold to a dealer at ordinary prices.

During January this year, these same cows with one additional cow returned four dollars and two cents for each dollar's worth of feed.

It is a time honored custom to feed the skim milk to pigs and in very many cases it is just as wrong as it is old and time honored. We all know that with whole milk at one dollar and five cents net per can nothing can be made in feeding it to six or seven cent hogs. With skim milk worth one dollar and twelve cents per can it would also be unprofitable to feed hogs.

The West Virginia Experiment Station has found that each added quart of skim milk fed to poultry produces an extra egg. We received for each egg sold during December and January three and one half cents, making the skim milk equal $1.12 per can. Last year our hens after paying for their feed returned two dollars and twenty cents each clear profit.

During January, 1909, one dollar's worth of feed produced over three dollars' worth of eggs. And on February 6 at the rate of over five and one half dollars worth of eggs for one of feed.



THE BENEDICT FARM

The Home of A. L. Greengo, Menomonee Falls, Waukesha County.

No member of the Short Course or Experiment Association has done more for the agricultural progress of Wisconsin. Mr. Greengo through perseverance, thrift, and good judgment has built this beautiful home and farm buildings. Pure bred Jersey cattle, Barred and Buff Plymouth Rock chickens and select seed grains are his specialties.

SHOULD WISCONSIN FARMERS GROW SUGAR BEETS?

G. W. MC. CORMICK, MENOMINEE, MICH.

Mr. Chairman, Ladies and Gentlemen of the Wisconsin Agricultural Experiment Association: I am convinced that your worthy secretary is a firm believer in crop rotation, as he manages to get sugar beets planted on your program every third year. It was in 1906 that I had the pleasure of addressing the members of your Association on much the same subject which has been assigned me for today. No one appreciates more keenly than I the honor you do me in inviting me to address this association of agricultural energy and brains; and no one knows so well as I how incapable I am to do justice to the important subject which I am to discuss.

The subject is rather a comprehensive one as it involves not only the growing of sugar beets, but practically every crop and occupation on the farm, because we must consider the relative results in growing the several crops and the labor expended to produce them.

Before introducing a new crop on his place an intelligent farmer naturally wishes to know if it is one that will successfully grow in this climate and on the character of soil he possesses; if it is a crop that is subject to attack by disease or insects; how much labor does it require to grow it; what quantity can be produced per acre; is there a ready market to receive it and about what price can be obtained for it. Another and very important question is, is it an exhaustive crop on the soil, and what, if any, beneficial results would be derived from growing it aside from the actual cash received from the sale of the crop?

You see, therefore, if we hope to successfully introduce the growing of the sugar beet in Wisconsin we must be able to answer these questions satisfactorily and submit reasonable proof.

The growing of sugar beets in this state is a very new industry and it is yet struggling with the infantile troubles and difficulties that attend the introduction of every new industry, the greatest difficulty being the lack of experience on the part of the farmers. However, new as is this crop with us, and as inexperienced as the average farmer is in the cultivation of it, we believe we have had enough demonstrations and experience to pass a fair judgment on its merits as a farm crop.

As to whether the climate and the soils of Wisconsin are adapted to the growing of sugar beets, we find these two conditions identical with those of the greatest beet growing country in the world—Germany. It has been demonstrated that sugar beets can be successfully grown on any Wisconsin soil that will produce a good crop of clover, alfalfa, barley, potatoes or corn.

After being grown more or less throughout all parts of the state for the past ten years there has been no evidence of any disease of any consequence attending this crop, and it has been attacked by no insects worthy of mention and has sustained no serious injury from frost; in fact about the only natural enemy the plant has is the lazy farmer and the oracle who occupies a front seat on a barrel-head at the country grocery store.

The question of labor necessary is important, but it differs little in amount from that expended on kindred crops, being slightly more than on potatoes, and less than on cabbage or cucumbers. The labor can all be measured in dollars and cents, it will vary from $25 to $35 per acre if you allow going wages for all work done. Any farmer who has help enough to do the other work on his farm can safely care for from two to five acres of sugar beets, and in case he desires to plant more the Sugar Company will gladly provide families who will contract to do all the hand labor on a very reasonable basis. The latter plan is being very generally adopted on the larger farms, especially by dairy farmers.

Like all crops the yield of sugar beets depends largely upon the state of fertility and cultivation of the field, but it is fair to say that on land in a good state of fertility, properly cultivated, a yield of from twelve to eighteen tons per acre can be produced. Hundreds of Wisconsin farmers do even better than this, and there is always an open market ready to receive every ton raised, the farmer is never obliged to peddle it. There need be no uncertainty as to there being an over supply and glutting the market as the Sugar Company will contract to take all the beets at a liberal guaranteed price, the average being about $5.00 per ton net to the grower. This gives him from $60 to $90 per acre, and when the cost of producing is deducted a net, clean profit of from $25 to $65 is the result.

Some people say it is an exhaustive crop or hard on the land. The experience of the best beet growers in Wisconsin has been that they grow a heavier crop of wheat, barley or oats following the beets than on the other fields on the farm. In Germany where they have been growing sugar beets for a hundred years, where they have had ample time to observe the

effects on the soil, their experience is that they are growing from 25 to 40% more grain per acre on their farms than before they introduced beet growing. Your own Experiment Station here at Madison thoroughly investigated this matter of exhaustion, and in Bulletin 123, on page 48, they show the value per acre in dollars and cents of the fertility removed by an average crop of wheat, corn, cabbage, potatoes, tobacco and sugar beets. And what is their finding? With the exception of potatoes, sugar beets removes less fertility from the farm than any of these crops, the leaves and tops being left on the field or fed to the stock. And this same report goes farther and states if the tops and beet pulp is utilized on the farm, "The loss of fertility is very small, and much less than any other crop grown in our state." This is as good proof as I can submit as to the exhaustiveness of the crop. It not only does exhaust the soil unduly, but, as every good farmer knows, the thorough mixing, hoeing and deep stirring of the soil in the preparation and cultivation of a field of beets, aerates the soil, sets free the plant food and destroys the foul weeds leaving the field in a well cultivated, clean, prime condition for any other crop to follow.

The development and growing of this crop in your state means something of still greater importance, and something which is deplorably lacking, and that is the deeper cultivation of the soil. It is a fact that in the fourteen counties of Wisconsin in which we operate the average depth to which the land is stirred and plowed is but six inches. In talking with an expert agriculturist and farmer of Germany, who visited this country twice in the past four years, he stated that the weakest point he observed in the American method of farming was the shallow plowing. On asking him how deeply they plowed he stated from twelve to fifteen inches, and this method of plowing had been brought about by beet growing in that country. "Why," he said, "you can never hope to grow as long a beet nor as many tons to the acre as we do when you prepare only six inches of soil for them to grow in; and this applies to every crop you raise; you want storage for your moisture to tide you over dry spells; you want more room for the development of the root system of your various crops, and you should make use of that additional plant food stored below upon which you are paying taxes and making no use of. You can increase your beet yield a third to a half; you can increase your yield of grains 25 to 40% and the quality of your soil will be better."

This deeper cultivation of the soil will require time to accomplish, as it would not be safe to plow more than one inch

deeper each year, and then only in the fall, but once it is practiced the yield of all crops, as well as beets, will be materially increased and periods of drought will not so seriously interfere with our crops.

James Wilson, United States Secretary of Agricltuure, whom we all know and honor for what he has done for the farmers of this country, publicly advises the farmers of this country to "Grow more sugar beets and milk more cows." Now this advice applies particularly to the state of Wisconsin, which makes the proud boast of being the greatest dairy state in the Union. With your splendid soil and your large dairy herds, to which you feed so much of the good things that are raised on the farm, you are enabled to manure your fields well and keep them in an excellent state of fertility and produce a large crop of sugar beets. This is a crop you can afford to sell from the farm as you received a good price for it and then you can have the beet pulp returned to you free by paying the freight charge and feed it to your dairy cows and hogs. It is an exceptionally good food for dairy cows, very largely taking the place of or supplementing your supply of ensilage. Your dairy cows will show a decided increase in milk while they are getting this succulent fodder and it enables them to digest more readily and get the value from the other feed you give them. Hundreds of beet-growing farmers in the northern part of the state are getting this product back on their farms and unhesitatingly state that they get an increase of from a quarter to a third in the flow of milk from their cows in feeding a part ration of pulp as against a whole dry ration. They frankly say they can fatten their hogs in three quarters of the time by adding pulp to the ration. They are thus raising a crop which they can produce at a good profit, leaving their soil in an excellent condition for a succeeding crop, and by taking back the pulp they are securing an added value in their dairy pails and on the backs of their hogs and through their animals returning to their fields what they sold from them, thus maintaining the humus and fertility and productiveness of their farms.

When the dairy farmers of this great state realize and understand the many advantages of growing this crop which has made Germany famous as an agricultural country, it will require twenty sugar factories instead of four to take care of the beets they will raise. This state will boast of being a much greater dairy state than it is today, then Wisconsin will come into its own and be a parallel to the Caanan of Bible times, veritably a land flowing with milk and sugar.

PLANT BREEDING.

PROF. K. L. HATCH, WINNECONNE, WINNEBAGO COUNTY.

Every member of the Wisconsin Experiment Association ought to be a plant breeder. Even more, if he is doing the work of the association as it should be done he is a plant breeder. These may seem to be strong statements but a little careful thought will convince us of their truth. In the first place what is a plant breeder?

Breeding, whether it be of plant or animal, is the improvement of those characters which have a peculiar value to man. Animal breeding consists in improving the mutton, beef, wool, energy or milk producing powers of animals and like qualities which have a definite commercial value to man. Plant breeding too, consists in improving the yield, quality, disease, resistance, beauty, or like equally valuable plant characteristics. For the most part the members of this association are interested in the producing power of plants. Any man, then, who secures a type of plants of greater yielding powers, greater resistance to insects or disease, more symmetrical form or any like characteristic, is a plant breeder and has produced a new variety.

What is a variety? In modern thought there is no such thing. Being long accustomed to the theory of immutability of species we used to believe that nature had drawn hard and fast lines between the classes and that species, originally created in almost endless profusion, continued to exist, without change, down through all succeeding time. But then came Lamarck, Huxley, Darwin, Mendel, Hays Bailey, DeVries, Nillson and Burbank each throwing a new light from his own point of view upon the "Origin of Species" until we now consider a variety as nothing more or less than a convenient, man-made classification of plants more or less alike but each essentially different in minor characteristics. No two ears of corn, no two blades of grass, no two buds or flowers or fruits are exactly alike but many of them are so much alike as to be conveniently put in the same class and this class constitutes what we now are pleased to call a variety for want of a better term and because we have long been accustomed to its use.

But it is this unlikeness, this eternal variation, that constitutes the hope of the plant breeder as well as the one who is interested in the improvement of animals. For years we have recognized this law of variation in animal life and upon it the

best breeds of the present day have been built up, even though the law was not an accepted scientific principle. Yes, more than that: even in the face of the fact that the world at large and scientific men, loudly proclaimed the doctrine of immutability of species."

It is the first business of the plant breeder to recognize that plants are not arbitrarily arranged by nature into definite, fixed and unchangeable groups but that whatever such arrangement may exist has been brought about by man's necessity for classification in his methods of study and by that higher law which we best know as the doctrine of heredity.

During the past few years great changes have taken place in our methods of study. Today we neglect the *group* which we call the variety and focus our attention on the *individual*, for we now know that it is the individual and not the group wherein our greatest hope for the future lies. We now know that there are certain individual plants as well as animals possessing characteristics far and away ahead of the group to which they belong and capable, through the law of heredity, of transmitting those characteristics to their offspring. It is this fact that the modern plant breeder has turned to his account, and through his unremitting toil has been able to produce strong strains better adapted to the needs of man. These strong strains we call new varieties for want of a better term, not necessarily because we believe that they will persist forever.

It is the business of the specialist to produce these strong strains and our own Professor Moore has done much for us in this direction, but it remains for us to keep these strains pure. A strong strain, once produced, will continue to persist for some little length of time but it will not go on forever. It then becomes your business and mine as members of this association to inform ourselves on the methods by which we can make these strong strains, on which so much work has been done before they are placed in our hands, persist in their increased usefulness to man. To understand them fully let us review the methods by which these strains are usually produced and the attendant difficulties.

First of all there is hybridization. This consists of crossing two plants more or less unlike, with the hope of combining in their offspring the desirable qualities of both parents for it must be remembered that plants are as distinctly sexual in their methods of reproduction as are animals. We should then look well to the parent stock of our future plant. But, since each parent plant has many essential characteristics, some of which are undesirable, and since the chances are that these

undesirables may themselves be as easily transmitted as the desirable ones it necessarily follows that our chances of securing the proper combination to meet our needs are very small if only a few plants be crossed. Again, should the desired cross be obtained, it may easily be lost the second generation through reversion to either one of its grandparents or worse still the hybrid may be sterile and future propagation be impossible as is often the case. Then too, the nature of most plants is such that it is neither easy to select the male and female parents, or to obtain the cross so that hybridization as a means of plant improvement is beyond the reach of the average farmer and most members of this association.

Then there is crossing which differs from hybridization only in that the breeding is between plants more nearly alike. Since the methods used for crossing are for the most part the same as those used in hybridization it necessarily follows that crossing is also impractical for us to use in any extensive manner. But crossing, as a general rule results in greater fertility, i. e. a greater yield, and in some plants chief of which is corn it should be employed. Now, corn is about the only farm crop in which it is easy for us to select the male and female parent. The tassel, as you know, is the male part of the plant, the silk on the female organ. Then by removing the tassels as soon as they appear we force certain desirable plants to become mother plants, and by carefully removing from the undetasseled rows those plants which we do not want to reproduce their kind we can force crossing. The seed is then selected from the desirable plants in the detasseled rows. In this way we do exactly what every good animal breeder does, select both male and female parents of our future stock, our crop of corn. Since crossing usually results in greater fertility, we increase our yield by the same method.

But the ultimate success of the plant breeder lies in careful selection and selection is the one method that we can all practice. If we get a desirable hybrid, we must exercise the utmost care in selecting our seed from this hybrid stock or all our work will be lost through reversion, the tendency of the law of heredity to assert itself. Our hybrid will revert in both directions toward the parent stock and unless we exercise the utmost care in selecting our seed for several years and "fix the type" our new variety becomes so mixed with the old and with the infinite combination of resulting crosses that we have no type at all.

So it is with crosses, but to a less degree because we have less difference between the parents and consequently less dif-

ference between the resulting crosses. It necessarily follows that the more nearly alike the parent plants, the more alike the progeny. This is the strong argument for line breeding and its untimate extreme, in-and-in breeding. There is a common belief that in-and-in breeding, like hybridization, results in infertility, that at one end of the line, crosses between very unlike individuals are sterile and that at the other end the progeny of very closely related individuals too are sterile. The greatest fertility results from crosses and the greatest efficiency results from crosses between individuals very much alike. Hence the necessity for a fixed type and careful selection so that *that* type will continue to persist.

But, as has already been said, there are certain especially desirable individuals in every so-called variety which are far and away ahead of the other members of the group to which they belong. It is the business of the plant breeder to find these individuals by some well defined and established method and to propagate them. In the same way there are in every so-called variety, no matter how well established, certain inferior individuals whose reproduction should be prevented with equal care. This is selection and unless selection is practiced our strong strain will soon disappear. In nature, these undesirable strains are sooner or later eradicated by that means which Darwin calls "natural selection," but in domestic plants, man interposes a barrier to this good work of nature.

The plant breeder should have a type in mind and with a determination as fixed in purpose as "the laws of the Medes and Persians" adhere to this ideal in his selection.

To illustrate this point I wish to cite the experience of Prof. Bailey with his Ignotum tomato. In 1887 he found a single tomato growing in his garden which had several points of superiority over any other variety which he was then growing. In 1888 he sowed the seeds for about 500 plants. A few reverted. A few of the best were selected and the seeds saved. These were sown in 1889. None reverted. In 1890 the seeds were sold to a seedman. He says: "The very next year, 1891, I obtained the seeds from fifteen dealers and grew the plants side by side. Of the fifteen lots, eight bore small and poor fruits which were not worth growing and which could not be recognized as the Ignotum! Grown from our own seed, it still held its characters well. Here, then, only a year after its introduction half the seedsmen were selling a spurious stock. I have secured no evidence of unfair dealing, but I am convinced that much of this variation was a legitimate result of the various conditions under which the crops of 1890 had been grown, and

the varying ideals of those who saved the seed. I am positive that the Ignotum tomato as I first knew it and bred it has been lost to cultivation, although the name is still used for the legitimate descendants from my original stock."

The work which Professor Moore has done for us, for Wisconsin and for the world at large can not be overestimated, but the time is at hand for him to do more or else, as surely as the world stands, the excellent varieties that he has produced will go the way of the Ignotum tomato. I do not care to assume the role of a prophet, but I venture to predict that unless Professor Moore succeeds in fixing the ideal that he has in mind in the selection of his several varieties of grains, that in twenty years from the day of his death, No. 7 corn as Professor Moore knows it, and he is the only one who really knows it, will have passed with its creator.

I, for one, as a member of this association, favor an appropriation which will enable Professor Moore to place in the hands of every member of this association a detailed description of each and every variety of corn and grain upon which he is working that will enable us to follow his ideal in the selection of seed. If such a publication can be issued as a station bulletin, well and good. If not, then this association should take it up and Professor Moore owes it to us, even though it take some of the precious hours, of a very busy life, from other important work. I was more than ever impressed with this fact a few weeks ago when viewing a number of samples of No. 7 corn, shown here at the university within 100 feet of the office desk where Professor Moore does his daily work. These samples showed almost as many types as there were samples, showing clearly the varying ideals of the men who made the selection. At least half of these were nothing like the ideal that the originator of the variety has in mind yet they all go by the name of No. 7. If this be true even while the breeder yet lives under his very eyes, what is to become of these types when he shall have passed from the stage of action. Yes, every member of the Wisconsin Experiment Association should be a plant breeder, and he should have a definite ideal of the type which he is breeding.

Harwood has written a very attractive book, full of food for thought which he has chosen to entitle "A New Earth." In this book he shows how certain men, students of agriculture and all related sciences have really created for us a new earth, a more desirable place in which to live. This new era begins with the present century and is filled with the marvelous work accomplished by plant and animal breeders during the past few

years. With him, "Old things have passed away, all things have become new." Be that as it may this old earth is rapidly becoming clothed with a new vegetation and inhabited by a new animal life. New plants, new animals, new men, new ideals! The history of the old earth is filled with the achievements of war. May the history of the new earth recount the victories of peace. Emblazoned on the pages of the old earth's history are the names of men whose lives, abound with selfishness and who have shamefully and wantonly spilled the blood of their fellow men. Napoleon, Wellington, Nelson, Cromwell, these are the men whose deeds the history of the old world recounts. But when the history of the new shall be written what names shall stand out in greater brilliancy than those of Bailey, Hays, DeVries, Nilson, Burbank, Davenport, Holden and our own beloved Moore! For we agree with Dean Swift "That whoever makes two ears of corn or two blades of grass to grow where only one grew before, would deserve better of his generation and do more essential service to posterity, than the whole race of politicians put together."

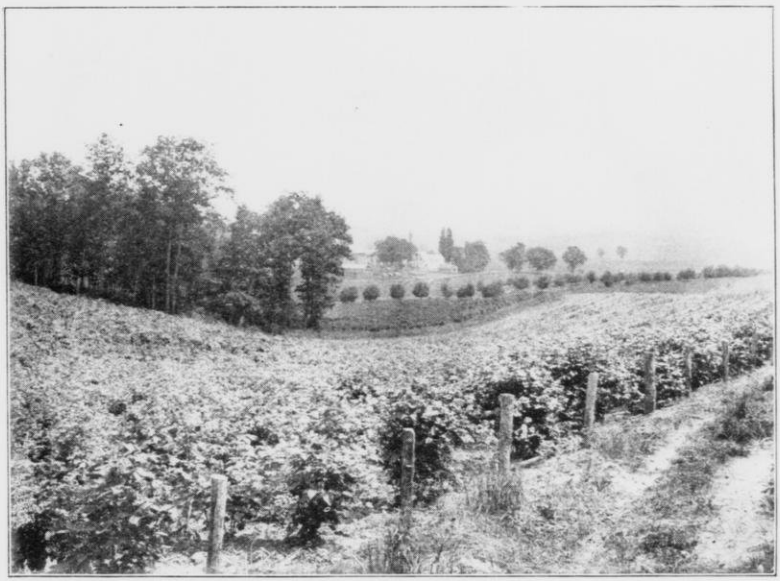
BENEFITS DERIVED BY THE STATE FROM THE WORK OF THE EXPERIMENT ASSOCIATION.

W. H. HANCHETT, SPARTA, MONROE COUNTY.

As members of an organization receiving an appropriation from the state this subject is one which should receive our thoughtful consideration as good citizens of our great commonwealth.

Government is ever subject to the designing schemes of the grafter and the taxpayer is ever having to pay the bill until he is carefully scrutinizing each appropriation made by the state legislature, so it behooves us to take anxious thought regarding the benefits derived by the state in exchange for the appropriation given us lest we too be classed as grafters.

In considering this subject my thoughts have gone back some years to boyhood days on the farm. I remember that in those days in my boyhood home the closest economy was necessary to keep the wolf of hunger from the door. I also remember that there used to be publications known as Experimental Re-



BADGER STATE FRUIT FARM.

(Farm Home in the Distance)

Geo. Hanchett & Son, Proprietors, Sparta, Monroe County.

The junior member of the above firm is our W. H. Hanchett who completed the Short Course in 1898, and has been a member of our Experiment Association since its organization. No one member of our Association has done more for the advancement of the organization than Mr. Hanchett. He has always taken an active part in our meetings and the management of the association has been materially helped by his counsel.

Mr. Hanchett makes a specialty of small fruits, dairying and pure bred seed grains.

ports visit our home and that mother in the practice of the necessary rigid economy used to slit the leaves of these reports into long strips and keep them where they were handy to use in lieu of matches when a lamp was to be lighted by igniting them at the kitchen stove. They came free of charge and they were large enough to save a good many matches. The younger members of this organization will be amused, of course, at such a use of knowledge that had been tabulated to enlighten the farmer, but many of the older members will be able to look back in their own experience and realize that in their case the reports were not the source of as much light as in mine, and I think I may claim without danger of contradiction that before the advent of the Short Course in Agriculture and the Farmers' Institute that very little of the knowledge dug out by our experimenters at the Station ever found its way to practical use and benefit on the Wisconsin farm. Bulletins and reports could be spread broadcast among the farmers without results simply because they were in most cases not read and if read were looked upon as "book farming" and ridiculed by the tillers of the soil, with results that were just as wasteful by comparison as it would be to prepare a great power plant, equip it with massive engines and then get up the steam to a "hundred and enough" and throw the throttle wide open and expect it to operate a great factory without providing a means of transmitting the power to the machines that were to do the work. The source of power might be perfect and the machines that were to do the work might be perfect but the whole was worthless without a means of transmitting the power to the machines, and I think all will agree that the bulletin and report alone were entirely inadequate to transmit the knowledge attained at the Station to practical use on the farm, and that a more responsive medium was sadly needed.

The Farmers' Institute has been of great value in this respect but still it has been in many respects like a slipping belt or a gear that jumps cogs in as much as it visits a community once in several years, creates some enthusiasm toward better farm practice and then lets the motion slacken up by sliding along till next time.

What seemed to be needed was a living medium that was constantly in touch with both the source of investigation and the practical operations on the farm, something that would be quick to take the knowledge attained through experimentation at the Station and put into use upon the farms in the several communities of the State as a practical object lesson for farmers generally to profit by, for the farmer (to use a slang phrase)

is "from Missouri" and must be shown not told. He is quick to imitate anything which he sees that looks good but slow to follow advice.

This is the office that the Experiment Association is performing. Composed as it is of graduates from the Agricultural College and leading farmers who have taken the Farmers' Course it is closely in touch with both the Station and the farm and is well calculated for this work and has proven very effectual in the performance of it.

I will not attempt to estimate in dollars and cents the results to our state for any attempt in that direction would be mere guess work. The increase in yields of grain through the introduction of pure bred seeds is a well established fact and the results have already mounted into the hundreds of thousands annually, but while an increased food supply from a given acreage is a very important matter mere dollars are only filthy lucre unless used to make better homes and better lives, so we should not consider this subject in a boastful way, for while it is proper to take careful note of the results of our work, the state in placing the results of years of costly experimentation in our hands has a right to expect us to use it unselfishly for the benefit of all. So let us as individual members of this organization humbly ask ourselves whether or not we are letting our light so shine among men that others will be drawn to the light, of better farming, better homes and better lives.

CLOVER SILAGE.

W. P. BUSSEY, OMRO, WINNEBAGO CO.

Mr. President and Members of the Wisconsin Agricultural Experiment Association: When your Secretary wrote me some weeks ago, that he would place me on the program for this meeting, to give you my experience on clover silage as a summer feed, I was inclined to object on account of my inability to present to you this subject in a satisfactory way. However, I will try to give you some of the most essential points as I consider them.

Having attended the meetings of this association for the past two or three years, and having grown some of the pedigree

FARM HOME OF W. P. BUSSEY.

Omro, Winnebago, County.

Mr. Bussey is an ardent worker in the Experiment Association and is noted for being one of the most public spirited men in Winnebago county. For many years he has been one of the leaders in the Winnebago local horticultural society and through his active efforts has been instrumental in doing much good for his community.

His leading specialties are pure bred seed grains, small fruits and dairying. Mr. Bussey's farm is up-to-date in every respect and his seed grains rank among the best grown in the county.

grains furnished to its members, and by watching the growth and development of them, I have been interested in some of the conditions that confront us as farmers, especially if we are looking to the dairy cow for the larger part of our cash receipts.

The subject of Silage for winter feeding for the milch cow has been presented to us for years by our best practicable dairymen and the results obtained by them have been the means of others following their lead. And today it is admitted by all, that the silo is the most economical way of taking care of the larger part of our corn crop.

While attending the meeting here last winter I spent part of the time inquiring of some of your members and faculty the more important features of Silos and Silage. Soon after returning home I contracted for two small stave silos, which were placed inside our barn, using part of the space that had formerly been used for a hay mow.

The part of our farm used for a pasture is rather low, and in ordinary seasons gives us good feed, but such seasons as we have had for the past three or four years, it has been too wet during the earlier part of the season. This had a good deal to do with our trying the experiment of clover silage for summer feed.

The past season gave us an enormous growth of clover, and as this was all new to us, and not knowing at just what stage to cut the clover to get the best results, we cut it when the first heads began to change from full blossom. We began cutting June 22, in the morning while the dew was on, beginning at once to load it onto wagons, three or four men pitching it on with large barley forks. It was not necessary for a person to be on the load, for it unloaded much better when it was not tramped down. This was drawn to the silage cutter and cut one inch long. It was well spread and tramped in the silo.

During the forenoon we put eleven loads into the silo. This was about half the amount that had been mowed. At noon we had a heavy rain which lasted about an hour. As soon as the rain was over we commenced drawing the wet clover. Of course a considerable part of the water dripped out during the pitching onto the load and from the load to the cutter, but for all that the clover which was put in in the afternoon was more wet than that put in in the forenoon. I am satisfied that this extra amount of water in the clover was one of the reasons that helped to make this trial so satisfactory. The last load run through the cutter was cut one-fourth inch long. This being wet and by being thoroughly tramped left the surface very hard

and firm. The following day I scattered some barley over the surface, and for several days sprinkled it with water. In a few days we had a growth that seemed to exclude the air. On the 27th of July we took off about a load from the top. This took off the green barley, the root growth, and a thin layer underneath, which seemed to smell rather strong. At this time our pastures were getting dry and the feed short. We had been feeding new clover hay for two or three weeks at milking time.

We were so busy haying, harvesting and cultivating corn, that it did not seem as if we could stop to uncover the silo.

And right here I want to say, that from the appearance of the top and the smell that came from it, and hearing the comments of people who had heard about the trial, I was not quite as anxious to open it as you might suppose. There seemed to be a feeling of pity as well as curiosity, concerning the results. Several "kindly" offered to help pitch it out and draw it out on the land, for they thought if it did not burn itself and set fire to the barn, it might make a good fertilizer. The first two or three feedings that were given the cows seemed to justify my friends' opinions. We put some bran on the feed after putting it in the manger. The cows ate the bran readily and the clover sparingly. My hired man said "they acted like a fellow getting used to a new brand of chewing tobacco." At the end of the third day all of the cows were eating with a relish all that we gave them. We fed a heaping bushel basket full to each cow twice a day. Some would eat more and it was given them. No bran was fed after the second day.

Our cows soon began to increase their flow of milk and lost that dissatisfied look that they had had when they were brought up at milking time. As the pastures became poorer and the flies more numerous, the young heifers and some of the cows which were soon to freshen, got into the habit of going into the stable at milking time and they were given feed regularly.

Now as to results. The flow of milk was soon increased considerably, the cows were contented and very soon their appearance had changed so that several asked me, "How much, and what kind of grain are you feeding your cows?" And when told that all they were getting was the clover silage, seemed hardly to believe me.

The twenty-one loads of clover put into the silo were taken from three acres of land. We fed twelve cows all of the time and eighteen most of the time for eight weeks. At the time of filling silos with corn we had not fed out all of the clover. There must be two or three tons in the bottom now.

During the time of feeding the clover silage some of our cows freshened. They were in fine condition and commenced milking in good shape, and I think that since we have been feeding the corn silage better results have been obtained, on account of the animals being in such good condition. I am satisfied that we made two mistakes. One was in not putting in more clover and the other was in not beginning to feed sooner. For if we had begun feeding the silage two or three weeks sooner, instead of dry clover hay, we could have increased the flow of milk instead of the decrease which was noticeable at that time. Some of the farmers here thought that the clover silage fed to cows while they were running in the pasture would physic them and be injurious. But such was not the case as not one of the cows was so affected.

Our bull, which was kept in the barn all of the time and received two feedings of silage a day with what dry hay he would eat at noon, was kept in fine condition and at no time did he show a too laxative condition.

There are one or two conditions present in clover that are not so noticeable in corn for silage purposes. First: The stalk or stem of clover being hollow, more tramping seems necessary to exclude the air. Second: The average temperature at the time of putting in clover silage being about 30 degrees higher than at the time of putting in corn, a considerable amount of moisture should be provided at the time of filling, so as to avoid a burning or scalding during the process of cooking or fermentation, that all silage goes through.

As to the silos, each one of our stave silos is placed on top of a five foot wall. The wall is laid up with cement mortar, the bottoms are concrete, and both bottoms and sides are plastered with two coats of cement.

There is no noticeable difference in the appearance of the silage either clover or corn against the staves or against the cement. I cannot give you the relative proportions or the feeding value in comparison between clover or corn silage, but from the results obtained last summer I consider clover silage one of the best and cheapest feeds for summer use.

RELATION OF MEMBERS OF THE ASSOCIATION WITH FARMERS AND SEEDMEN OF THE STATE AND THE UNITED STATES.

HENRY E. KRUEGER, BEAVER DAM, DODGE CO.

Mr. President, Ladies and Gentlemen: There are many strong factors in connection with our association in relation to farmers and seedsmen of the state and United States that are not found in other organizations.

We are composed of young men who have deliberately and enthusiastically selected agriculture as a business. We are all students of one school and have had similar training and that adapted to the conditions under which we live.

We are scattered over the state and many outside of the state living on farms and working under varied conditions of soil, moisture and climate.

Some of you are experimenting in the production of grains; others growing alfalfa, while others are stockmen, dairymen, horticulturists, etc., and are setting examples of untold value to farmers in your respective communities.

We cover many branches of agriculture and the work we are doing is of great importance to the farmers everywhere and to the state at large.

The education we have received from the College of Agriculture has been practical and it has broadened us intellectually. It enables us to think more clearly, to reason and sift out the useful from the useless.

Last summer I had the pleasure to visit the farms of some forty of our members in various parts of the state; and I found that they were growing pure bred varieties of grain, corn, stock, etc., and were leaders in their localities. Some members got their neighbors interested, and whole communities were growing one select variety of small grain or corn, that the members had found to be best adapted to that particular section. Thus their influences benefited the neighboring farmers.

But there are still many who have to be shown. We, who live in those communities, know all too well the mistrust with which a large proportion of the rural population view the acts and professions of student farmers. They are from Missouri on many points and we have to show them by actual demonstrations that our pure bred barley, oats and corn are better yielders

FARM HOME RESIDENCE HORACE E. WHITTAKER, FOND DU LAC, FOND DU LAC COUNTY.

The above cut shows the beautiful farm home of Horace E. Whittaker. Mr. Whittaker completed the Short Course in 1906, and has been an ardent worker of the Experiment Association for many years.

His specialties are Wisconsin No. 7 corn, Oderbrucker barley, Swedish Select oats, Ito San soy beans, Aberdeen Angus cattle and Duroc Jersey swine.

Like other members of the Association he is actively engaged in displacing scrub grains by pure bred varieties.

SUNNY SLOPE FARM.

J. P. Bonzelet, Proprietor, Eden, Fond du Lac County.

The Sunny Slope Farm consists of 215 acres of some of the finest land in Wisconsin, and is devoted to the raising of pure bred seed grains and seed potatoes. Dairying also receives due attention. Mr. Bonzelet is a former student of the Short Course and is now president of the Fond du Lac County Order of the Experiment Association, the largest county order in the State. He has always been an active member of the Experiment Association, and h s pure bred seed grains rank among the best. Swedish Select oats, Oderbrucker and Pedigree barley, White Victor and Rural New York seed potatoes are his specialties. The Wisconsin No. 8 and Golden Glow seed corn also receive special attention. Mr. Bonzelet is fully equipped with good seed houses and power grain graders, so as to send to his customers only the finest grades of seed.

than the old mongrel varieties. "And we are showing them." The agricultural world is full of Missourians. They are the very men we want to reach; and if we can pound our gospel or examples into them without their knowing it, we shall be able to pile up results still faster.

It is one thing to grow and offer for sale choice varieties of seed; it is quite a different problem to make people buy. We can do it however by instituting a campaign of education by setting examples that shall reach every farmer in the state who can see and think. Many of the farmers with the scrub grains see the advantage of the improved varieties and are buying our seeds.

There is a market for them in Wisconsin for ten times the quantity of pure seed grains that is being sold here at present. But it requires development. I believe the time is ripe for our organization to open up that market, by each one of us doing a little toward educating the grain and grass growers to a thorough realization of the necessity for improved varieties and adapting better cultural methods; and give old Wisconsin a boost by leading every farmer to clamor for better seeds and pull ourselves up a notch or two.

Largely through the efforts of the members of our society, we have shown the farmers that alfalfa can be grown with profit in forty-five counties of this state. Members have taught the farmers how, when and where to sow it. They have determined the best time and methods of cutting and a few have succeeded in maturing seed. So not only are the members increasing the productivity of their own farms, but their neighbors as well. They are missionaries scattering the gospel of pure bred seeds and increased yield all over the state and United States.

The members of the association are the seed producers of the state. Wisconsin seeds are more and more in demand. They are wanted in other states. Illinois and Iowa farmers are finding out that it pays them to buy Wisconsin seed oats; they out yield their home seed every time. The same is true of barley, clover seed and soy beans.

Now as to our relation to the seedsmen of the state and United States. The leading, or I think all of Wisconsin seedsmen are buying their seed from our members as far as we can supply them. While we can supply their demand at present on Swedish select oats, Oderbrucker barley and clover seed, they still are short of good, kiln-dried seed corn, soy beans and wheat each year. Now there is a great field open here for our hustling members to help supply this demand. While we have not done

much with wheat, there is a place for it on some of our Wisconsin farms at present prices.

These seedsmen are helping us to introduce our stock throughout the United States, through their catalogues; and I notice many seed catalogues from outside of the state are also quoting prices on Swedish Select oats, Oderbrucker barley and other seeds that were grown by members of the Wisconsin Agricultural Experiment Association. So not alone are we supplying Wisconsin seedsmen, but our seed is recognized all over the United States, by leading seedsmen. I know of some forty car load lots that left the state this season for seed purposes, some to New York and Pennsylvania in the east, Michigan, Ohio, Illinois, and most all of Iowa, in the Central West. Besides many thousands bushels in lots from one to one hundred bushels, were shipped out; some of which reached every state in the Union. And if the reports are as satisfactory this year as last, we will have farmers and seedsmen all over the county looking to us for their seeds in the future, as long as we supply *good, pure* and *reliable* seed.

Our members have pushed the corn, that only a few years ago was thought to be fit for southern Wisconsin, well up into the center of the state; but it had to be Wisconsin grown seed, bred and selected especially for that purpose, so it would mature; and not Kansas or Nebraska grown seed, as some seedsmen heretofore were pushing and selling in Wisconsin.

You older members, and you five hundred new ones who are just joining our ranks to help carry on this good work, you are more than ordinary farmers, you are public benefactors.

As you return to your homes experimenting and setting examples for your neighbor farmers, the best wishes of the Experiment Association go with you.

WISCONSIN SELECT SEED GRAINS.

HENRY MICHELS, MALONE, FOND DU LAC CO.

Wisconsin Select Seed Grains? What does the term imply? Does it mean that the word Wisconsin placed before the name of a grain designates any particular variety of that grain. Do we hear of Wisconsin barley or Wisconsin corn as we hear of Montana alfalfa or of California grapes? Perhaps matters have

not come to that stage yet. Nevertheless, we can take pride in the fact that our state is fully as aggressive in the development and dissemination of select seed grains, as Montana is in the production of the alfalfa seed which is known the country over; or as California is in the culture of her vineyards whose products are considered such a luxury.

Wisconsin may truly be considered a pioneer in the field of good seeds. To her Agricultural College the world owes a debt of gratitude for the work she has done, not so much in breeding ordinary grains to a higher state of excellence; that part of her achievements marks only the beginning of the great work which has proven such a benefit to the country. Many other Colleges have worked along similar lines in perfecting common varieties of grains, but once they had effected the improvement sought for, they considered their work ended. Not so with our College. Of what use are extensive breeding operations, when the products of such labor are scattered broadcast over the land to anyone who is willing to pay the price, and are then forgotten? Right on the farm, under farm conditions the real test must be applied. And even then one trial is not sufficient to determine the value of any new variety. Tests must be made in different sections, in different climates, and on different soils in order to prove whether or not the variety is the one best suited to the area of land for which it was intended. Thus reasoned the men in our College, and therefore they carried their work a step farther than the experimenters in other institutions of the kind.

Had Oderbrucker barley been left to shift for itself after it had been imported and improved, the state would have received little benefit. A few farmers would have bought a bushel or two each, to give it a trial, upon recommendation of the University. At harvest time perhaps, it would have been mixed with the scrub grain grown beside it; or it might have been contaminated with foul material which would render it useless for seed; or the grower might have saved as much as he wanted for seed and sold the rest to the brewers. Whatever was done with it the Station would have had no means of knowing to what extent its experiment had benefited the state in general.

Instead of pursuing such a course, our College through the Experiment Association, distributed its select seeds among men, who, by reason of their special training were able to grow them intelligently and then disseminate them among their neighbors in such manner as would be productive of best results. Herein lies the secret of the success of the Wisconsin seed grower; he co-operated with the state in growing his seeds and in disposing

of them, and by so doing rapidly increased the area of select grains grown within the state each year.

Outside of our boundaries, people come to realize the value and the importance of this movement. The reputation of Wisconsin methods and of Wisconsin seeds has spread far and wide. Everywhere, even in foreign countries, the buyer of seeds recognizes our grains as being the cleanest, the purest and the best obtainable. To him, the term "Oderbrucker barley" is synonimous with "Wisconsin barley;" "Silver King Corn" with "Wisconsin Corn;" "Swedish Select Oats" with "Wisconsin Oats." To him, the word Wisconsin prefixed to a grain is a better guarantee of its excellence than any variety name. It signifies that it was grown in a district which makes a specialty of growing the best.

In the space of a few short years Wisconsin has risen by rapid strides until now she is second to none in the acreage of select seeds grown. She is naturally entitled to such a position being favored with a splendid climate and a fertile soil. The credit for the rapidity of her rise, however, belongs to the Agronomy department of her Agricultural College, which through its systematic work covering the entire state, has done more to improve the type of grains commonly grown, than all other factors combined.

SYSTEMATIC FARMING.

H. P. HOWELL, SPARTA, MONROE COUNTY.

There is only one way of carrying on a business successfully and that is systematically. I need not say anything in the way of urging you to cultivate your desire to get the largest possible profits from your business. I know that you want to have maximum crops, to improve your soil and to bring as much happiness to yourselves and those dependent on you as possible.

In order to do this a farmer must be continually answering these questions for himself. What crops shall I grow and what area to each? What care shall I give these crops and the soil upon which they grow? What disposition shall be made of the produce of the fields? If the crops are to be sold, then when and where? If they are to be fed, then to what class of stock and to what number? What manure and fertilizer shall be ap-

HOWELL STOCK AND GRAIN FARM.

H. P. Howell, Proprietor, Sparta, Monroe County.

This high grade farm is owned and operated by our worthy member, H. P. Howell, and consists of 120 acres of land conveniently located near Sparta. Mr. Howell completed the Short Course in Agriculture in 1907, and immediately engaged in farming. No member of the Experiment Association has put forth more active efforts in banishing scrub stock and scrub grains from our State, than Mr. Howell. Pure bred Guernsey cattle and pure bred seed grains are his specialties. High grade seed potatoes, Poland China hogs and White Leghorn chickens receive attention.

plied to the soil, to what crops, in what season, in what quantity? What provision shall be made for the protection of growing crops from insect and fungus diseases, for storing crops and the care of live stock? When and where shall livestock and their products be marketed?

The repeated answering of these and similar questions constitutes farm management and the farmer who wishes to be successful must work out a system that will profitably solve these problems under his conditions.

"I have supper almost ready," I heard my wife say one afternoon when I knew she had not left the sitting room, and I looked up in surprise. "Yes," she repeated, "Supper is almost ready, I know what I am going to have."

Knowing what one is "going to have" is a long step toward having it. Planning ahead is an essential for economy of time and money in any business. Systematic farming means that problems are thought out before steps are taken to work them out, and when the time comes to do the work it has been so well planned out as to cut out all false movements, so every step counts. The reason many farmers fail is because of too much ill-applied hand labor and too little brain work combined with bad business management in buying and selling.

System is as essential on the farm as in a large mercantile establishment. System enables one to keep ahead of his work and to do things well because they are not left to the last minute when lack of time and present need encourage slighting. System sets the wheels going round smoothly and makes farming pleasant and profitable on either a small or large scale.

Take the matter of breeding livestock. Systematic breeding along special lines is the only method of establishing a uniform herd, which will produce meat or milk with any degree of certainty. The careful breeder knows what to expect from his matings, he knows that there will be a certain percentage of culls and that there will be a certain percentage of average animals, but he also knows that a certain percentage will be stronger along lines he is trying to build up than either parent. He works with positive assurance of getting something good from his work because he mates his animals with system.

This example will apply to breeding better grains, improving the soil and every other branch of a farmer's work. In order to be successful, we must apply it.

System is absolutely essential to success in farming.

HANDLING MANURE WITH SPREADER IN THE WINTER.

L. W. BRIGGS, PEEBLES, FOND DU LAC COUNTY.

It is somewhat troublesome work to spread manure properly on the land in the winter and for this reason I desire to say a few words relating to the method in use on our farm. All admit that it is preferable to get the manure to the land direct from the stable before it has suffered a loss through leaching, and fermentation. This is particularly true when the farm is not supplied with a manure shed.

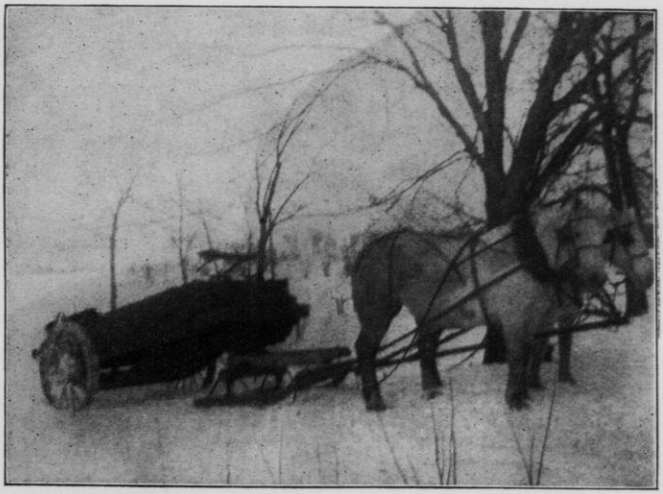
During the fall months the manure can be conveniently handled with a manure spreader but after several inches of snow has fallen it becomes a more serious task. I have been experimenting a little of late with my spreader, and I find by removing the front wheels and attaching a pair of bobbs to the front of the spreader that we are able to operate the machine much more conveniently and do more efficient work. In order to raise the front end of the spreader to its position when on the trucks we found it necessary to put a block which was about six inches thick on the bolster of the sleigh, otherwise there were no changes necessary. I think this will be a hint to the progressive farmer, who believes in getting the stable manure onto the fields before it has lost a large per cent of its value.

CORN: HANDLING, SOIL, AND PROPER ROTATION.

C. P. NORGORD, MADISON, DANE COUNTY.

The soil best adapted for corn may be characterized as a medium loam well supplied with vegetable matter overlying a subsoil of good texture. Few farms are composed entirely of such soil, hence, we find the majority of farmers raising corn on only a few choice pieces of land, thus destroying the sequence of crops in their rotation. While we would not advocate that corn be grown on land so hilly as to entail a large loss of fertility from washing, nevertheless, owing to the large amount of fertility set free by the cultivation and exposure of the soil

Farm Home of L. W. Briggs & Son, Peebles, Fond du Lac Co.



Handling Manure with Spreader in the Winter.

to fallowing incident to corn culture and because of its place in the rotation of crops, corn should be grown on all the fields of the farm so far as possible. We hear of the importance of farming so as to conserve the fertility of the soil, aside from keeping stock and feeding crops at home, the main method of conserving fertility is by adopting a proper rotation of crops. The importance of crop rotation is moreover seen in the improved conditions for each succeeding crop formed by the preceding one of another kind requiring different food elements and different methods of handling the soil, this may be quickly noticed by the vigorous growth of the grain crop following corn.

No best rotation for corn or any other grain can be cited. The local requirements in each individual case determine the rotation most suitable. However, the following three rotations are practiced extensively.

	1st year.	2nd year.	3rd year.	4th year.	5th year.
No. 1.....	Corn ...	Grain...	Hay and manure		
No. 2.....	Corn ...	Oats. ...	Barley.	Hay.....	Hay or pasture manure.
No. 3.....	Corn ...	Barley .	Oats..	Hay.....	Hay or pasture manure.
No. 4.....	Corn ...	Grain...	Hay.....	Hay or pasture manure.	

Rotation No. 1 is practiced by many good farmers. Its many good points lie in the fact that it does not permit the formation of old sod. Farmers who have lost crops or found difficulties in getting perfect stands of corn because of insects will appreciate the fact that beetles, grubs, cutworms, corn root worms, and other insects attacking the roots of corn cannot find time to develop in the one year of hay nor can they thrive in the absence of a stiff sod. Land in a fair state of cultivation and fertility can usually be kept so and in a good mellow tilth under this rotation. However, it must be emphasized that this is not the rotation proper for building up poor land. It should also be noted that this rotation permits of only one-third of the farm in hay. This does not usually meet the needs of our dairymen. Hence, for the larger part of Wisconsin this rotation cannot be recommended. Rotation Nos. 2 and 3 are very similar. Both provide a large amount of grain and more hay than No. 1. No. 2 is particularly favorable to grass seeding as it provides for barley as a nurse crop. With this rotation, there is however, danger of the lodging of the oats, as this crop follows corn, the most favorable place for a vigorous growth of straw. Because of this danger, rotation No. 2 can

be recommended only for land of medium fertility. Rotation No. 3 follows corn with barley, a stiffer strawed crop than oats, and the oat crop is placed in the third year where the fertility has been reduced by the two previous grain crops. This will counteract the danger of lodging and make it possible to use oats as a nurse crop for grass seeding. This rotation is therefore to be preferred above No. 2 for lands in a high state of fertility. No. 4 is very similar to 2 and 3 but provides for only one year of grain with one-half of the farm into hay. This is a rotation practiced on the Station Farm, the best soil building rotation, especially adapted to dairy farming. Seldom indeed do we find soil too rich for corn. This rotation adds fertility to the soil by the large amount of leguminous crops and the practice of applying manure every four years immediately preceding corn.

In practicing this rotation, the manure may be applied to the hay land during the winter and spring of the second hay year, in which case an abundant crop of hay will result in the year when the hay is often poor. The roots of this crop will also hold the fertility and prevent it from leaching down out of the reach of crops or washing away. Moreover this will permit of hauling the manure from the barn direct to the field during the winter and still allow fall plowing for corn.

If this plan cannot be followed the manure should be applied during the early fall and winter preceding the corn crop. The sod may then be plowed early in the spring just before planting or late during the preceding fall. Corn on spring plowing is usually less weedy than on fall plowing. It is easy to see that a sod cover keeps the soil from washing during the winter and by the growth the legumes present in the fall and early spring may add some nitrogen to the soil. Since plants by their transpiration rapidly remove moisture from the soil a heavy growth of grass before plowing may deplete the soil moisture to such an extent as to seriously affect the following corn crop if the season be dry. Another serious drawback to spring plowing lies in the fact that the grass crop covered with a coating of manure and plowed under so close to planting time will lie for a long time as an unrotted mass under the corn thus destroying capillarity and drying out the soil. When manure is applied to the preceding hay crop or at least early in the fall preceding the corn it is possible to plow for corn early in the fall. Whenever this is done sufficient time is given for the vegetable matter plowed under to rot thoroughly before the corn is planted. The furrow slice can then settle down against the bottom of the furrow so as to permit perfect capil-

lary action and insure against loss of moisture from below. Moreover land plowed in the fall is ready to work in the spring earlier than that which is to be plowed in the spring. This means much in Wisconsin where the danger of too short a season is always great.

In considering the handling of the soil, it must be remembered that the sole purpose of working the soil is to aerate and warm the soil and increase the moisture, but *particularly* to set free plant food so that it will be soluble in the soil water and thus be in condition to enter the plant with the water.

A stone picked up in a fine loamy corn soil may show by analysis as much plant food as the soil in which it was found and would furnish as much actual food per unit if it were finely pulverized. Soils are found in various stages between the rock and the fine soils. It should be our purpose in preparing land for corn, as well as other crops, to reduce all the soil to the condition of the fine soil. In this work nature, is our potent aid. Where land is plowed in the fall the freezing and expansion of water in the soil burst asunder millions of little particles of soil which enclose minute quantities of water. The wind and the sun are also powerful factors working in conjunction with men. We must not forget however, that the farmer of today has at his service tools, that, for fineness of work, are surpassed only by their *capacity* to do work. These; the disc, the harrow, and the roller should be used freely as each application of these tools goes far, for the present crop at least to make up for the lack of direct application of fertilizers. The depth at which to plow, depends of course, upon the condition of the soil and sub-soil. In general it should be said the plowing should be as deep as possible, within reasonable limits, without plowing up too much poor subsoil at one time, for the deeper the furrow the larger and deeper is the feeding area of the roots for the plants. Fall plowing is also to be recommended for its affect on the moisture content of the soil. Professor King and others have demonstrated the fact that fall plowing contains more moisture and holds moisture better than spring plowing. Moreover, as the furrow acts as storage for water, the deeper the furrow the larger the supply of water available to any crop and the greater the proportion of any rain will the soil take in before it becomes filled and begins to overflow and wash.

The loss of moisture takes place rapidly immediately after plowing when the fresh moist soil is opened up excessively permitting the air to penetrate and carry the moisture. To prevent their loss harrowing to smooth down the more prominent

irregularities should take place soon after plowing preferably the same half day.

Shortly after planting, if the soil be coarse and lumpy, the seed is apt to lie in pockets between coarse grains of soil in such a manner that there is little contact between the sides of the kernels and the soil. Under such conditions, the moisture cannot well come in contact with the kernel. To remedy this condition, the roller should be applied immediately after planting. By the crushing of the clods and coarser grains of soil and the pressing of the soil against the kernels, connection is made for the water to come from below up around the seed to moisten it and produce rapid germination and growth. For sometime after plowing, especially if the land plowed be sod, there is often an opening between the furrow and furrow slice. The main supply of water for the growing plant comes usually from below upward as oil passes from the bowl of the lamp to a burner. The opening between furrow and furrow slice acts upon the transmission of the soil water to the plant as cutting in two the wick of a lamp. The weight of a roller passing over the furrow slice packs the latter against the bottom of the furrow thus securing perfect connecting for the passage of water from below to the seed and surface of the soil. It will be readily seen however, that permitting the water by this process to reach the surface provides favorable condition for the lack of moisture by evaporation. To prevent this the roller should always be followed by a light harrow thus destroying the connection to the surface and by the soil mulch from holding the water directly to the region of the seed.

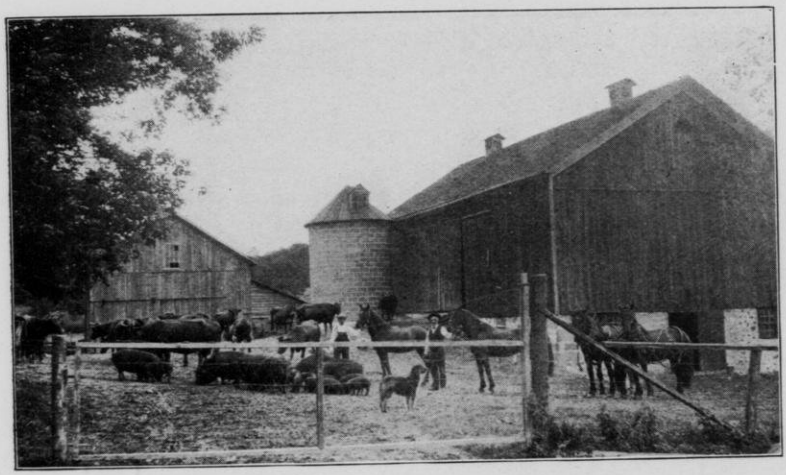
Let us therefore plan our work, according to the best light of the present day and work our plans to their complete realization for satisfactory results come only to him who thinks as well as works.

REPORT ON SILVER KING CORN.

HENRY MICHELS, MALONE, FOND DU LAC COUNTY.

While I do not wish to say anything against the suitability of Silver King corn for southern half of Wisconsin, I feel that I cannot recommend it for more northern localities. After growing it for two years, I have come to the conclusion that it is not adapted to places in our latitude, which is that of Fond

FARM HOME RESIDENCE OF CHAS. ROETHEL AND SON.



THE MEEME STOCK AND GRAIN FARM,

Chas. Roethel & Son, Prop's. Kiel, Manitowoc County.

This beautiful farm home is located on one of the finest farms in Manitowoc county and is managed and operated by our worthy member, Herman Roethel. The farm consists of 170 acres, of which 30 acres are fine wood land, the remainder is under a high state of cultivation.

Mr. Roethel took the Short Course in 1903, and is now president of the Manitowoc County Order of Wisconsin Experiment Association.

Pure bred seed grains, Jersey cattle, White Plymouth Rock poultry and Berkshire swine are his specialties. Mr. Roethel's work in the Experiment Association has been of a high grade and his select seed grains have always been regarded as the best.

du Lac. This opinion is held by all others in that section who have grown it, with the possible exception of those residing on the shore of Lake Winnebago. There is a strip of land along the lake, about a mile wide, which has a black soil, and, being protected from early frosts, is fairly well adapted to this corn. But outside of the territory mentioned, the seasons are a little too short to permit its successful cultivation.

During the summer, the corn makes a fine growth and starts large ears, but in the average season, frosts come about a week before the kernels have hardened. The result is that we have to crib a lot of soft corn which neither keeps nor feeds well. Because of its very thick ears which do not dry out easily, No. 7 must be even riper than other varieties or it will mold in the crib. Furthermore, the stalks grow so rank that they are hard to handle and on account of their immaturity are low in feeding value.

As to yield, it surpasses all other varieties grown in Fond du Lac County as far as I know. Last season our field of six acres averaged 52 bushels of shelled corn per acre on land which was not exceptionally rich having received no manure previously.

It is suited to one purpose, however, which makes it valuable even in our northern latitude, and that is as a silage crop. Its growthy stalks, numerous wide leaves, and large ears, all go together to produce a succulent feed which, for cheapness and quality is hard to excel.

THREE YEARS EXPERIMENT WITH SILVER KING CORN.

HERMAN ROETHEL, KIEL, MANITOWOC COUNTY.

Fellow Members: In the spring of 1906 I had the opportunity of giving this variety of corn a fair test. At the close of the Short Course, I took home with me twenty-five ears of Silver King corn to carry on an experiment. I took great care in preparing the seed before planting. Fifteen ears were selected that were as near to type as I could get them. I then discarded the butt and tip kernels to get rid of the ill-shaped kernels. I prepared just one acre of clover sod land, well manured, and plowed in the spring as soon as the frost was out of the ground. A roller was used to compact the soil and

this followed with fine tooth harrow to conserve the moisture for future aid to the corn crop. Shortly before planting I went on with a disc harrow and worked the ground up in a nice mellow condition. The corn was then planted May 18 with a hand planter in check rows three feet eight inches apart each way. After planting I harrowed it again and in eight days the corn was about one inch above the ground when I started a one horse cultivator. I then followed with a two horse cultivator, this cultivation was kept up once a week for about five or six weeks and my corn then looked strong and vigorous. It kept on growing and by the end of September it was fairly well matured. It was then cut by hand and shocked and the week following was husked and yielded eighty bushels of shelled corn per acre. This method of seed preparation and care in cultivation was kept up every year since and I always have a fine well matured crop of Silver King corn each year. I do not think we can get a better variety at present for the silo as it makes an exceedingly fine grade of silage on account of the abundance of leaves and large ears and soft stalks.

It seems to me that my corn is ripening about a week earlier each year under the same care and cultivation. I feel that it is getting used to the climate. This year I found that some ears and kernels were verging away from the standard and before I prepared my seed this year I wrote to Prof. Moore to send me some kernels that were just the right type, which he did. I then went to work and picked out kernels of my seed that were just the same type. I planted one-half acre which was planted a sufficient distance from my other corn to prevent crossing. From this plot I selected my seed corn for the next year and I am sure now that I have the right type again. It seems better to select the proper type from your own seed than to attempt to get new corn as it takes at least three years for a corn to become thoroughly acclimated.

SILVER KING CORN.

OWEN R. JONES, BEAVER DAM, DODGE COUNTY.

Mr. President, Fellow Members of the Experiment Association: Three years ago while here attending the Short Course together with several other classmates I decided to join this large army of cooperative seed grain growers. By so doing

we were entitled to some variety of grain or forage plant of which I chose the Silver King corn. It was planted in a heavy clay and sandy loam soil on the 26th day of May. Five days later the corn that was planted in the sandy loam soil made its appearance above ground. Seven days from the date of planting that in the heavy clay soil the corn made its appearance. A few days later the cultivator was put to work as soon as the corn was at a sufficient height to see the rows well and it was then cultivated at intervals of about ten days until it had grown too large for cultivation. The corn was cut Sept. 28 and put in moderate sized shocks where it stood for about two weeks, then it was husked and the best ears taken out and kiln dried for seed. The yield was 65 bushels shelled corn per acre. The next season we planted two acres, the experiment being carried on much the same way. It was planted on the 20 day of May in a clay loam soil and was all up above ground in four days. It was then cultivated and later harrowed with a fine tooth harrow. A week later it was cultivated the second time, after that it was cultivated at intervals of ten days, and hoed once until it had grown too large for further cultivation. It was cut on the 26th day of September, and was husked three weeks later and the best ears taken out again and kiln dried for seed. The average yield was 78 bushels shelled corn per acre which was an increase of eighteen bushels per acre over the 1907 crop.

SILVER KING CORN.

G. A. STIVARIUS, FENNIMORE, GRANT COUNTY.

Mr. Chairman, Ladies and Gentlemen: My first experience with Silver King corn was in the year 1907 when I received some ears from the Wisconsin Experiment Association and at the same time I bought some of a member. On May 20th I planted 2½ acres on a clay soil which was spring plowed and well prepared. The corn was planted with a two horse check row planter. This field was harrowed a few times after planting and then cultivated five times with a two horse six shovel cultivator and two horse 8 shovel spring tooth cultivator at different times until the corn was too tall. The last week in September, we had a killing frost. The corn did not ripen as well as my other corn. In the middle of October I picked my

seed and found more seed ears in this field than in any other corn field I had. The ears were more true to type and better filled at butt and tip. This corn was well dried and the year following or last season I planted Silver King corn in three different fields. Field No. 1 contained one acre. This field had been planted to sugar beets the previous year, plowed the same fall and in the spring we top dressed with barn-yard manure at the rate of nine loads per acre, then disced, harrowed and planted with check row planter May 16th.

Field No. 2 was spring plowed, well prepared and planted with check rower on May 22.

Field No. 3 was a two year old timothy and clover sod manured at the rate of six loads per acre, then plowed and prepared the last week in May. These fields were cultivated nearly all in the same manner, first using the harrow, then weeder and then we cultivated four or five times with two horse six shoveled cultivator. This corn all ripened well and was an excellent grade of seed corn. I think the Silver King is the corn for southern Wisconsin, in fact, I shall plant nothing else but this and the Golden Glow.

SILVER KING CORN.

R. J. SCHAEFER, APPLETON, OUTAGAMIE COUNTY.

Mr. President, Fellow Members, Ladies and Gentlemen: There is no doubt in my mind, but what some of the members have had more experience and better results with the Silver King corn than what I have had. I am located on the northern boundary of Winnebago County, and I consider it might be worth while giving my experience in that locality as requested.

Three years ago I procured one bushel of Silver King seed corn and planted five and one-half acres in drills on the 18th of May. It sprouted well and grew rapidly and was ready to harvest Sept. 23. It was husked by hand as I desired to select the good seed ears. I paid for the husking of 800 baskets and selected 90 baskets of good seed corn. I also had the best crop of fodder I ever raised.

In 1906 I put in 18 acres planting it May 7 so as to give it a long season, but after having planted we had a long stretch of wet and cold weather and it seemed as though the seed lacked

vitality. I had tried to cure too much without experience so had not done the curing properly, I was obliged to plant over half of the field, which I did the first of June. I used the Wisconsin No. 8 for replanting and got a good crop for silo, but having it mixed I did not try to select seed from it, but procured enough seed again in 1907 to plant twenty acres. In 1908 the corn was planted on the 19th of May on fall plowed, well manured clover sod. The ground being in fine shape the corn grew fast, but ripened too fast to get a big yield. I cut it September 10, filling my silo which is 30 feet deep and 16 feet in diameter with fourteen acres and husked the remainder of it. On six acres I got 600 bushels, and selected twenty bushels of seed corn which I know is good, and expect to put in 18 acres the coming season. The number of silos is increasing rapidly and the excellence of this corn for silage purposes has caused a great demand for seed wherever its merits are known.

SILVER KING CORN.

L. W. BRIGGS, PEEBLES, FOND DU LAC COUNTY.

Members of the Wisconsin Agricultural Experiment Association: My experiment with the Wis. No. 7 corn, like those of many others was a success.

The ground on which it was planted was an alfalfa sod. The soil was a rich loam having a gravel subsoil. It was plowed early in the spring and later replowed in an opposite direction in order to cut off the roots of the alfalfa plants which had not been previously destroyed. The disc harrow was then applied. This was followed by a spike-toothed harrow. The ground was then rolled and marked. After planting it was harrowed again. I used a hand planter on this field dropping three or four kernels in each hill.

As soon as the rows were visible a two horse cultivator was started, the shovels being set deep but later in the season as the roots developed I cultivated more shallow so as not to check the growth of the plants by cutting off their roots.

The corn grew rapidly. It made a very attractive appearance on account of its dark green leaves of which there were more in proportion to the amount of stalk than of any other variety with which I am acquainted.

In the fall when it had ripened I went through the field and selected my seed. One of the factors which I gave particular attention to in my selection was to take those ears which had matured the earliest.

In conclusion I will say that I believe that the Silver King corn will become a permanent variety in my home county which is Fond du Lac. To my knowledge it is the largest yielder and the best corn for the silo that we can grow.

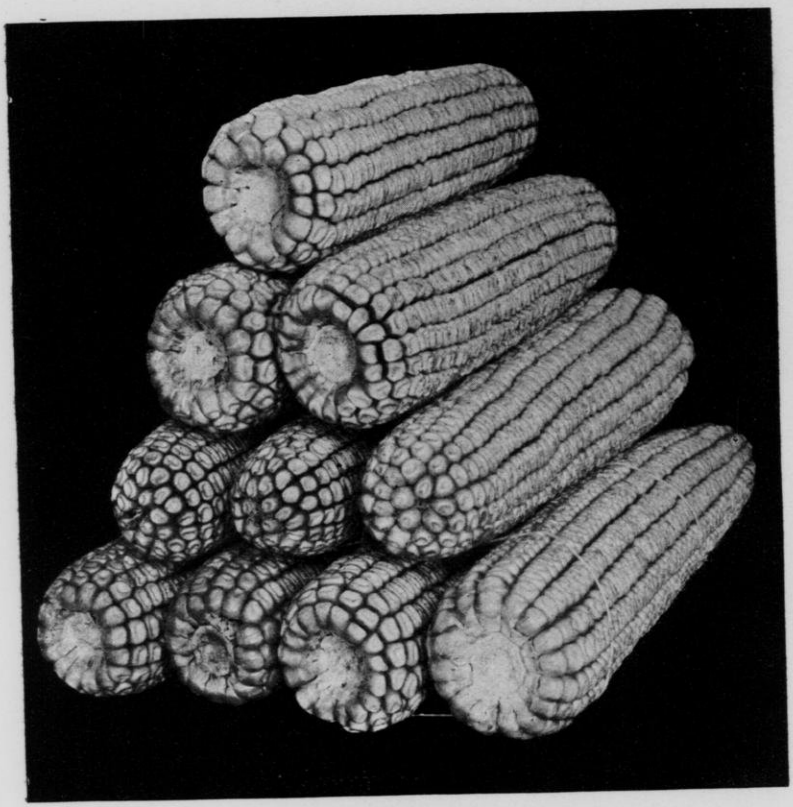
SILVER KING CORN.

A. G. AUSTIN, JANESVILLE, ROCK COUNTY.

There were two reasons why we did not grow our first Silver King corn until the season of 1908.

In the first place we had had experience with an old type of white corn having flat shallow kernels and large cob; and in addition we believed yellow corn to contain a larger percentage of oil and protein. We learned, however, that chemical analysis shows practically no difference between the yellow and white varieties and so determined to try some of the Silver King corn given out by the Experiment Association. We selected two pieces of ground; one of two acres which we will call Plot 1, and the other of one acre which we will call plot 2. Plot 1 was selected as the best seed plot on the farm. The soil was a rich black silt loam from which one year's cutting of clover had been made the previous year. It was heavily manured during the winter and plowed early in the spring. Owing to rainy weather, the corn was not planted till May 30. In about nine days it was up so that the rows could be seen. Except for a period of cold rainy weather in early June the corn made very rapid growth and excited much favorable comment among the neighbors. We estimated the yield upon this piece to be close to seventy bushels of shelled corn to the acre in spite of the fact that a drove of ill-favored Gypsy's horses spent a night in the field when the corn was about ready to harvest. The No. 7 corn gave a better yield of corn than our Clark's Yellow Dent or the home variety of yellow dent. It might be said for the Clark's Yellow Dent that the seed used was a little inferior and the field conditions not the best.

On Plot 2 the results of the experiment were not quite so good. This was the last acre we plowed for corn and it did



SILVER KING CORN (WIS. NO. 7)

Yield 93 bushels shelled corn per acre, Experiment Station Farm, 1908.

not get a covering of manure as the other fields did. The ground was rather high and was only cultivated three times whereas Plot 1 was cultivated four times. After picking some seed corn off from Plot 2 the remainder of the crop was put into the silo so I cannot make an estimate of the yield, but will say it was much smaller than Plot 1. Our year's experience with Silver King Corn has pretty well convinced us of the superior qualities of this variety, both as a grain producer and a yielder of large quantities of the best storer. The stalks are medium sized and leafy bearing a single well developed ear. This is preferable to having a larger number of small ears with more cob and a smaller percentage of corn. Reports from other parts of Rock County indicate that others have had equal success with the Silver King Corn and no doubt it will soon become one of our leading varieties.

SILVER KING CORN.

ROBT. W. BRUNNER, HUDSON, ST. CROIX COUNTY.

Mr. President and Fellow Members: Our experience with Silver King corn began two years ago. Previous to that time we raised nothing else but yellow dent corn and after much hesitation determined to try this new variety. On application we received from Prof. R. A. Moore sufficient corn to give it a fair trial. This was planted as soon as the ground was warm enough.

This corn grew very tall with heavy stalks and a dense foliage and very heavy ears. But sorry to say it was badly frozen as was all the corn in our section that season. Notwithstanding the frost it yielded 85 bushels of shelled corn per acre, of which one half was saved for seed and stored in a dry well ventilated place, and when shelled and tested, showed almost a perfect germination.

This corn was planted May the 18 in drills with a horse planter on 7 acres of sandy loam soil with a clay subsoil.

The corn sprouted and was over ground in a very short time considering the fact that we had a very wet, cold spring which later retarded the growth of the corn until July, after which it did not receive any beneficial rain until one week before it was cut.

September the 12th this corn was safe from the injury of frost and had attained a goodly height with heavy foliage.

It was cut with a corn binder, shocked, and later husked in the field but the yield was not very good on account of being thin in the row caused by large kernels clogging the planter plates.

From this field considerable good seed corn was picked and this season we intend to double the acreage of Silver King. If this corn continues to do in the future what it has done in the past we will have a wonderful variety of corn from the feeders' standpoint.

SILVER KING CORN.

R. W. CHATTERTON, BASCO, DANE COUNTY.

Mr. President, Ladies and Gentlemen: In this great world of ours we have many peculiar phrases. One of these which has come to my notice many times, seems to be used as descriptive of quality.

It is heard when a person bargains for some merchandise, when he asks whether a piece of goods will "wear well." The same words are used in inquiring about many other things.

However, my subject is "Silver King Corn" and I want to say that this corn has demonstrated that it will "wear well." My first experience with this corn was in the summer of 1905 and it was practically a failure, but no fault of the corn. Many persons had the pleasure of a laugh at my expense, also a few jokes.

The next year the crop was much better, but still not a decided success. The above critics passed this crop by with little comment.

The third season this corn made good, and was right in the front row. And those who laughed the hardest at the first trial were among the first to recognize that this crop was one of the best that season.

Last year the general average of the crop was better than the year before and nearly everyone conceded that it was the best in the neighborhood. In other words, "Silver King Corn" demonstrated for itself that it would "wear well."

SILVER KING CORN.

WM. A. PARSONS, FT. ATKINSON, JEFFERSON COUNTY.

Fellow Members of the Wisconsin Experiment Association: I was asked by Prof. Moore to tell my experience with Silver King corn, and in reply will say that I am very grateful to Prof. Moore for the small sample of corn which he gave me four years ago. My experience with the corn has been so satisfactory that Silver King is now the only variety of corn which I plant. I was the first party in this section to grow this variety of corn, but this coming season I expect one third to one half of the farmers will plant some of this variety.

The main objection which many of the farmers seem to have to Silver King is the fact that it is white. Say they, "There is not the oil in the white corn that there is in the yellow" and "It won't put fat on a hog like the yellow."

I have heard the above remarks so often that I fear I should have believed that there was a grain of truth to what they said, had it not been my fortune to run across a bulletin from Pennsylvania. In the report, thirty one varieties of yellow corn against twenty nine varieties of white corn were tested for their oil content. While the contents were much alike for both colors yet the white stood slightly ahead.

Last year I planted about thirty five acres to Silver King. Most of the corn was planted the latter part of May, with a check rower in a well prepared seed bed of clay loam. About ten acres of corn planted on spring plowed sod was badly injured with cut worms. The corn was cultivated five times. The fifth time was with a one-horse cultivator, which was after the riding cultivators had to be abandoned. My land is no richer than my neighbors', but few of my neighbors harvested the number of bushels to the acre that was harvested on my farm. My yield was not as large as it has been in years past, but considering the season, it was very satisfactory. It probably went about forty bushels of shelled corn to the acre.

My satisfactory yield in an unfavorable season was due in my opinion to three causes; first, I had good Silver King corn for seed; second, good, thorough cultivation with a surface cultivator; third, going through the corn with one horse, after the corn was too high for a riding cultivator.

Last fall at husking time, I went into the field and selected out about one third of the best ears, which were hauled to a specially prepared drier and thoroughly fire dried before cold

weather set in. We have now on hand something like 200 bushels of select ear corn, and about 200 bushels of shelled corn. The shelled corn was all tipped before shelling.

In my opinion I consider that Wisconsin No. 7 or Silver King is the best variety of corn that can be planted in the southern portion of Wisconsin. It matures in good season, is a good producer of fodder and can not be excelled when it comes to yield in bushels per acre.

EARLY YELLOW DENT CORN (WIS. NO. 8).

W. L. ILLIAN, ADELL, SHEBOYGAN COUNTY.

Fellow Members of the Association: We have now grown the Wisconsin No. 8 corn for several seasons with good results, and are satisfied that it is the earliest dent corn that we have been able to get. I experimented with four other early varieties, but they did not mature as early, nor did they yield as heavy as the Wis. No. 8.

This corn grows to a height of seven and eight feet, and the stalks are well covered with leaves. This makes it a very good corn for fodder and silage. The earliness of this corn makes it a very desirable variety for the lake counties. In order to avoid crossing with some other variety, the entire corn crop should be planted to this one variety. I believe in planting a variety of corn for the silo, and for husking which is sure to mature in a backward season, and this variety seems to fill the bill in Sheboygan county and northern Wisconsin. If conditions are right, it should yield from 55 to 80 bushels of shelled corn per acre.

We practice a three and four year rotation and corn is always planted on clover sod, and by using good seed and proper cultivation a good crop is sure to follow.

WISCONSIN NO. 8 CORN.

ALBERT J. BLAKELY, NEENAH, WINNEBAGO COUNTY.

I began growing this corn in the season of 1907. I bought a bushel of seed on the ear from one of our members, and after discarding the butts and tips, planted the remainder on between four and five acres. I threw out the butts and tips to

have more uniform planting. I used the hand planter, in check row 44 inches each way. The season was backward, and rain followed rain until the last of May. I was impatient to get the job done, so planted May 31 with the land packed hard and sticky, clay land at that. This was a mistake I shall never repeat if I have to wait until July for planting. At one end of the same field which was more gravelly and hence warmer soil, I planted No. 7. The latter came up so thinly that I had to harrow the whole thing up and drill for fodder June 20. The No. 8 had about half a stand, so I hoed the vacant hills and replanted without harrowing. So much for the ability of this corn to stand cold and wet.

In spite of so poor a start, the No. 8 came along well and was ripe October 1, without frost. I saved a lot of very nice ears for seed and planted them, together with some 25 ears of the same variety which I obtained from the Association last winter, on May 21, 22, and 23, 1908. This time I had the conditions about right. The land was spring-plowed timothy sod, very rich sandy loam, with a gravelly crest of about two acres in the whole field of some 8 or 9 acres. It had been copiously manured for years back. I harrowed it until it was almost like an ash-heap, then roled firm and smooth. The weather could not have been better. You could see the rows by May 30th and it made a remarkably rapid growth. I cultivated with a sulky spring tooth cultivator twelve times in the summer. My only drawbacks were cut worms and quack-grass. I had to plant some over after the worms but at time of harvest the second planting was as good as the first, apparently. The quack-grass had to succumb to such persistent cultivation, and some hoeing too. Dry weather in August stunted that on the gravelly ridge somewhat, but the remainder was certainly grand. It was all ready to cut by Sept. 15. I cannot give the exact yield, because I don't know the exact acreage, and had to cut some green to feed in the dry weather. Most of my seed corn I cut by hand, leaving ears on the stalk and shocking up by itself to cure, before starting the binder. In this way I got the earliest ears, and secured them before rain or frost could touch them.

When I bought my seed two years ago, I counted 123 ears in the 70 lbs. It was raised in Washington county. Now I find it takes only 116 to 120 ears fire dried corn to weigh 70 lbs. So it has certainly not lost size by being raised farther north. It matured, as you will notice, in a shorter season last year than in 1907. I am well satisfied with the No. 8 and prefer it to No. 7 for my locality.

WISCONSIN NO. 8 CORN.

CHAS. H. HOWITT, RANDOLPH, DODGE COUNTY.

Mr. President, Fellow Members of the Experiment Association: I have been growing Wisconsin No. 8 corn for the past two years. The yield has been satisfactory with me both years. In 1907 which was considered a poor corn year, I secured a yield of fifty bushels of well matured corn per acre. The stalks are leafy, and furnish a large amount of fodder. With me the corn has lodged badly both years; whether this is a fault in general with this variety I do not know. The Golden Glow which was planted on the same kind of soil, stood up much better. The corn has not matured quite as early with me as some others have reported. I consider the variety valuable for planting in the central and southern parts of the state, as well as the northern, especially when one is not able to get all of his corn planted early.

WISCONSIN NO. 8 CORN.

HILBERT SORENSON, MARINETTE, MARINETTE COUNTY.

Fellow Members of the Experiment Association: My experience with Wisconsin No. 8 corn covers but one season, although it has been grown on the farm that I am now working for a number of years, each year it has been better than the year preceding; and this year in spite of the dry season it has proven better than ever.

The soil where it was grown is sandy loam and slopes enough to afford perfect drainage. It was manured and plowed in the spring. The seed which had been kiln-dried and tested by the single ear method, was planted by the check row system, three feet seven inches apart, on May 28 and 29. The corn came up in a few days and was cultivated at intervals till it was too large to allow a horse to pass between the rows conveniently, then all the weeds that were left were removed by hand. The corn was all ripe by September 20, and was cut and husked by hand and gave a yield of 59 bushels to the acre.

I think this corn can, with a few years breeding and selection, be grown successfully in any portion of Northern Wisconsin.

WISCONSIN NO. 8 CORN.

O. R. FRAUENHEIM, RANDOM LAKE, SHEBOYGAN COUNTY.

After completing the Short Course, my eyes were opened to a great many practical things. The methods then employed in the growing of corn on our farm were such as are found on a great many farms today. We were growing dent corn of no particular type, a variety of which it was hard work to find two ears that were alike in the entire crib.

I experimented with a small plot of the Wisconsin No. 8 corn four years ago and since then I have grown it with results that have far exceeded my expectations.

The average yield for four years of this corn grown on our farms was a little over sixty bushels shelled corn per acre, while the average yield per acre of the corn grown on our farm heretofore was less than forty bushels per acre. All credit is not given to the corn, however. Better methods were adopted in the selection, care and testing of the seed and a better plan adopted in the preparation and subsequent care of the field.

It is a very early maturing variety, ripening almost as early as the flint varieties grown in my neighborhood. It grows to a height of about eight feet, with plenty of leaves, a fact that should not be overlooked in corn in the sections of the state where this corn is established as farmers want a variety that furnishes plenty of stover after the corn is husked.

The ears, while not as large as the No. 7 corn, give a larger percentage of shelled corn, the kernels have a good depth and the ears are well filled at the tips. The chief fault is poorly filled butts. The members must pay careful attention to breeding this corn for it has a tendency to turn to the flinty type. The first indications of "running out" are shallow kernels and poorly filled butts. All ears having these indications should be strictly avoided in our seed corn for future planting. Only ears having the true type should be planted in our breeding plots.

Not only has this corn given us entire satisfaction, but it has shown my neighbors that it is the only dent corn for a sure crop in our section of the state and I am glad to say that a great many of them are growing it on their farms.

GOLDEN GLOW CORN (Wis. No. 12.)

WILLIAM A. STROWIG, CLEVELAND, MANITOWOC CO.

Mr. President, Ladies and Gentlemen: Last year I secured from the Experiment Association 27 ears of the Golden Glow corn. It was planted the 5th of June, and it appeared above ground on the 15th.

It was planted on an acre plot some distance from the home corn. The soil on which the corn was planted was a sandy loam, which had been fall plowed. Fodder corn had been grown on it the previous year. The corn was cultivated several times and the stalks grew to a good height. It matured by October 1st. and yielded 120 bushels of ear corn per acre.

The Golden Glow corn is, in my opinion, a very good corn to grow in the lake shore counties where there commonly is a late spring and an early fall.

GOLDEN GLOW CORN.

FRED P. GREBE, FOX LAKE, DODGE CO.

Mr. President, Fellow Members and Friends: Last winter while attending the Experiment Association meeting, I procured a sample of Golden Glow corn (Wisconsin No. 12) to carry on an experiment. This new variety is a cross between the North Star and the Wisconsin No. 8, and I feel at the present time that this variety will come to the front with our standard varieties.

But one year's experience is not enough to form any definite opinion of what the corn really will do, but will give you the results which I have obtained this past year. I planted this corn May 26th, on good soil, following a potato crop. I cultivated this field five times and hoed it once. This kept the ground free from weeds and in good shape for the growing crop. The corn was harvested between the 15th and 20th of September and yielded sixty-seven bushels per acre.

I am very much interested in this corn and expect to plant seven acres of this variety next spring on clover sod.

"THE PINES."

Farm Home of John Van Loon, La Crosse, Wisconsin, R. No. 1,

Mr. Van Loon is an ardent worker of the Wisconsin Experiment Association and has done a great work for the state in growing and disseminating high grade seed corn. The home farm consists of merely forty acres but by the thorough manner in which the farm has been run, annually produces per acre double that of the average farms of the state. With select seed corn as a leader closely followed by small fruit and alfalfa Mr. Van Loon is setting an example in high grade farming that can be safely followed.

A. C. HAGESTAD AND FAMILY.

Dairy Barn in Background. Ettrick, Trempealeau County.

Our worthy member, A. C. Hagestad, finished the Short Course in Agriculture in 1897 and on its completion like 95 per cent of all young men who attend the College of Agriculture, embarked in the greatest of all occupations, farming. He now ranks as one of the most progressive dairymen and pure bred seed growers in the state. By his untiring energy and enterprise he has rapidly come to the front. All young men who take the Short Course in Agriculture have practically the same opportunities afforded them.

GOLDEN GLOW CORN.

CHAS. H. HOWITT, RANDOLPH, DODGE CO.

Mr. President and Fellow Members of the Experiment Association: One year's experience with a variety of corn is hardly sufficient to form any definite ideas in regard to its merits; but if the results are as good every year as I obtained last year, I think that Golden Glow will prove to be a valuable variety for the central part of the state.

The seed which I secured from the Association was planted the 21st of May, on spring plowed land. It was given thorough cultivation through the growing season, and harvested the third week in September. I secured a yield of sixty-two bushels of shelled corn per acre. I planted some Wisconsin No. 8 on the same date that I planted the Golden Glow. Both varieties matured at the same time, the Golden Glow yielding about ten bushels more per acre. The stalk development of the Golden Glow is greatly superior to that of the No. 8.

GOLDEN GLOW CORN. (Wis. No. 12.)

A. C. OCHSNER, PLAIN, SAUK CO.

Mr. President and Members of the Association: Last spring I received some Wisconsin Golden Glow seed corn from our Association for experimental purposes. This corn I planted on fall plowed land following barley. I selected a field with as much variety of soil as possible. One end was sandy soil, while the middle was clay, and the other end black soil with clay subsoil. This was disced and worked up good before planting. The corn was planted on the 5th of May at a uniform depth, using a corn gauge. The night following it rained heavily, washing out about one-fifth of the seed. It was impossible to work the ground any more for the heavy rains prevented. In the sand it appeared above ground in about five days. This was dragged and cultivated several times. The corn did very well, it matured first on the sand, the leaves being dry September 12 to 15. The corn on the middle of the field matured some later. The entire field was perfectly ripe September 20, but

frost would not have done any harm September 15. I think if the corn had been planted a week later under those conditions, it would have been a better crop. The estimated yield of this corn was about 50 bushels per acre, but as one-fifth was washed out, the crop would have been 75 bushels, which is a good crop for early corn.

Anybody wishing an Early Yellow Dent as a good yielder and an early ripener, will make no mistake in securing the Golden Glow. I am certain if a perfect stand can be obtained, it will yield from 90 to 100 bushels of shelled corn per acre.

GOLDEN GLOW CORN. (Wis. No. 12.)

EDWARD E. STRAKA, KELLNERSVILLE, MANITOWOC CO.

My experience with the Golden Glow corn covers only last season, yet I am well satisfied with the results obtained.

In the spring of 1908 I secured from the Experiment Association a limited quantity of seed corn, which when tested gave a germination of 98 per cent.

The soil varied from clay loam to black loam. This field had been used for a pasture previously. It was manured in the spring and plowed about six inches deep early in May.

After preparing the soil, the corn was planted about May 18 in hills thirty-four inches apart, cultivated twice cross-ways, with a fine tooth-harrow cultivator. The corn grew well and matured about September 20. It was harvested and husked by hand. The estimated yield was sixty bushels in the ear per acre. The two previous seasons I raised Wis. No. 8 corn, and in comparing these two varieties I think the Golden Glow corn gave a better yield on account of the ears being somewhat bigger than that of the Wis. No. 8. The stalk is larger and more leafy than the No. 8 which makes it an excellent corn for fodder. It is a good yielder both of grain and fodder, and with its early maturing qualities makes it an ideal corn for the lake shore counties and northern Wisconsin.

CLARK'S YELLOW DENT CORN.

CHAS. H. HOWITT, RANDOLPH, DODGE CO.

Mr. President and Fellow Members of the Experiment Association: I have been growing Clark's Yellow Dent for the past four years with exceedingly good results. It is a heavy yielding variety, yielding seventy-five bushels of shelled corn per acre under fair conditions. It is a little late in maturing and is probably the best adapted to the central and southern parts of the state. Clark's Yellow Dent has always matured with me, with the exception of the year of 1907. That year it did not mature thoroughly. It grows quite large stalks and yields a large amount of fodder. It stands up well and is easy to husk I do not think there is much difference between Clark's Yellow Dent and Wisconsin No. 7 in regard to yield and time of maturing. One's choice between the two is probably a fancy of color more than anything else.

CLARK'S YELLOW DENT CORN.

W. L. DAVIDSON, VERONA, DANE CO.

Mr. President, Fellow Members of the Experiment Association: I am asked to give my experience with Clark's Yellow Dent corn. Will say it is limited to one season and that being a wet one, I cannot base an opinion on the corn.

Last spring I secured enough seed to plant six acres. It was planted May 28, and all came up evenly. In seven or eight days I manured the soil, (which was a rich dark loam) quite heavily. I harrowed it well after planting and then waited a day or two and put the cultivator in, working it shallow. I had cultivated once each way, when wet weather set in, and the land being low, of course the corn got a severe setback; consequently did not mature as it would have done had the season been more favorable. But I still have faith in this corn, and shall try it again this year.

BARLEY VALUATION

DR. R. WAHL, PRESIDENT, WAHL-HENIUS INSTITUTE OF FERMENTOLOGY, CHICAGO, ILL.

GENTLEMEN: In 1907 the question of barley valuation was taken up on the occasion of the International Agricultural Congress at Vienna and it was determined to submit it to a special international commission to meet in Berlin in October of 1908. This commission agreed upon a general system of barley valuation which, however, according to a unanimously carried motion of the American delegate, should have no direct application to four or six-rowed barleys.

The principles underlying the new international valuation system are:

1. To establish a general system of valuation not considering varieties.
2. To create three grades of value, a highest, a medium and a lowest.
3. To adopt eleven points for valuation classified as follows:

Highest Class:

1. Albumen content (penalties for excessive albumen being omitted).
2. Bad odor:

Second Class:

3. Uniformity (as to size).
4. Weight (1000 kernels).
5. Fineness of husk.
6. Damaged grains.

Lowest Class:

7. Color.
8. Purity of sample (foreign seed).
9. Purity of sample (foreign seed).
9. Sprouters.
10. Purity as to variety.
11. Shape of berry.

The following points were omitted from the system:

1. The mellowness of corn, either of the original barley, or after steeping.
2. Hectoliter weight.
3. Impression as a whole.
4. Water content of the barley.

The germinating energy was recognized as a valuable point

for judging barley, and it was recommended to use it at competitive exhibits, but it was considered impracticable for ordinary expositions.

This system of barley valuation as well as the Berlin and Vienna systems, which are superseded by it, were established for the purpose of serving as guides to jurors of award in judging exhibit barleys, and consequently under circumstances necessitating the judging of large numbers of specimens or samples with dispatch. While in the main the same test points should naturally form the basic features for valuing barley for commercial purposes also, such important points as germinating capacity, the examination for which requires much time, cannot well be undertaken for exhibit barleys; besides, exhibits have usually taken place soon after harvesting, when germinating capacity does not compare favorably with results after proper storage of barley, the higher moisture content alone influencing the property of germinating capacity detrimentally to a decided degree. For this consideration and because at the usual exhibit periods moisture content is considerably higher than after storage, it was not included in these systems of valuation. In a commercial system of valuation, however, germinating capacity and moisture content become main points for consideration of value. In the present tentative system germinating capacity forms the basic factor of valuation, the importance of all other points or properties being made relative to that of germinating capacity.

A Tentative System for the Valuation of American Brewing Barley

The American Barleys

The American barleys are to be classified in at least four groups: One comprising the Eastern six-rowed Manchuria barley, (cultivated particularly east of the Rockies); a second—the Western six-rowed barley, the Bay Brewing and Blue barley; a third the six-rowed Utah Winter barley; and a fourth the two-rowed barleys, the Chevalier, Hanna, Goldthorpe, etc. The Western barleys, two-and-six-rowed, from west of the Rocky Mountains or from the Rocky Mountain territory conform more nearly to the European standard than the Eastern.

For each of these four groups of American barleys mentioned above a model barley valued at 100 points is used for compari-

son and more or less points deducted according to the results of each test. A deduction of more than 6 points in any test or division would place a barley below standard.

STANDARD BARLEY

Standard barley ranges from 94 to 100 points. A barley is below standard when it receives less than 94 points in any one of the examinations of properties given on attached form.

For commercial valuation divisions 1 to 8 should be included. For exhibit purposes all tests should be included that are feasible, omitting moisture and germinating capacity for reasons given above.

The total average of points is determined by dividing the sum of the points of each test or division by the number of divisions determined. In this way, not necessarily all divisions need be included in the test, for instance, moisture, albumen and husk may be omitted by those not having the facility for analysis; and the relative value of the barley nevertheless stands for the remainder of the tests or divisions.

CALCULATING THE PERCENTAGE

The value for each division as stated in points is established by the relative importance of a defection from 100 points, indicating thereby the percentage of inferiority to the assumed model barley. A barley, for instance, of which 3% does not grow, is rated as 97 for that test or division, a deduction of 1 point being made for each dead berry or germ. The berry is, however, of greater value than such grains of wheat and oats that are too large and heavy to be removed by screening, blowing or steeping. As they may cause albumen turbidity not more than 2 per cent of such grains should be permissible in a standard barley and 3 points should be deducted for every per cent of unremovable foreign matter. For all offal that is removed by screening, blowing and steeping, only one point is deducted for every per cent because it is not directly harmful and still of commercial value. This offal, together with the unremovable foreign matter and the sprouters should not exceed 6 per cent in a standard barley. This means that a standard barley, after cleaning and skimming and after deduction has been made for unremovable foreign matter, should yield at least 94 per cent malting barley.

At the valuation from the standpoint of the malster the deductions for offal should not be included in the final average, which should refer to the cleaned barley. Only for exhibition purposes should the deductions for offal be included in the final average. A barley containing as much as 15 per cent of screenings and skimmings, etc., would only yield 85 per cent of malting barley and could not be considered a standard barley. Those 85 per cent of malting barley may, however, be of good or even excellent quality, although probably of low 1000 berry weight. Its quality is to be determined by the maltsters' test (divisions 1 to 12) offal, being omitted from the final average. The number of points deducted in one division should be of equal value or importance as indicating inferiority of quality, as those in another division. Thus a Manchuria barley with 9 per cent of albumen would lose, on account of its 2 per cent of albumen below normal, 6 points, and its rate of inferiority would be considered equivalent to that of a barley with 6 per cent of berries not germinated, or with 3 per cent of moisture above normal, or 6 per cent offal, or 2 per cent of unremovable foreign seeds, and with a barley having a 1000 kernel weight of 3 grams below or above the normal. Likewise would a barley with 14 per cent albumen, or 2 per cent above normal, be rated as to inferiority 2x3 points.

This system is equally applicable to all four groups of American barley, but the normal conditions and the requirements to be met by the model barley are somewhat different for each group.

* TESTS: OR EXAMINATIONS † REQUIRED TO RATE OR VALUE BARLEY.

I. For commercial valuation: (a) Merchants' or Graders' tests, 1 to 8; (b) Malterers' tests, 1 to 12; and Seed Barley tests, 2 to 14.
II. For exhibit valuation: tests 2 to 14, excepting 11 and 12.

By subjective examination:
1. Variety and Admixtures: (Manchuria, Bay Brewing, White Club, Chevalier, etc.): Deductions 1 to 6 points.
2. Color and Brightness: Deductions 1 to 6 points.
3. Odor: Deductions 1 to 6 points.
4. Thickness of Husk: Deductions 1 to 6 points.
5. General Impression: uniformity of form and size of berries (plump or elongated); Threshing: (too close or insufficient): maturity: Deductions 1 to 6 points.

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* (If barley is infested by weevils or other insects, stained or discolored by fungus growths such as smut, mold, etc., it is absolutely condemned.)
† (Detailed methods of examination are contained in "American Barleys, Their Classification, Valuation and Cultivation," by Dr. R. Wahl.)

By objective examination:

6. Offal:
   - By Screen: Upper screen: (gravel, peas, corn, etc.) lower screen: (barley, oats, rye, rape, mustard, etc.) Deduct one point for every percent.
   - By water: skimmings, excluding sprouters. Deduct one point for every percent.
   - By Blowers: Straw, barley, oats, etc. Deduct one point for every percent.
   - By cockle-machine: broken kernels, cockle, etc. Deduct one point for every percent.
7. Sprouters: Deduct 6 points for every percent.
8. Remaining foreign matter (wheat, oats, etc.) Deduct 3 points for every percent.
9. 1000 Berryweight: Deduct 2 points for every gram above or below optimum.
10. Uniformity as to Size: 100 to 80 % deduct 0 points.
    (The sum of screens 80 to 74% deduct 1 point.
    2.8 mm.+2.5 mm., or 74 to 69% deduct 2 points.
    2.5 mm.+2.2 mm., or 69 to 65% deduct 3 points.
    2.2 mm.+2.0 mm. 65 to 62% deduct 4 points.
    giving the highest figure: 62 to 60% deduct 5 points; 60 to 58% deduct 6 points.
11. Germinating Capacity: Deduct 1 point for every % below 100.
12. Moisture: Deduct 2 points for every % above 11%.
13. Albumen: (N. x 6.25) Deduct 3 points for every % above or below optimum.
14. Uniformity as to Variety: (By botanical examination) Deduct 2 points for every % of foreign barley or different groups (mixtures of two, four, or six-rowed barleys).
15. Husk: (not determined unless considered below standard in subjective examination) Deduct 3 points for very % above optimum.

Bushelweight and Mealiness are not considered.

WISCONSIN PEDIGREE BARLEY.

BREEDING AND THE FUTURE WORK OF DISSEMINATION.

E. J. DELWICHE, SUPT. NORTHERN SUB-STATION FARMS, ASHLAND, ASHLAND CO.

The importance of knowing something of the pedigree or ancestral history of the different kinds of live stock has long been recognized by breeders of animals. With plants, however, it has only been in comparatively recent years that the value of such a record has been appreciated. In Illinois the Funk Brothers have put the idea into practice in breeding seed corn

with marked success. Prof. Hays produced several varieties of pedigree wheat which have been shown to yield several bushels more per acre than the standard kind grown in Minnesota. Several valuable pedigreed barleys have been originated in Sweden at the Experiment Station at Svalöf under the direction of Professor Nillson. The Vilmorins of Paris have applied the idea to the sugar beet. Many other examples both in this country and abroad could be cited to show that the idea of pedigreed grains and plants is very rapidly spreading.

In order to supply the need of pure bred grains adapted to Wisconsin conditions, Professor Moore began work with several kinds of cereals in 1899. Ten standard varieties of barley were used in the foundation work for that grain. After three years of comparative trials only the four best promising varieties were retained from which to establish pedigreed strains. These were Manshury, Oderbrucker, Silver King and Golden Queen. These were grown in small plots for several seasons, the best plants being selected for seed each year. In 1902 motherbeds of 2,500 plants were planted for each of the above named varieties. From each motherbed the 20 best plants were selected and placed in envelopes. In 1903 the ten best plants for each variety were taken and the best seed of each used to establish centgener plots. These centgener plots each containing a hundred seeds were tested for three successive years to determine yield and other desirable characteristics. The best heads were selected from each centgener plot the first year of the test and the succeeding years a close comparison was made and the number of strains of each variety reduced from ten to four. Thus 16 pedigreed varieties of barley have thus far been developed from the original stock of four varieties. These pedigreed varieties of barley have been grown for four years in the increase plots and will this year be grown on a large scale by the Experiment Station for dissemination.

The seed will be controlled by the Experiment Association and will be distributed to members who apply to the secretary on or about January 1, 1910. It is the aim of the Association to have each member who engages in growing seed barley to be supplied with sufficient pedigreed seed to sow at least one acre and establish what is known as a seed barley center in his community.

WISCONSIN PEDIGREED BARLEY NO. 10.

W. L. ILLIAN, ADELL, SHEBOYGAN CO.

Fellow Members of the Association: I received from the Experiment Association last spring one sack (2 bu.) of this Wisconsn No. 10 barley. The seed looked rather light, a common grain bag filled contained 100 lbs. My crop goes 125 lbs. to the sack, but it is not as plump yet as I would like to see it.

Barley was sown on a light clay loam soil, the two bushels covering about seven-eighths of an acre. It was sown on the side of a field, with a two foot space between this and the Oderbrucker barley. This field was fall plowed and had grown corn and potatoes the previous season.

Weather conditions were favorable and I secured a good stand, although it was a little slow in coming up, caused by the light and shrunken seed. It resembles the Oderbrucker barley in a great many respects. With us it seemed to stool more, and the heads were longer than the Oderbrucker barley; but the kernel is not as plump, although it is improving, as my seed I grew this season is much better in this respect.

In yield it compares favorably with the Oderbrucker, at least with us. The latter part of the season was very dry and hot for barley but still it went close to 40 bushels per acre. It grows a strong straw of good length.

I am well pleased with it, considering the conditions of seed and weather, and intend to give it a further test.

WISCONSIN PEDIGREE BARLEY NO. 5.

HENRY E. KRUEGER, BEAVER DAM, DODGE COUNTY.

Mr. President, Fellow Members, Ladies and Gentlemen: Last spring I received from Professor Moore two bushels of barley known as Wisconsin Pedigreed No. 5. I sowed it on April 21, broadcast and covered as nearly as possible one acre of ground.

It apeared above ground in a few days and there was a marked difference in the appearance of the young plant from that of other barley.

It was strong, vigorous and looked more like corn than barley when it reached the height of eighteen inches, and when the leaves appeared, they were broad and long, and as it headed out it was but a short time until the heads had a downward turn on account of the large head and plumpness of berry, but the straw was very stiff and strong and supported the head well. It stood up well at harvest time and matured in 93 days.

It certainly was a pleasure to harvest barley of this kind, for as the binder real tipped it over on the platform, the heads dropped with a whack. No smut whatever was noticeable.

The straw was bright and clean and without rust. It was taken care of in the usual way, shocked and capped, stacked as soon as dry.

Now as to yield. I had to waste some at threshing time so as to keep it absolutely pure. I had thirty-six bushels clean seed, but this could not be called the yield per acre as one third of the field was a little low, and on account of the unusual amount of rain drowned out, so the yield per acre was at the rate of 54 bushels.

To compare it with other varieties it excelled anything in the barley line I ever grew.

BUSINESS MEETING.

Business meeting of the Wisconsin Agricultural Experiment Association, Thursday, February 6, 1909, 2 P. M., Assembly Hall.

Called to order by the Vice-President, H. A. Main. The minutes of the last meeting were read and adopted, after which the following officers were elected:

President ..... C. P. Norgord, Madison.
Vice-President ..... A. G. Austin, Janesville.
Secretary ..... R. A. Moore, Madison.
Treasurer ..... H. N. Longley, Dousman.

On motion of the secretary, Mr. G. W. McCormick of Menominee, Mich., was made an honorary member of the Experiment Association.

On motion, R. A. Moore was unanimously awarded $150.00 and thanks for his past eight years services as Secretary and Manager of the Association.

RESOLUTIONS.

The following resolutions were reported by the committee and unanimously adopted:

WHEREAS, The Wisconsin College of Agriculture wishes to extend its good work in behalf of seed and weed control, and

WHEREAS, Appreciating such action and the great good that can be accomplished thereby,

Therefore, Be it Resolved, That we, the members of the Experiment Association in annual convention assembled, favor the passage of a bill giving the college the right to exercise just control over farm seeds with a view of preventing adulterated and contaminated seeds being sold indiscriminately throughout the State.

Be it Further Resolved, That we urge the passage of this bill and instruct our secretary to notify the members of the legislature of this action by sending each a copy of these resolutions.

We, the members of the Wisconsin Agricultural Experiment Association, now in annual convention assembled, fully realizing the great benefits brought to the State in past years by the work of the College of Agriculture and further appreciating the value of a widespread dissemination of agricultural work throughout our State do hereby,

Resolve, That the members of this Association are in hearty accord with the plans of the College of Agriculture for a further extension of agricultural work as represented in bill No. 54, S., and that through our officers and membership we labor strenuously for the enactment of this law.

Be it Resolved, That the secretary of this Association shall send a copy of these resolutions to each member of the legislature and state officers, and use all just measures in the interest of said bill.

HORACE P. HOWELL,
H. A. MAIN,
Committee on Resolutions.

TREASURER'S REPORT.

Jos. N. Bohl, treasurer of the Association, made the following report, which was duly accepted.

Report as rendered by treasurer, February 12, 1909.

Receipts.

Feb. 7	From clerk as membership fees	$323 00
Mar. 2	H. W. Meekin as balance in treasury	102 97
Mar. 27	Clerk for stamps received as fees and left in general office	14 50
Mar. 31	Clerk as membership fees	14 00
May 29	Clerk as membership fees	47 00
Sept. 10	Members as fees	2 50
Jan. 11	Clerk for stamps received as fees and left in general office	20 00
	Total receipts	$523 97

Disbursements.

Feb. 7	To W. Rodell Ward, premiums	$4 00
Feb. 7	J. W. Briggs, premiums	1 00
Feb. 7	Harvey Longley, premiums	4 00
Feb. 7	W. L. Illian, premiums	1 50
Feb. 7	F. P. Grebe, premiums	19 00
Feb. 7	P. A. Paulson, premiums	1 00
Feb. 7	H. W. Meekin, premiums	8 50
Feb. 7	Levi Palmer, premiums	50
Feb. 7	R. N. West, premiums	40 00
Feb. 7	John Puls, premiums	1 00
Feb. 7	Prentice Warmington, premiums	3 00
Feb. 7	Jos. N. Bohl, premiums	9 00
Feb. 7	Eugene Hetts, premiums	6 00
Feb. 7	O. R. Frauenheim, premiums	7 00
Feb. 7	G. Q. Emery, premiums	3 00
Feb. 7	Clyde Akins, premiums	13 00
Feb. 7	W. A. Toole, premiums	4 00
Feb. 7	Earl Usher. premiums	8 00
Feb. 7	A. C. Ochsner, premiums	3 50
Feb. 7	C. H. Howitt, premiums	41 00
Feb. 7	M. O. Myrick, premiums	3 00
Feb. 7	H. E. Krueger, premiums	46 50
Feb. 7	H. F. Kramer, premiums	4 00
Feb. 7	Andrew Finsnes, premiums	4 00
Feb. 7	G. R. Blodgett, premiums	2 00
Feb. 7	Donald Bryson, premiums	3 00
Feb. 7	E. L. Dreger, premiums	2 00
Feb. 7	W. L. Schulte, premiums	1 00
Feb. 7	L. C. Spaulding, premiums	5 00
Feb. 7	J. P. Bonzelet, premiums	6 00
Feb. 8	Horace Whittaker, services during meeting	6 50
Feb. 8	A. C. Ochsner, premium for 1907	50
Feb. 8	Harry Garside, premiums	3 00
Feb. 18	H. W. Meekin, expenses attending annual meeting	8 36
Feb. 25	A. J. Philips, expenses attending annual meeting	2 00
Mar. 27	Idalyn Bibbs, clerical and office expenses	30 00
Mar. 27	Idalyn Bibbs, stamps received as fees	14 50
Apr. 27	Idalyn Bibbs, general office expenses	25 00
June 20	Idalyn Bibbs, general office expenses	25 00
June 30	Idalyn Bibbs, general office expenses	25 00
Aug. 8	Idalyn Bibbs, general office expenses and clerical services	30 00
Aug. 18	M. C. Lilley & Co., State Fair badges	15 00
Sept. 29	Geo. C. Carpenter & Co, 2 flags	12 00
Oct. 8	Idalyn Bibbs, general office expenses	30 00
Nov. 27	Idalyn Bibbs, general office expenses	20 00
Jan. 11	Idalyn Bibbs for stamps received as fees	20 50
	Total disbursements	$521 36

Receipts	$523 97
Disbursements	521 36
Balance	$2 61

Respectfully submitted,

JOS. N. BOHL,

Treasurer.

SECRETARY'S REPORT OF STATE APPROPRIATION.

R. A. Moore, Secretary of the Association, made the following financial report, which was duly adopted:

Receipts.

Money in the state treasury, February 5, 1908, date of making last report	$804 22
State appropriation for 1908	2000 00
Total	$2804 22

Disbursements.

1908.		
Feb. 8.	Prof. P. G. Holden, services attending annual meeting	$25 00
Feb. 8.	Parsons Prtg. Co., index cards, note books, receipt books, etc	10 65
Feb. 8.	Democrat Prtg. Co., 2,000 programs, 14 pp	23 00
Feb. 17.	H. W. Meekin, 10 bu. No. 8 corn for experimental purposes	17 50
Feb. 24.	H. A. Main, expenses attending annual meeting	5 72
Feb. 25.	L. L. Olds, Clinton, Wis., expenses and judging grain exhibit at annual meeting	9 75
Feb. 25.	Miss Bibbs, clerical services	15 00
Mar. 19.	R. A. Moore, expenses	5 51
Mar. 25.	E. C. Nielson, prints of display, etc	6 40
Mar. 27.	R. A. Moore, expenses incurred in attendance at meeting of National Corn Assn	18 10
Mar. 27.	Miss Bibbs, clerical services	15 00
Apr. 10.	J. P. Bonzelet, 11 bu Wis. No. 4 oats	8 25
Apr. 16.	E. W. Keyes, 5,000 1 ¢ stamps, 7,000 2 ¢ stamps, 1,000 post cards	200 00
Apr. 23.	E. W. Keyes, 1,000 post cards	10 00
Apr. 23.	Miss Bibbs, clerical services	15 00
Apr. 27.	Louis H. Fischer, 18 bu. Oderbrucker barley	27 00
May 8.	R. A. Moore, traveling expenses	10 66
May 25.	Miss Bibbs, clerical services	15 00
May 27.	Democrat Prtg. Co., 5,000 letterheads	12 50
June 22.	Miss Bibbs, clerical services	15 00
June 25.	E. W. Keyes, 900 10 ¢ stamps	90 00
July 15.	International Harvester Co., 16 ft. binder	90 00
July 21.	Miss Bibbs, clerical services	15 00
Aug. 11.	R. A. Moore, traveling expenses, inspection of crops	23 49
Aug. 11.	E. W. Keyes, 1,500 8 ¢ and 1,500 1 ¢ stamps	135 00
Aug. 22.	Menges Pharmacies, films	3 60
Aug. 22.	Miss Bibbs, clerical services	15 00
Aug. 31.	R. A. Moore, trav. expenses, inspection of crops	27 89
Sept. 16.	Miss Bibbs, clerical services	15 00
Sept. 18.	A. L. Stone, expenses incurred at State Fair	30 07
Sept. 18.	J. N. Bohl, " " " " "	12 91
Sept. 18.	L. R. Zerbel, " " " " "	23 14
Sept. 18.	H. E. Krueger " " " " "	23 06
Sept. 21.	Henry Michels, " " " " "	12 66
Oct. 23.	Miss Bibbs, clerical services	15 00
Oct. 23.	Fred P. Grebe, expenses incurred at State Fair	14 35
Oct. 28.	H. W. Meekin, 2¼ bu. alfalfa seed Wis. grown	22 75
Nov. 23.	E. W. Keyes, 1,500 1 ¢ stamps	15 00
Nov. 24.	Parsons Prtg. Co., 2,000 No. 9 envelopes	3 20

Nov. 24.	Democrat Prtg. Co., 5,000 No. 10 envelopes	15 00
Nov. 27.	Miss Bibbs, clerical services	15 00
Nov. 30.	Wis. Exp. Station, 100 bu. 60 Day oats.....$50 300 " Oderbrucker barley....$210 200 " Wis. No. 7. Corn.....$300	560 00
Nov. 30.	R. A. Moore, traveling expenses, lecture tour	9 41
Dec. 1.	Miss Fehlandt, mimeograph work	11 60
Dec. 15.	Miss Bibbs, clerical services	15 00
1909.		
Jan. 11.	Democrat Prtg. Co., 300 tags, 5,000 envelopes, 5,000 seed grower's list, 5,000 No. 10 envelopes, 2,000 receipt books	100 25
Jan. 12.	Miss Fehlandt, 22 hrs. clerical services	3 30
Jad. 21.	C. H. Howitt, 12 bu. Golden Glow Corn	27 00
Jan. 21.	H. P. West, 1632 lbs. Golden Glow corn	46 63
Jan. 21.	Miss Bibbs, clerical services	15 00
Jan. 21.	R. A. Gillette, 40 bu. field beans at $2.50	100 00
Jan. 23.	E. W. Keyes, 5,000 1 ¢ stamps	50 00
Jan. 29.	Milwaukee Bag Co., seed bags	59 98
Jan. 29.	E. C. Nielson, prints, negatives, etc	7 70
Feb. 8.	Parsons Prtg. Co., cards, guides, folders, case	4 35
Feb. 8.	Jonas Bros., ribbon for premium awards	5 44
Feb. 8.	Waukesha Canning Co., 6 bu. seed peas	18 00
	Total	$2,115 82
1909.		
Feb. 10.	Total receipts in State Treasury	$2,804 22
Feb. 10.	Total disbursements from State Treasury	$2,115 82
	Balance in State Treasury	$688 40

We, the undersigned committee, appointed to examine the treasurer's and secretary's reports on receipts and disbursements of funds for the past year, beg leave to report that we found them correct.

Signed: R. J. SCHAEFER,
HENRY MICHELS,
H. N. LONGLEY.

Eighth Annual Meeting, Feb. 11-12, 1909.

DISPLAY OF GRAINS AND FORAGE PLANTS FOR 1909.

Perhaps one of the most attractive features of the last annual meeting of the Experiment Association was the display of grains and forage plants. Approximately to the value of six hundred dollars in cash and special prizes had been set aside for premiums to be paid for the best exhibits of pure-bred seed grains. The quality of the grain displayed was of a high standard and the interest taken in the exhibit was such that the Association deems it advisable to continue this line of effort on a

much larger scale. Cash and special prizes to the approximate value of eight hundred dollars will be given to the growers of best seeds at the next annual meeting. A list of special prize offerings will be sent to members of the Association later in the year.

All members of the Association should exhibit seed grains at the State Fair in Milwaukee and the International Corn Show at Omaha, as well as the Experiment Association Contest. We desire to let farmers and seedsmen far and near know what we are able to produce.

We feel that much can be done in the way of encouraging the dissemination of good seeds free from obnoxious weeds that have been grown in our own state.

As soon as the Experiment Association demonstrates to the seedsmen and farmers of Wisconsin that good seed can be grown within our borders which is acclimated to our home conditions, it will not be necessary for them to place their orders with growers from other states. The seedsmen of our state and of adjoining states will be only too pleased to assist in the dissemination of home grown seeds if they can be shown that the quality is equally as good or better than they can get elsewhere. Realizing the great improvement that can be made in the growing of farm crops we trust that every member of the Association will do all in his power to assist in every possible manner in the production of choice grains and forage plants for our next display.

PARTIES AWARDED CASH PREMIUMS AT THE WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION MEETING, FEBRUARY 11-12, 1909.

Class 1a—Best ½ peck Swedish Select Oats (Wis. No. 4).

First premium		—E. T. Briggs, Fond du Lac	$4 00
Second	"	—Anton Bohl, Beaver Dam	3 00
Third	"	—C. H. Howitt, Randolph	2 00
Fourth	"	—H. W. Meekin, Fond du Lac	1 00
Fifth	"	—H. E. Krueger, Beaver Dam	50

Class 1b—Best ½ peck any other variety.

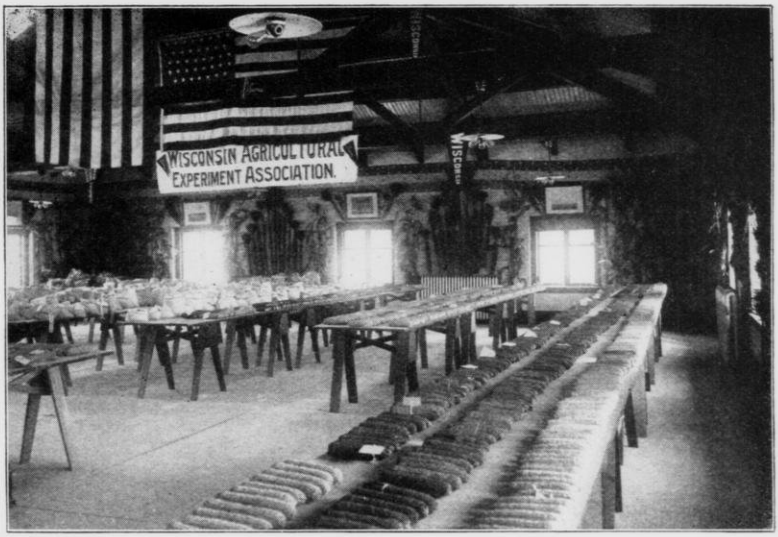
First premium		—H. E. Krueger, Beaver Dam	$4 00
Second	"	—Anton Bohl, Beaver Dam	3 00
Third	"	—C. H. Howitt, Randolph	2 00
Fourth	"	—F. P. Grebe, Fox Lake	1 00
Fifth	"	—J. F. Ford, Mazomanie	50

Class 2a—Best ½ bundle Swedish Select Oats.

First premium		—C. H. Howitt, Randolph	$4 00
Second	"	—Anton Bohl, Beaver Dam	3 00
Third	"	—H. E. Krueger, Beaver Dam	2 00
Fourth	"	—F. P. Grebe, Fox Lake	1 00
Fifth	"	—Jos. N. Bohl, Beaver Dam	50

Class 2b—Best bundle any variety Oats.

First premium		—Jos. N. Bohl, Beaver Dam	$4 00
Second	"	—C. H. Howitt, Randolph	3 00
Third	"	—Anton Bohl, Beaver Dam	2 00
Fourth	"	—C. H. Howitt, Randolph	1 00
Fifth	"	—F. P. Grebe, Fox Lake	50



Competitive Display of Grains and Forage Plants made by The Wisconsin Experiment Association at its Annual Meeting, February 11-12, 1909.

Class 3a—Best ½ peck Manshury Barley.

First premium		—H. E. Krueger, Beaver Dam	$4 00
Second	"	—Anton Bohl, Beaver Dam	3 00
Third	"	—H. P. West, Ripon	2 00
Fourth	"	—A. C. Ochsner, Plain	1 00
Fifth	"	—Evan B. Lloyd, Cambria	50

Class 3b—Best ½ peck Oderbrucker Barley.

First premium		—H. E. Krueger, Beaver Dam	$4 00
Second	"	—Henry Michels, Malone	3 00
Third	"	—F. P. Grebe, Fox Lake	2 00
Fourth	"	—John Puls, Hartford	1 00
Fifth	"	—A. C. Ellickson, Arlington	50

Class 3c—Best ½ peck any variety of Barley.

First premium		—Anton Bohl, Beaver Dam	$4 00
Second	"	—C. H. Howitt, Randolph	3 00
Third	"	—H. E. Krueger, Beaver Dam	2 00
Fourth	"	—H. P. West, Ripon	1 00
Fifth	"	—Alvin Voigt, Oconomowoc	50

Class 4a—Best bundle Manshury Barley.

First premium		—J. P. Bonzelet, Eden	$4 00
Second	"	—H. E. Krueger, Beaver Dam	3 00
Third	"	—C. H. Howitt, Randolph	2 00
Fourth	"	—Anton Bohl, Beaver Dam	1 00
Fifth	"	—Jos. N. Bohl, Beaver Dam	50

Class 4b—Best bundle Oderbrucker Barley.

First premium		—C. H. Howitt, Randolph	$4 00
Second	"	—A. C. Ellickson, Arlington	3 00
Third	"	—Anton Bohl, Beaver Dam	2 00
Fourth	"	—E. P. Grebe, Fox Lake	1 00
Fifth	"	—J. P. Bonzelet, Eden	50

Class 4c—Best bundle any other variety of Barley.

First premium		—F. P. Grebe, Fox Lake	$4 00
Second	"	—C. H. Howitt, Randolph	3 00
Third	"	—Anton Bohl, Beaver Dam	2 00
Fourth	"	—Jos. N. Bohl, Beaver Dam	1 00
Fifth	"	—H. E. Krueger, Beaver Dam	50

Class 5a—Best ten ears Clark's Yellow Dent (Wis. No. 1) Corn.

First premium		—C. H. Howitt, Randolph	$4 00
Second	"	—Anton Bohl, Beaver Dam	3 00
Third	"	—James Barston, Randolph	2 00

Class 5b—Best ten ears Silver King (Wis. No. 7) Corn.

First premium		—F. P. Grebe, Fox Lake	$4 00
Second	"	—H. N. Longley, Dousman	3 00
Third	"	—Jos. N. Bohl, Beaver Dam	2 00
Fourth	"	—Anton Bohl, Beaver Dam	1 00
Fifth	"	—F. B. Joos, Fountain City	50

Class 5c—Best ten ears Wisconsin No. 8 Corn.

First premium		—C. H. Howitt, Randolph	$4 00
Second	"	—H. W. Meekin, Fond du Lac	3 00
Third	"	—F. P. Grebe, Fox Lake	2 00
Fourth	"	—Hilbert Sorenson, Marinette	1 00
Fifth	"	—Anton Bohl, Beaver Dam	50

Class 5d—Best ten ears Golden Glow (Wisconsin No. 12) Corn.

First premium		—F. P. Grebe, Fox Lake	$4 00
Second	"	—C. H. Howitt, Randolph	3 00
Third	"	—Anton Bohl, Beaver Dam	2 00
Fourth	"	—Oscar Klumb, Rockfield	1 00
Fifth	"	—A. C. Ochsner, Plain	50

Class 5e—Best ten ears North Star Yellow Dent (Wisconsin No. 11).

First premium		—Anton Bohl, Beaver Dam	$4 00
Second	"	—W. A. Toole, Baraboo	3 00
Third	"	—C. H. Howitt, Randolph	2 00

Class 5f—Best ten ears Yellow Flint Corn.

First premium		—C. H. Howitt, Randolph	$4 00
Second	"	—Clyde Akins, Warren, Ill.	3 00
Third	"	—A. L. Greengo, Menomonee Falls	2 00
Fourth	"	—Earl Usher, South Wayne	1 00
Fifth	"	—Anton Bohl, Beaver Dam	50

Class 5g—Best ten ears White Flint Corn.
First premium—Clyde Akins, Warren, Ill..... $4 00
Second " —Earl Usher, South Wayne..... 3 00
Third " —Anton Bohl, Beaver Dam..... 2 00
Fourth " —H. E. Krueger, Beaver Dam..... 1 00

Class 5h—Best ten ears, any other variety of Corn.
First premium—J. Brueckner, Ft. Atkinson..... $4 00
Second " —Clyde Akins, Warren, Ill..... 3 00
Third " —E. L. Dreger, Madison..... 2 00
Fourth " —Anton Bohl, Beaver Dam..... 1 00
Fifth " —F. P. Grebe, Fox Lake..... 50

Class 5i—Best single ear of Corn, any variety.
First premium—F. B. Joos, Fountain City..... $1 00
Second " —H. E. Krueger, Beaver Dam..... 3 00
Third " —Anton Bohl, Beaver Dam..... 2 00
Fourth " —W. A. Toole, Baraboo..... 1 00
Fifth " —Clyde Akins, Warren, Ill..... 50

Class 5½a—Best fifty ears of Silver King (Wisconsin No. 7) Corn.
First premium—Anton Bohl, Beaver Dam..... $10 00
Second " —F. P. Grebe, Fox Lake..... 6 00
Third " —W. E. Colloday, Stoughton..... 3 00
Fourth " —Thos. Royston, Mazomanie..... 2 00
Fifth " —Clyde Akins, Warren, Ill..... 1 00

Class 5½b—Best fifty ears of Wisconsin Standard Yellow Dent Corn.
First premium—C. H. Howitt, Randolph..... $10 00
Second " —W. A. Toole, Baraboo..... 6 00
Third " —O. R. Frauenheim, Random Lake..... 3 00
Fourth " —Anton Bohl, Beaver Dam..... 2 00
Fifth " —Hilbert Sorenson, Marinette..... 1 00

Class 6a—Best ⅛ peck of Medium Red Clover Seed.
First premium—C. H. Howitt, Randolph..... $4 00
Second " —H. N. Longley, Dousman..... 3 00
Third " —Clyde Akins, Warren, Ill..... 2 00
Fourth " —Geo. Joyce, Waterloo..... 1 00
Fifth " —Wm. Leonard, Ft. Atkinson..... 50

Class 6b—Best ⅛ peck Mammoth Clover Seed.
First premium—O. R. Frauenheim, Random Lake..... 4 00
Second " —H. E. Krueger, Beaver Dam..... 3 00
Third " —Adolph Klann, Hayton..... 2 00
Fourth " —H. N. Longley, Dousman..... 1 00

Class 6c—Best ⅛ peck of Alsike Clover Seed.
First premium—S. F. Herdrich, Adell..... $4 00
Second " —James Barston, Randolph..... 3 00
Third " —Anton Bohl, Beaver Dam..... 2 00
Fourth " —H. E. Krueger, Beaver Dam..... 1 00

Class 7a—Best ⅛ peck Black Soy Beans.
First premium—F. P. Grebe, Fox Lake..... $3 00
Second " —Anton Bohl, Beaver Dam..... 2 00
Third " —H. E. Krueger, Beaver Dam..... 1 00
Fourth " —C. H. Howitt, Randolph..... 50

Class 7b—Best ⅛ peck Green Soy Beans.
First premium—F. G. Swoboda, Dousman..... $3 00
Second " —W. L. Illian, Adell..... 2 00
Third " —Earl Usher, South Wayne..... 1 00
Fourth " —Clyde Akins, Warren, Ill..... 50

Class 7c—Best ⅛ peck Yellow Soy Beans.
First premium—Anton Bohl, Beaver Dam..... $3 00
Second " —H. E. Krueger, Beaver Dam..... 2 00
Third " —C. H. Howitt, Randolph..... 1 00
Fourth " —Chas. Kuehn, Brandon..... 50

Class 7d—Best ⅛ peck Brown Soy Beans.
First premium—F. P. Grebe, Fox Lake..... $3 00
Second " —Anton Bohl, Beaver Dam..... 2 00
Third " —H. W. Meekin, Fond du Lac..... 1 00
Fourth " —H. E. Krueger, Beaver Dam..... 50

Class 8a—Best bundle of Soy Beans.
First premium—Anton Bohl, Beaver Dam..... $3 00
Second " —H. E. Krueger, Beaver Dam..... 2 00
Third " —Jos. N. Bohl, Beaver Dam..... 1 00
Fourth " —C. H. Howitt, Randolph..... 50

Class 9a—Best ½ peck of Alfalfa Seed.
First premium—None.
Second " —H. E. Krueger, Beaver Dam..... $3 00

Class 10a—Best Alfalfa Hay.
First premium—W. L. Illian, Adell..... $4 00
Second " —Robert Lachmund, Sauk City..... 3 00
Third " —F. P. Grebe, Fox Lake..... 2 00
Fourth " —C. H. Howitt, Randolph..... 1 00
Fifth " —Anton Bohl, Beaver Dam..... 50

Class 11a—Best ½ peck Winter Rye.
First premium—Jos. N. Bohl, Beaver Dam..... $3 00
Second " —H. E. Krueger, Beaver Dam..... 2 00
Third " —Anton Bohl, Beaver Dam..... 1 00
Fourth " —A. L. Wagner, Haven..... 50

Class 11b—Best ½ peck Spring Rye.
First premium—Anton Bohl, Beaver Dam..... $3 00
Second " —C. H. Howitt, Randolph..... 2 00
Third " —Jos. N. Bohl, Beaver Dam..... 1 00
Fourth " —H. E. Krueger, Beaver Dam..... 50

Class 12a—Best ½ peck Timothy Seed.
First premium—A. C. Ochsner, Plain.....$ 3 00
Second " —H. E. Krueger, Beaver Dam..... 2 00
Third " —Anton Bohl, Beaver Dam..... 1 00
Fourth " —C. H. Howitt, Randolph..... 50

Class 13a—Best ½ peck Silver Hull Buckwheat.
First premium—R. W. Chatterton, Basco..... $3 00
Second " —C. H. Howitt, Randolph..... 2 00
Third " —H. E. Krueger, Beaver Dam..... 1 00
Fourth " —L. J. Lee, Iola..... 50

Class 13b—Best ½ peck Japanese Buckwheat.
First premium—Harry G. Moore, Mauston $3 00
Second " —Anton Bohl, Beaver Dam..... 2 00
Third " —H. E. Krueger, Beaver Dam..... 1 00

PRESENTATION OF SILVER TROPHIES.

H. E. KRUEGER, BEAVER DAM, DODGE COUNTY.

Mr. President and Members of the Wisconsin Experiment Association: The duty which has been imposed upon me for this occasion, will be best made plain by reading two letters which have been addressed to me, one from the president of the Milwaukee Chamber of Commerce, the other from the Wisconsin Brewers' Association:

MILWAUKEE, Feb. 8th, 1909.

MR. H. E. KRUEGER,
Of the Executive Committee of
The Wisconsin Experiment Association,
Beaver Dam, Wis.

Dear Sir:—In response to your suggestion, the Milwaukee Chamber of Commerce has provided five silver cups, suitably inscribed, to be known as the Milwaukee Chamber of Commerce trophies, which are offered as trophies for the best specimens of grain, raised by members of your Association, as follows:

1. For best ten ears Silver King Corn (Wisconsin No. 7), one sterling silver trophy.

2. For best sample Swedish Select Oats (Wisconsin No. 4), one sterling silver trophy.

3. For best sample spring wheat, one sterling silver trophy.

4. For best sample winter rye, one sterling silver trophy.

5. For best bundle Oderbrucker Barley, one sterling silver trophy.

The Chamber of Commerce suggests that in order to have the trophy become the permanent property of a member of your Association contesting therefor, it shall be won by such member in contests in two different years; and that any member who is successful in winning the cup in any one year shall have his name appropriately inscribed thereon, together with the date of the year of such award.

As it was through you that the Chamber of Commerce had its attention directed to this important matter, we place these trophies in your hands, with the request that you present them to the Wisconsin Experiment Association, with the assurance that they represent our great appreciation of the value of the service of your Association to the State, and of our desire to co-operate with you for the uplifting of Wisconsin grain culture.

In behalf of the Milwaukee Chamber of Commerce, I am

Yours with great respect,

E. C. WALL,
President.

MILWAUKEE, WIS., February 10th, 1909.

MR. H. E. KRUEGER,
c/o Wisconsin Agricultural Hall,
Madison, Wis.

Dear Sir:—On behalf of the Wisconsin Brewers' Association may we ask you to present to the Wisconsin Agricultural Experiment Association the silver trophy which the Association has had made to your order to be given to the member of your asssociation who raises the best sample of Barley in this State? This trophy to become the property of the member of your association who wins it three times. We are deeply interested in the barley improvement in this State. It is acknowledged at the present time to be the best in the market for malting, pearling and feeding purposes, and we are anxious that it shall ever maintain its supremacy. This trophy is offered solely for the purpose of inducing the Wisconsin barley growers to maintain the high standard of Wisconsin barley.

Yours truly,

THEO. KNAPSTEIN,
President.

L. L. CAUFY, Sec'y.

A suggestion that an effort be made to secure some special prizes from people interested in encouraging the growing of grains in Wisconsin, was made at our last annual meeting. Acting upon the suggestion, I visited Milwaukee with a modest purpose of trying to get a few small special premiums added to our list. My success, as demonstrated in the six trophies, which I now formally present to you, was beyond all expectations. These rich and permanent trophies represent much more than a desire on the part of the donors to encourage this Association in its good work. They are also a substantial recognition of the excellent work already done in improving the grade of Wisconsin grains. I know this from those who present them. They represent a cordiality and good will toward our work, that I had not before realized, and which I have no doubt, will be deeply appreciated by you, as it was by me. It illustrates that there are times when the prophet is not without honor in his own country. I hope these trophies may serve, as they are expected to do, as an encouragement to us all to pursue the work of improving the quality and yield of Wisconsin grains with renewed vigor and enthusiasm.

SPECIAL PRIZES AND TROPHIES GIVEN AT THE LAST ANNUAL SEED GRAIN CONTENT BY FRIENDS OF THE ASSOCIATION.

Through the kindness of friends of the Wisconsin Experiment Association, we were able to offer at the last annual display of grains and forage plants, the following special prizes and trophies:

A complete fanning mill with all attachments, for best peck of Medium Red Clover, valued at $45.00, given by the Johnson & Field Mfg. Co., Racine: won by C. H. Howitt, Randolph, Wis.

A New Superior Fanning Mill, for best half bushel of Swedish Select oats, valued at $45.00, given by J. L. Owens Co., Minneapolis, Minn.; won by H. P. West, Ripon, Wis.

A corn sheller, for best sample of Silver King corn, valued at $5.00; given by J. A. Wilkinson, Hiawatha, Kansas, won by F. P. Grebe, Fox Lake, Wis.

A Berkshire pig, to person taking the greatest number of cash prizes on pure bred corn, valued at $25.00, given by H. P. West, Ripon, Wis., won by Anton Bohl, Beaver Dam, Wis.

A sterling silver trophy, for best ten ears Silver King corn, valued at $40.00; given by Chamber of Commerce, Milwaukee, Wis., won by Fred P. Grebe, Fox Lake, Wis.

A sterling silver trophy, for best sample Swedish Select oats, valued at $40.00, given by Chamber of Commerce, Milwaukee, Wis., won by E. T. Briggs, Fond du Lac, Wis.

A sterling silver trophy, for best sample spring wheat, valued at $40.00, given by Chamber of Commerce, Milwaukee, Wis., won by H. P. West, Ripon, Wis.

A sterling silver trophy, for best sample of Winter rye, valued at $40.00, given by Chamber of Commerce, Milwaukee, Wis., won by Jos. N. Bohl, Beaver Dam, Wis.

A sterling silver trophy, for best bundle Oderbrucker barley, valued at $40.00, given by Chamber of Commerce, Milwaukee, Wis., won by C. H. Howitt, Randolph, Wis.

A sterling silver trophy, for best sample of Oderbrucker barley, valued at $125.00, given by Wisconsin Brewers' Association, won by H. E. Krueger, Beaver Dam, Wis.

A sterling silver trophy, for best ten ears of Golden Glow corn, valued at $60.00, given by Wisconsin Agriculturist, Racine, Wis., won by Fred P. Grebe, Fox Lake, Wis.

PREMIUM LIST, 1909.

(Awards to be made February, 1910.)

DEPARTMENT OF FARM CROPS.

Class 1. Oats.

Best ½ peck Swedish Select oats (Wis. No. 4), $4.00; 2nd, $.300; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best ½ peck any other variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 2. Oats in Sheaf.

Best bundle Swedish Select oats, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best bundle any other variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 3. Barley.

Best ½ peck Manshury barley, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best ½ peck Oderbrucker Barley, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best ½ peck any other variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 4. Barley in Sheaf.

Best bundle of Manshury barley, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best bundle of Oderbrucker Barley, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Best bundle of any other variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 5. Corn.

Best ten ears, Clark's Yellow Dent (Wisconsin No. 1), $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, Silver King, (Wisconsin No. 7), $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, (Wisconsin No. 8), $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, Golden Glow, (Wisconsin No. 12), $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, North Star Yellow Dent, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, Yellow Flint, $4.00; 2nd. $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ten ears, White Flint, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th 50 cents.
Best ten ears, any other variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best single ear of corn, any variety, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cent.

Class 5½. Special.

Best fifty ears of Silver King (Wisconsin No. 7) corn, $10.00; 2nd, $6.00; 3rd, $3.00; 4th, $2.00; 5th, $1.00.
Best fifty ears of any Wisconsin Standard Yellow Dent corn (Wisconsin No. 8, Clark's Yellow Dent, Golden Glow, North Star), $10.00; 2nd, 2nd, $6.00; 3rd, $3.00; 4th, $2.00; 5th, $1.00.

Class 6. Clover Seed.

Best ½ peck of medium red clover seed, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ½ peck of mammoth red clover seed, $4.00; 2nd, $3.00; 3nd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ½ peck of alsike clover seed, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.
Best ½ peck of white clover seed, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 censs.

Class 7. Soy Beans.

Best ½ peck (black) soy beans, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck (green) soy beans, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck (yellow) soy beans, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck (brown) soy beans, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Class 8. Soy Beans in Sheaf.

Best bundle of soy beans, $3.00; 2nd, $2,00; 3rd, $1,00; 4th, 50 cents.

Class 9. Alfalfa Seed.

Best ½ peck of alfalfa seed, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 10. Alfalfa Hay.

Best sample of alfalfa hay, $4.00; 2nd, $3.00; 3rd, $2.00; 4th, $1.00; 5th, 50 cents.

Class 11. Rye.

Best ½ peck winter rye, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck spring rye, $3.00, 2nd, $2.00, 3rd, $1.00; 4th, 50 cents.

Class 12. Timothy Seed.

Best ½ peck timothy seed, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Class 13. Buckwheat.

Best ½ peck Silver Hull buckwheat, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck Japanese Buckwheat, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Class 14. Wheat.

Best ½ peck winter wheat, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best ½ peck spring wheat, $3.00; 2nd, $2.00; 3rd, 1.00; 4th, 50 cents.

Class 15. Wheat in Sheaf.

Best bundle winter wheat, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.
Best bundle spring wheat, $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Class 16. Navy Beans.

Best sample of Navy Beans; $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Class 17. Navy Beans.

Best three single stalks with pods attached; $3.00; 2nd, $2.00; 3rd, $1.00; 4th, 50 cents.

Competitive Exhibits of the County Orders of the Wisconsin Experiment Association.

Greatest and Best Display of Threshed Grains.

1st, $10.00; 2nd, $5.00; 3rd, $3.00; 4th, $2.00.

Greatest and Best Display of Sheaf Grains.

1st, $10.00; 2nd, $5.00; 3rd, $3.00; 4th, $2.00.

RULES AND REGULATIONS UNDER WHICH PREMIUMS ARE GIVEN.

1. The exhibitor must be a member of the Wisconsin Experiment Association.
2. Grain or forage plants must have been grown the season previous to exhibition by the exhibitor.
3. No fees will be charged for exhibiting in any classes.
4. The samples of grain and forage plants exhibited are to be retained as the property of the Wisconsin Experiment Association and will be sold at auction to the highest bidder after the awards are made.
5. Exhibits are to be brought in by members of the Association. If sent by express or freight all carrying charges should be prepaid.

HOMESTEAD FARM.

W. G. Jamison & Sons, Owners, Appleton, Outagamie County.

Place of Meeting of the Fox River Valley Guernsey Breeders' Association, June 30, 1909.

This beautiful farm consists of one hundred and twenty acres of high grade soil and is operated by W. G. Jamison and his two sons, both of whom have taken the Short Course in Agriculture. The father and sons are members and ardent workers in the Experiment Association, and take an active part in its meetings.

Pure bred seed grains, Guernsey cattle and Shropshire sheep are specialties upon the farm.

The Wisconsin No. 8 and Golden Glow corn receive marked attention. Oderbrucker barley is the leader of the small cereals.

The farm is located near Greenville in Outagamie county and has upon it a beautiful grove in which the meeting of the Guernsey Breeders was held.

6. Varieties of grain or forage plants not specifically named in the list can compete as "any other variety" in which case these different varieties compete against each other and not as an individual class.
7. Exhibitors cannot compete for two cash premiums on the same variety of grain or forage plant.
8. A proper entry of all grains, seeds, etc., must be made in the entry book at the Secretary's office before they are placed on exhibition tables.
9. Expert judges will be secured to place the awards.
10. Where doubt exists in regard to grains being entered according to rules and regulations the exhibitor may be required to verify by oath or affidavit to the correctness of the entries.
11. The meeting of the Association will be held at Madison in the Agronomy Building and rooms have been secured in that building for the exhibits.

ADDITIONAL RULES GOVERNING TROPHY AWARDS.

1. The Chamber of Commerce trophies must be won twice by one member before it becomes his permanent possession.
2. The Wisconsin Brewers' Association trophy must be won three times by one member before it becomes his permanent possession.
3. The Andrew Simonson trophy must be won three times by one member before it becomes his permanent possession.
4. The trophies must stay on exhibition in the Agronomy building, Madison, Wis., until they are permanently awarded. The name of each winner will be engraved on the trophy each year.

A FEW ARTICLES ON TIMELY TOPICS.

R. A. MOORE.

SELECTION OF SEEDS FOR THE SEASON'S CROP.

NO ONE THING ON THE FARM NEEDS SO CAREFUL ATTENTION.

From actual experience farmers have found that to make progress in breeding animals only the best foundation stock should be used. Farmers no longer look for progress in their herds by using scrub sires. The question of farm seeds for the season's crop is of equal importance when we consider that the field crops of Wisconsin are valued at one hundred million dollars annually.

This valuation can be increased one-fourth by careful selection of seeds all other things equal. During the winter months before the rush of spring work, the farmer should clean and grade his seed grain, test all seeds as to their viability and vitality. Where clover or alfalfa seed is to be purchased, it is well to send early to some of the leading seed firms for samples and test before placing the order. Many times the success or failure of clover and alfalfa fields are determined by the vitality of the seed. Alfalfa and clover seed are injured by being stored in deep bins after hulling where the temperature is raised through the natural curing process to such a degree that the vitality becomes impaired. Such seed is put upon the market and unless detected by the test, reaches the farmer and is the means of crop failure. Good alfalfa and clover seed should test 90% or above; no seed except some of the variety of grasses should be sown that does not test at least 80%. Where the viability of seed is low we can rest assured that practically all the seeds are deficient in energy even though a portion germinates.

There is no seed of which a farmer should be more careful than his seed corn as there is usually a wider variation in quality and vitality in seed corn than in any other seed. No farmer can afford to take the risk of planting "any kind" of seed corn for his season's crop.

The time to select seed corn should begin at the ripening season of the crop and then a few diligent hours' work may be the means of doubling the yield of corn the following year.

The writer is firmly convinced that all seed corn for Wisconsin should be fire-dried in order to lock all the energy and vitality of the corn in the kernel until time of planting. Where the desire is to cure merely four or five bushels a place can be arranged in one of the living rooms or the attic. Where large quantities are to be fire dried, a little building with shielded stove in center conveniently arranged with corn racks is preferable. Many members of the Experiment Association of the state are now making a specialty of growing and curing seed corn in co-operation with the Experiment Station and great advancement has been made in quality of seed and yield per acre.

One safe rule a farmer should follow when purchasing seed corn is to insist that it shall be sent him in the ear. Our best seedmen and corn breeders handle seed corn in the ear and it is the only safe way to secure it.

We trust the time is at hand when the scoop shovel method of handling seed corn, which has wrought such widespread

damage in our state, will be relegated to the past. Although the farmer will have to pay a higher price for his seed corn in the ear, yet he is certain to get good seed which determines the success of the season's corn crop.

By the passage of Bill 167, A., the seed control work of the State is placed in the Department of Agronomy and complete tests of seed which include purity, germination and vitality tests will be made for seedsmen, seed growers, and farmers at a cost of twenty-five cents per sample. A. L. Stone, Madison Wisconsin, will have immediate charge of the seed control work and samples can be sent direct to him or to the Department of Agronomy, and will receive prompt attention. All farm seeds must be tested and properly labeled previous to being placed upon the market.

GROWING PEAS FOR SEED AND GRAIN.

Wisconsin ranks well as a pea growing state as far as quality is concerned she takes the lead. This is especially true of the peas grown in the lake shore counties, as the climate is there perfect for the full development of the vines and pods. Northern and eastern Wisconsin contains the pea growing cen ters of the state and there grow them abundantly for seed and feeding peas. Peas can be grown in southern Wisconsin but the conditions are not ideal, the climate is too dry and warm. The peas are apt to be troubled with weevil and occasionally over one-half of the entire crop will be affected.

In the lake shore counties and northern Wisconsin, farmers regard the pea crop of the utmost importance and it there forms one of the principal crops.

Farmers making a business of growing peas for seed or the general market usually plow the land in the fall so as to have it ready for the early spring.

Rotation. In rotation the pea crop is grown on clover sod or follows corn which the previous year was on sod land. Peas belong to the legume family and hence have the power through minute organisms that inhabit nodules, that grow upon its roots, to gather nitrogen from the air to build plant tissue and store a supply in the ground for the further use by plants. On account of the pea crop being a soil renovator, usually barley, oats or wheat follow that crop to good advantage.

Preparation of the seed bed. Like many other crops, peas respond readily where given the proper attention, consequently

it is well to thoroughly prepare the land by double disking and free use of roller and fine tooth harrow.

Sowing the seed. From two to three bushels of seed are used per acre, depending upon the size of the peas sown, the smaller the peas the less seed is necessary. Some of the large varieties require as high as three and one-half bushels of seed per acre in order to get the best returns.

The ground should be prepared as soon in the spring as machinery will work well on the land, and the peas sown with drill or seeder. The drill seems preferable as the seed can be put in at a greater and more uniform depth, which is very essential. When sown with drill peas should be put in at a depth of from three to four inches.

After the peas are sown use a roller or planker so as to get a nice even seed bed for running harvesting machinery later. Use fine tooth harrow after roller or planker so as to create a mulch and prevent too rapid evaporation of moisture.

Harvesting. The peas should be cut when the larger portion of the vines and pods have turned yellow. The most common practice of harvesting is with mower and bunching attachment. A pea harvester is now on the market which is said to do exceptionally good work.

After the peas are cut they are left to cure and dry on the field for a few days, and then drawn to the barns on ordinary hay racks and stored. When peas are stacked before threshing it is well to cover the stack with marsh hay or canvass as rain penetrates the stacks quite readily.

Threshing. Peas are threshed with the ordinary grain thresher but usually blank concaves are used or at least one blank and the other with only a few teeth left therein.

Peas thresh quite as readily as the small cereals and often a day's run exceeds one thousand bushels.

Storing. Peas are stored in granaries or are drawn direct to market where ready sale at good prices usually awaits the farmer. The straw, if peas are not too ripe when cut, makes a fine feed for sheep. Other farm animals also relish good pea straw.

The Canadian field pea of which there are some two hundred varieties, are grown generally in Michigan, Wisconsin and Minnesota.

The Scotch Green pea seems to be one of the leaders in the lake shore counties of Wisconsin and is there grown for seed and dry market peas.

GROWING CLOVER FOR SEED.

The high prices paid for clover seed during the past few years has caused many farmers of Wisconsin to consider the advisability of turning their attention to this line of effort. It seems quite conclusive from the success experienced by those who have pursued the raising of clover seed, giving the subject the thought and care due to so important a crop, that Wisconsin farmers can raise clover seed in conjunction with a hay crop at a good profit.

Some localities of the state are more especially adapted to raising clover than others, and in these favored districts the clover does not only grow better but the heads seem to fill out with seed better. This fact has led many farmers who live in what is known as the clover belt to raise clover for seed extensively and attract buyers of clover seed to that section of the state. These farmers realizing the money that can be made by growing this important legume for seed purposes have given the plant special care and attention, in other words, have made a study of growing clover. It seems quite conclusive that this clover belt proper could be made much wider and longer, as a matter of fact, could be made to extend all over the state if farmers made a study of the proper conditions under which clover is raised for seed. It also seems quite conclusive, that it would be an important crop for the general farmer to turn his attention to, as Wisconsin seems naturally adapted for raising most legumes, and especially clover.

The Medium red, or common red clover is the clover most commonly grown by farmers of this state. The Mammoth, Alsike and white clovers are also grown but not so extensively as the medium red, consequently we will consider the common clover specifically and the other varieties generally.

The medium red clover is a biennial plant, the seed being sown one season and the harvest proper to take place the following year. If sown without a nurse crop often a cutting of hay may be produced the first season. The usual practice followed by most farmers is to sow in the spring with barley, oats or some cereal as a nurse crop, and depend on the crop for hay the year following. Whichever practice in sowing is followed to get the best seed crop it seems advisable to retain the second cutting of medium red and the first cutting of other varieties named the year following seeding. Where the first cutting of clover is retained for seed it should be pastured or clipped back by running mower over the field about June 1st. The reason for reserving

the second cutting of medium red clover for seed is from the fact that it ripens quite unevenly at first and few bees and other insects are present to aid in fertilizing the many tiny florets of the numerous blossoms, which is not the case later in the season when the white and alsike clovers are out of bloom and bees are forced to work upon the red clover. This is very essential as unless pollenation is quite complete it does not pay to harvest the crop.

Where the second crop is to be retained for seed it is quite essential that the first crop be cut somewhat earlier than if the desire was not to save the second cutting for seed. When the clover is nearly in full bloom, before any of the blossoms turn brown, is about the proper time to cut to insure the best chances for a good seed crop later. After the first cutting has been removed for hay, the clover plants come on quite evenly and reach the blossoming period approximately at the same time.

When the clover heads begin to turn brown an examination of the crop should be made to determine if it will pay to retain the crop for seed. Fifty or one hundred heads should be selected from different parts of the field and each head examined and the seed taken out.

From estimates that have been carefully made by clover growers it has been found that if from the number of heads examined the number of seeds found only averaged twenty per head and the clover considered a fair stand, the yield would be about two bushels per acre; if thirty seeds to the head, three bushels per acre, etc.

Unless approximately one and one-half or two bushels could be secured per acre, it would not be advisable to wait and cut the clover for seed. It could be cut for hay or turned under as a fertilizer.

If from the test it should be found that a yield of two bushels per acre or over could be secured it is then well to wait until the heads are brown and the leaves turning dark, then cut with self-rake reaper adjusted so that sufficient clover will accumulate on the table before being raked off to make the gathering of the clover most convenient. A mower can be used to advantage with buncher attachment. The clover should remain in piles until thoroughly dry when it can be hauled directly to the machine and hulled. In parts of the state where only a limited number of farmers raise clover for seed it will be hard to get a clover huller to thresh from the field in which case it will be necessary to stack or place on the barn floor or some other convenient place where the seed can be saved to the best advantage. Clover should be hauled in a rack with a tight bottom so as to

save the seed which shells. Under no circumstances should damp clover be stored away in barns, stacks or hulled direct from the field. After threshing if a large quantity of seed is on hand place in shallow bins and shovel over from time to time. In no case leave the newly threshed clover in sacks or deep bins as there is danger of heating, thereby reducing the viability and vitality of the seed.

CURING AND STORING SEED CORN.

ONLY CORN OF HIGH VITALITY SHOULD BE USED FOR THE SEASON'S CROP.

Too much cannot be said on the importance of good seed corn. With everything else equal in connection with growing corn it is safe to say that seed of high energy and vitality means double the crop in comparison with seed of low or medium vitality.

Farmers who have investigated this matter fully realize the wide variation in yields brought about by seed that has been saved under various conditions. It is safe to say that the yield of Wisconsin corn the present year has a variation in yield of from five to one hundred bushels of shelled corn per acre. Why this great variation? It is true that the variation in soil, latitude and cultivation plays an important part in the yield, yet the greater portion of the variation has been caused by the difference in the energy and vitality of the seed. Any farmer worthy of the name, on good corn ground can by using judgment in selecting and curing and testing of his seed corn double the average state yield annually. One of the chief reasons for small yields of corn is improper stand of corn of low energy.

The remedy for this evil lies in the selection and curing of the seed so as to lock the energy within each kernel and keep it there until planting time. It will then stand adverse conditions.

For small seed plots and breeding plots we study the character of the stalk and ear development, upon the stalk before selection and only select seed corn of the highest perfection yet where the desire is to save a portion of the entire corn crop for seed which we desire to sell to individual farmers or seeds-

men we cannot use the same careful judgment we use when we merely select a small amount for special purposes.

The seedgrower selects from his general crop produced from well bred seed and the quality of the seed will largely depend upon the care given the corn after harvest. For Wisconsin and states having like conditions, kiln-dried corn is the only safe sure corn to use for the season's crop. At the time of harvest, although the corn may seem very hard and ripe, yet it will be found to contain from twenty to thirty per cent of water. Our season is too short to drive off this excessive moisture before the damp cold weather is upon us.

One of the best methods we have so far found for the saving of large quantities of seed corn for experimental purposes is about as follows:

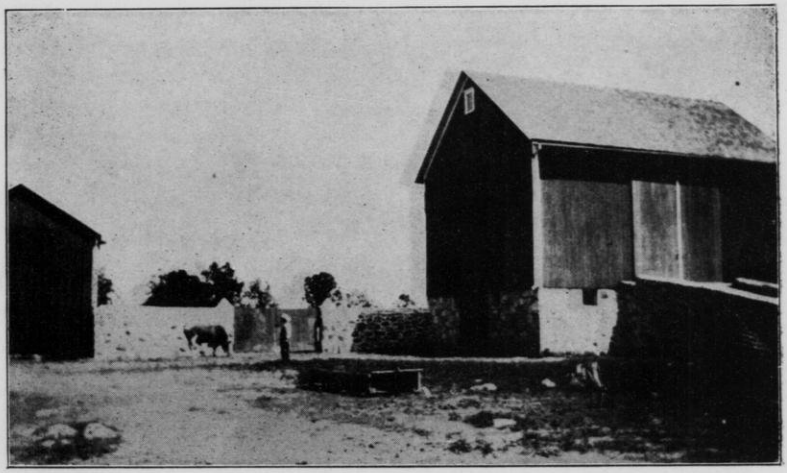
After the corn is well hardened harvest with binder and immediately shock. After the shocks have dried out well hand husk making three divisions of the corn, viz., seed corn, marketable feeding corn and nubbins. The marketable feeding corn and nubbins should be cribbed separately, the soft corn is put in the crib with the nubbins.

The seed corn demands our best attention and should be stored in our corn curing room within a few hours after husking. Lack of attention on the part of the corn grower at this time means about ruin to the subsequent corn crops produced from his seed. Corn should not lie on the cold, damp ground for any great length of time after husking, but be gathered daily.

BREEDING AND DISSEMINATION OF WISCONSIN GRAINS AND FORAGE PLANTS.

For many years Wisconsin farmers have paid considerable attention to the breeding of special strains of dairy cattle; also our State became noted for her fine herds of sheep, hogs and fat stock, but nowhere within our borders could we find pure bred races of corn, oats, barley, clover, etc. The grains and forage plant that are the very foundation of good live stock production had been neglected.

The grain breeding work in Wisconsin was started in 1898 and up to that time comparatively little work in America had been done in the way of breeding pure bred varieties of grains in any great quantities. Professor Hays of Minnesota, Dr. Hopkins of



OAK LAWN FARM.

Operated by H. N. Longley, Dousman, Waukesha County.

The Oak Lawn farm consists of one hundred and fifty acres of fine farming land and has been the home of the Longley family for many years. H. N. Longley completed the Short Course in 1906 and joined the Experiment Association as soon as he was eligible. He is the present treasurer of the Association and has been very active in the Association work since he became a member. Mr. Longley feels that scrub grains and scrub stock are a detriment to our farmers, therefore has put forth his best efforts to banish them from his county and the State. Select Oderbrucker seed barley, Silver King corn, Guernsey cattle and Chester White swine are his specialties. His seed grains have always ranked as first class.

Illinois, Professor Holden of Iowa, were our leading pioneer grain breeders and it was largely from these men that Wisconsin caught her inspiration.

In 1898 Wisconsin had ceased to be a wheat growing state and the disastrous effects of growing that single grain crop were then practically obliterated and we had no desire to revive it, consequently we turned our attention largely to barley, oats and corn.

Our farmers were entirely dependent upon our seedsmen for seed grains and grasses and these gentlemen furnished the best seeds possible which at the best were scrub varieties. Corn was sold in accordance with the scoop shovel method which did not admit of careful inspection and testing of the seed before planting. It was to better these conditions and place the farmer and seedsmen of the state in a position to secure pure bred grains instead of mixed varieties that the work was inaugurated. The work as planned involved the following:—Breeding, Testing, Dissemination.

The breeding work has been carried on by selection and cross fertilization. Two methods of breeding were employed, the first by selecting one hundred of the best heads from 100 of the best plants, while the second methods, established two years later, started individual plants from single select seeds, and by a process of elimination secured the progeny of one plant of many hundred for further trial.

The breeding of pedigreed plants is a slow and tedious process but is exceedingly interesting. To illustrate we will mention the possibility with the barley crop the work of which is now well under way. The first four years of the work a person is dealing with a few kernels of grain, not more than enough to sow the area of a few square feet. The fifth year we have but sufficient to sow one square rod, the seventh, ten square rods, and the eighth, one acre. From this point forward the increase is surprising, it swoops down upon you like an avalanche. From the acre plot we jump to twenty-five acres and from twenty-five in a single year to 1250, the next year we can sow 31,000 acres, and the following 775,000, which will give a yield sufficient to sow twenty million acres and produce a crop of one billion bushels, or enough to seed the entire barley acreage of the world.

In Wisconsin, this year, no less than fifteen million bushels of one breed of barley has been grown. You will find nearly whole townships growing this one distinct breed in preference to all others. This select barley has given a yield of from three to ten bushels per acre above that of its closest competitor, as reported by several hundred members of the Wisconsin Experi-

ment Association. The Oderbrucker barley is a stiff strawed, heavy bearded, six rowed barley that is high in protein, hence making it an exceptional good feeding barley. On account of its uniformity in size and constituent of kernel it is also an exceptionally good malting and pearling barley.

METHOD OF DISSEMINATION.

Through the cooperation of the Wisconsin Experiment Association barley centers were at first established in approximately all the barley growing districts of the state. The members of the association at first grew one acre each from seed furnished by the Station and the following year sowed all seed raised and then sold the crop for seed as far as possible to neighbors. This work has been pushed to that extent that there are now approximately sixteen hundred barley centers established and the Select Oderbrucker barley is grown everywhere throughout our state.

CORN BREEDING.

Our corn breeding work was begun in 1900 and our first attempt was to secure select breeds of corn from our sister state, Illinois, thinking we could by a process of acclimatization reap the benefits of the work already put upon the corn. We found that we could not succeed with southern bred corn and would be obliged to work out the problem with corn bred in Wisconsin. We scoured the state and secured corn in various places that had been grown through a long series of years. We tested many varieties and cast out many, only retaining a few for final tests.

Our corn breeding work is carried on largely by the ear-to-the-row method. Ears are selected and tested that are uniform in characer and show equal viability. Butts and tips are rejected and the remainder of the ear planted in a single row. Each ear is thus planted until fifty or one hundred are used. The hills are an equal distance apart and the same number of kernels are planted to the hill.

The outcome is very astonishing, some of the ears of corn planted have the energy, vitality, and projected efficiency to produce as much as ten times the amount of select seed corn that other sister ears are able to produce.

There are factors that make up an ear of corn that are not visible to the naked eye, and the only way we have of testing its general worth is by putting it to the growing test.

In this way we have bred corn for six successive years, until the variation, which at first was wide is now narrowed so that seldom there is a variation of more than from three to one of select corn.

The breeding and dissemination of select corn coupled with the information of growing and curing corn properly, has played an important part in raising the yield throughout the entire state.

PEAS IN THE LAKE SUPERIOR CLAY BELT.

E. J. DELWICHE, ASHLAND, ASHLAND CO.

It may be news to many readers of this article that there exists in northern Wisconsin a belt of land which, although well adapted to growing peas, is still practically untouched. This region, which is destined to become a famous pea raising section, lies on the south shore of Lake Superior, extending from Minnesota to Michigan, and is from 12 to 20 miles in width. This section has unexcelled shipping and market facilities. Several trunk lines of railroad run through this section, or have their terminals at the lake ports. The cities of Duluth and Superior, the Iron Range towns, the copper country, offer excellent markets for the product.

The climate and soil conditions in this locality are almost ideal for raising peas. These are similar in many respects to those that are obtained in the famous Green Bay and Lake Michigan region. The soil is red clay for the most part, clay loam in some places. Where well drained as is feasible in most cases, it grows very fine peas, both for canning and for seed or soup purposes. Although the pea industry here is practically undeveloped, enough has been done to demonstrate that this section is pre-eminently adapted to pea raising. Peas are raised very successfully in every garden and have been grown under field condition by a number of farmers throughout the region. But owing to a lack of understanding of up to date methods of harvesting and threshing, no great advance has been made.

During the last season the Experiment Station has had several varieties of peas on trial on the experimental farms near Superior and Ashland and yields considerably above the average were obtained. In 1908 nine varieties tested at Ashland yielded at the average rate of 22 bushels per acre. One variety gave a

yield of 38 bushels per acre. The famous Scotch variety which sold for over $2.40 per bushel during the past season yielded 22 bushels per acre. Reports of yields of over 40 bushels of dry peas per acre have been known to the writer. When it is remembered that the average yield for the state is something like 17 or 18 bushels per acre, it can readily be seen that the future of the pea industry in this section is bright and promises good returns. Extensive tests were made at Ashland during the past season.

There exists several hundred thousand acres of "cut over" land in the region mentioned, which are especially well adapted to peas when cleared and properly fitted for the crop. This can still be bought at comparatively low prices, $10.00 to $15.00 per acre. Already a large northeastern Wisconsin pea canning firm has purchased several thousand acres of land a few miles south of Ashland to be used for raising peas for canning purposes.

There is no question but what some day this region will rival the noted eastern Wisconsin pea section. What is needed, is farmers who have some capital at their disposal to be used in clearing the land and who understand the requirements of pea raising. To such, the Lake Superior clay belt evidently offers exceptionally good opportunities.

FIELD BEANS AS A WISCONSIN FARM CROP.

R. A. GILLETTE, VERONA, DANE CO.

Fellow Members: I have been raising white beans for several years, starting in with a few bushels and raising more or less every year, depending on conditions of my other farm crops, using them as a catch crop if any other crop failed. Later, I began to see the possibilities of the crop in other ways. Following the system in use in most bean growing districts, the crop with its cultivation rids the land of many foul weeds.

As a cash crop in comparison with corn and wheat:

Using 40 bushels as an average crop of corn at 50 cents a bushel $20.00
15 bushels of wheat 90 cents a bushel 13.50
16 bushels of beans $2.25 a bushel 36.00

Using the same authority for the cost of raising these crops, corn costs $7.00, wheat $6,20 and beans $8.00.

Also the bean straw and cull beans form quite an item in figuring up the profits.

The October Crop Reporter gives Wisconsin credit for raising 29% of all the beans produced in the United States, while New York raises 28%, Michigan 36% and California 10% out of 100; so there is plenty of room at the top.

We import about 3,000,000 bushels a year mostly from Bulgaria, and pay a duty of 45 cents per bushel. The price varies from $1.65 to $2.40 a bushel.

Soil and cultivation: Lime stone soils, or sandy clay loam are best, but they do well on any soil that will produce good corn or oats, that is if it is in a good state of cultivation. Beans should not be planted on very rich ground. Plow the same as for corn and any time you can spend disking or dragging will help to kill the weeds before planting. Plant anytime from June 10th to July 1st, depending upon variation and condition of soil. Most growers use a grain drill planting in rows 30 inches apart between rows and about 3 inches apart in the row. Beans should be about 2 inches deep. A light harrowing two days after planting will kill some weeds and break the crust. I have used a weeder to advantage going crossways when the plants were about two or three inches above ground. I use my beet cultivator with narrow teeth, and don't go too deep when roots begin to run, hilling a little. Also avoid cultivating in damp weather, or when the vines are damp, as dirt sprinkled on the foliage when damp causes them to rust. Another thing, plan your cultivations so you won't have to cultivate when blossoms are setting, as you will knock off the blossoms and decrease the yield.

Use a bean puller, pulling two rows at a time, bunching with forks in small bunches, and as soon as dry haul direct to stacks or mow; if in stacks, cover them with corn stover. They do not heat easily in the stack, but should be left three or four weeks, to sweat before threshing. They require special machinery for threshing and cleaning, and this has kept many from raising them. Now it is possible to get a small thresher that will do from fifty to one hundred bushels per day for $60.00, while a machine for commercial work will cost the same as a common thresher.

I might add here that those of you who try them in a small way this year, should not attempt threshing them with a common thresher, as it will split a good many. A flail or good barley fork will do if you have but forty or fifty bushels.

Few diseases or insects bother beans so far as I know.

The variety that Prof. Moore is distributing this year, are some I have been raising for several years and have found favor with many in this locality on account of their good yielding qualities. This variety originally came from New York state, where they were grown quite extensively; originating from a single bean sent out by the U. S. department of agriculture to a man by the name of Hill.

As to yield, I have not made it a practice to thresh so I could estimate the yield closely; but have had small patches that went 40 bushels per acre. This year the yield was poor, owing to extreme dry weather coming on just as the pods were setting; that and the heat caused many pods to fall off and what was left to only partly fill. The yield this year will be about 14 bushels per acre of marketable beans.

Thus far, I have planted my beans 18 inches apart, planting four rows with a five foot drill and cultivating with a two row beet cultivator, pulling with a one row puller of my own make, but consider that distance too close; the air does not get enough chance.

A little work in selection might be carried on individually by thinning the beans out to say eight inches apart, leaving the strongest plants, and in pulling keep each promising plant separate by putting it in a paper bag, and bringing a few to the meeting next year. I think a prize for the best individual plant would give us a start on some good individual plants.

SORGHUM FOR FORAGE.

A. L. STONE.

One of the valuable forage crops introduced into the United States and extensively grown in the southern and western portions of the country, is sorghum. This plant is not grown as extensively in the northern states as its good qualities would indicate that it should be. The reason why it is not is due to a lack of knowledge of its good qualities and place in the rotation.

The native home of the sorghums is probably in Africa where many varieties have been found and where it still flourishes in great abundance. It has been grown in Asia for many years also and while it is essentially a tropical or semitropical plant

many varieties have been developed which mature a fine grade of seed in the countries farther north. In fact sorghum is now grown successfully in all of the states unless it may be some of the most northern of the eastern states and in the western mountainous states.

The sorghums were introduced into the United States in 1855, the seed coming from China. Two years later sixteen varieties which had been brought from Africa were grown here and since that time many other varieties have been introduced and the spread has been rapid. For the first few years after the introduction attention centered wholly upon the sugar and syrup producing qualities of the plant and although it was noted that the stalks, leaves and seeds and even the crushed cane were palatable to live stock, no attention was paid to it as a forage plant. Of late years however its qualities as a forage plant for all classes of live stock have become known and it is being rapidly incorporated into the agriculture of every live stock state in the Union.

There are two distinct groups of sorghums, the saccharine or sugar sorghums and the non-saccharine sorghums. The saccharine sorghums are valuable for both sugar, seed and forage, the non-saccharine sorghums for seed and forage only. There is one variety of the latter called the broom corn which some writers put in a group by itself. It has a very bushy head of light colored flower stems from which broom corn for the manufacture of brooms is obtained.

The saccharine group includes many distinct varieties but the most prominent are the Amber, the Orange, the Sumac, Folger's Early and Gooseneck. These different varieties are characterized by differences in appearance of head and color of seeds. The head is compact and club-shaped in the Sumac, open in Orange and Gooseneck, and spreading in the Amber canes. The seeds are red in the Sumac and reddish yellow in Orange and Amber cane.

The non-saccharine sorghums are also divided into many varieties and here we find listed the Kaffir corn, and Dhoura both of which include many distinct forms. Under Kaffir corn we find White Khaffir, Black Khaffir, Red Khaffir and Milo Maize. The Dhoura includes Jerusalem corn, Brown and Yellow Dhoura, and several other similar names derived from the color of the seed.

While there are many varieties of sorghum and the number is rapidly increasing as the sorghums cross readily, there are comparatively few which have become widely used either for sugar or forage. Generally speaking those varieties which are

highest in sugar content are best for forage other things considered. They should be quick maturing, hardy, stand up well and produce good crops of soft, non-acid seed.

Because of its heavy yields sorghum draws heavily on soil nourishment particularly on the potash and phosphoric acid and so is thought to be extremely hard on the soil. Sorghum is a deep feeder and draws to the surface, elements which other crops could not reach. Sorghum thrives best however on soils that are light or sandy but in a high state of fertility. It needs a deep well prepared seed bed. The land should be fall plowed and receive thorough preparation in the spring with special reference to weed eradication.

The young sorghum plants grow slowly especially in cool weather and weeds are apt to crowd them. It is a good plan to harrow the field once or twice. This can be done without special harm after the sorghum plants are once well established.

Sorghum may be used in various ways; for a soiling crop, where it is particularly valuable, for pasture, for hay, or for silage. The early varieties such as the Early Amber can be sown at intervals, beginning the first of June after the soil is thoroughly warmed and by this means green forage can be had all through the summer months when pastures are dry and some supplementary green feed is necessary to maintain the milk flow with dairy cows or the best physical conditions with any live stock. In Wisconsin Early Amber sorghum will produce two crops of forage the same year if cut the first time when just in bloom. If sown at intervals as recommended the first patch will have reached its second growth by the time the last of the first cutting is gone. By fencing these patches separately they can be pastured off with the same results. Care must be taken not to turn cattle or live stock of any kind into a sorghum pasture without first feeding some other feed to partially fill the stomach as bloating is apt to result. The sorghum is extremely palatable and there is danger of overeating and consequent derangement of the digestive system. When sorghum is to be pastured, cut for soiling or for hay it should be sown with a drill, preferably a press drill, at the rate of 1½ to 2 bushels per acre, depending upon soil conditions. When the sorghum is cut for hay it should be cut and left for four or five days exposed to the sun, being turned once in the meantime. The cane is succulent and hard to cure unless properly treated. After lying for this length of time it may be raked up and piled in big cocks. If cut just before heading it piles up nicely and sheds water almost perfectly. The writer can assert from personal experience that he neve

fed any form of hay that was eaten with so great avidity as sorghum hay cured in this manner. It was fed to dairy cows and the affect on the milk flow was distinctly noticeable.

After one crop is cut off, the ground should be stirred in some manner preferably with a disc harrow to prevent weeds from starting and to establish a soil mulch for the time being. Sorghum does not make as good a quality of silage as corn. On account of the high sugar content the silage is apt to be too highly acid but if cut when the seed is in the hard dough stage sorghum makes a good quality of silage. It has the advantage of producing two crops in a season and hence a much heavier yield, amounting to twenty tons per acre.

Sorghum is a crop that may well be incorporated into the agriculture of Wisconsin. The idea that it is poisonous has reacted against it. It is no more poisonous than corn under the same circumstances. The second crop has always been considered the most dangerous and yet the writer turned a herd of forty valuable dairy cows upon a second crop of sorghum as pasture with positively no ill effects, and a greatly augmented milk-flow. The cattle were always given a light feed of some other forage to blunt the appetite before turning on to the sorghum. If care and judgment are used there should not be any ill effects from feeding sorghum in any form.

MILLETS FOR FEED AND FORAGE.

Of the forage crops which are not well understood by farmers in general is millet. Millet has no place in a regular rotation of crops but can be used as a catch crop to supplement pasture in a dry season or in case of failure of the hay crop or injury to the corn.

The millets of which there are many varieties are important both as food for men and beasts, and their successful cultivation and use should be better understood by farmers as a rule for they can be made to do good service at a time when other crops fail.

When intended for hay it should be cut when beginning to bloom as later the stems become tough. If sown for seed it should be sown in rows about three feet apart and the plants from four to six inches apart in the row.

Of the millets proper there are three distinct groups. There is the Foxtail group which includes the Common and Hun-

garian millets. Second, the barnyard group including the varieties resembling the common barnyard grass; and third, the broom corn millets. The Foxtail millets are so called from their resemblance to and probable descent, from the common green foxtail or pigeon grass, (Chaetochloa viridis). Any farmer who hears the name of pigeon grass will at once recognize this millet, which is one of our most common forms. The varieties known as Common millet, German millet, Golden Wonder millet, Hungarian millet, Japanese millet, all belong to this group and have much the same general appearance although the varieties differ in some minor points, like drought resistance, yield, etc.

The Barnyard millet is so called from the resemblance of the heads to the common barnyard grass (Panicum crus-galli), of which it is a direct descendant.

The barnyard millets like the foxtail millets are used in some portions of the world for human food. The heads are open like oats except that the seeds are much smaller and very smooth and shining, while the seeds of the Foxtail millets are corrugated crosswise of the seed. Where used for human food the seeds are ground and used as a mush or porridge.

The Broom corn millets so called from the broom straw appearance of the flower stems probably originated in Egypt or southern Asia and have no wild counterpart in this country. While they produce heavier crops of larger seed than some of the other varieties they have never become so popular in the United States as have the foxtail millets.

The different varieties in this group are distinguished most largely by the color of the mature seed which varies from white through yellow to red. The growing plant also varies from a light green to a reddish tinge to correspond with color of seed. The larger number of varieties of this group grown in the United States are white seeded.

While the different groups and varieties differ in appearance and origin as before noted the culture necessary is practically the same for all.

The millets produce heavy crops, usually producing two or more crops under proper environment, and so make a heavy draft on both soil moisture and fertility. The soil upon which millet is sown should therefor be rich and should have an abundance of moisture. It draws its nourishment largely from the surface soil and this part of the soil should be enriched by applications of well rotted manure.

The millets are very susceptible to cold and should not be sown until all danger of frosts is over, usually about the first of

June. Sown at this time it will mature by the middle of August. The broom corn millets will mature in from seventy-five to eighty-five days and the foxtail millets in from eighty-five to one hundred and ten days. The land on which it is sown should be thoroughly tilled to kill weeds before sowing the millet, otherwise the weeds are apt to get the better of the millet.

Where grain or corn is destroyed by hail or insects the ground can be cleaned, disked, sown to millet and a crop produced to supply the lack of other forage. Millet makes a good soiling crop and by sowing at successive intervals will furnish green feed throughout the season. The seed may be sown broadcast or with a drill and should be sown at the rate of from one-half to three-quarters of a bushel of foxtail or broom corn millets, and from one-fourth to one-half a bushel of barnyard millet per acre. The richer the land the less seed will be needed as stooling will be more extensive. The seed should be put in rather shallow, not over an inch deep preferably and lightly harrowed.

All millet meant for hay should be cut at the time it begins to bloom. If left longer than this the stems become woody and fibrous and the beards develop to such a degree as to spoil the palatability of the hay. Barnyard millet is a little harder to cure than either Foxtail or Broom corn millet. A good way is to allow the hay to lie in the swath until partially cured then cock up and allow the curing to finish in the cock the same as is customary with alfalfa.

Where millet is to be cut for seed it should be allowed to ripen and may then be cut with a binder the same as the cereals. The bundles may be placed two by two in long shocks and when thoroughly dried threshed from the shock. This saves the handling in stacking wherein much seed is battered from the heads.

The millets are valuable as food for dairy cattle, young stock and sheep, especially where used as a soiling crop to supplement pasture. Care must be used however in feeding the green forage as damage may be done by over feeding. It is well where stock are turned onto millet as a pasture or where the green forage is fed, to blunt the appetite by some other feed beforehand as the extreme palatability of the green forage may easily induce to over eating.

Where the corn crop fails millet may be used as a silage crop with excellent results. It is especially valuable in this connection on account of its short maturing period whereby a crop

can be obtained for silage even after the corn is destroyed by hail or insects.

The notion that the foxtail millets prove injurious to stock is probably due to the fact that in some cases the grass was left too long before cutting and became hard and indigestible. The beards also become stiff and harsh and are exceedingly hard to digest. In conjunction with other substances they may form balls in the stomach or irritate the stomach and intestines. All this may be avoided by cutting at the proper stage and feeding judiciously.

The actual feeding value of millet is about equal to that of timothy although it is perhaps not so well relished by farm animals. It should not be fed alone, but in combination with other feeds. When green it has a tendency to act as a laxative and if fed in too large quantities or continuously may prove injurious to stock.

On the contrary over ripe millet acts as a diuretic and may also prove unhealthful, but cut at the right stage and properly cured these effects are so small as to do no harm but on the contrary may assist in keeping animals in a healthy condition.

The barnyard millets are perhaps superior to the broom corn and foxtail millets as a forage as they contains more fat and crude protein and a greater digestibility. The millets therefor can be made extremely useful by the thoughtful farmer either as catch crops or as a part of a short rotation and should be more generally adopted.

DIVISION OF FARM CROPS.

PLAN OF WORK FOR THE COMING YEAR.

R. A. MOORE.

I desire the energy of the Experiment Association concentrated on the corn and barley work again the coming season. We are now at the threshold of success and any delay on our part would mean the losing of the vantage ground already obtained. The call from all over the country for seed grains grown by our Association leads me to see that the farmers are quick to perceive the importance of growing crops from select seeds instead of continuing the mongrel bred varieties. The

favor so far obtained for select seed grains can only be continued by observing strict rules of honest practice.

If for any reason our seed crop should be damaged or contaminated with noxious weed seeds we should at once notify the Secretary and refrain from selling such seed. All seeds of questionable character should be fed on the farm or sold as feed, and not listed as seed grains.

Our work in establishing standard varieties of corn for Wisconsin should be continued and pushed with the utmost vigor. No longer should we encourage the scoop-shovel method of supplying seed corn, but insist that the only true way of furnishing seed corn is in the ear and that to be kiln-dried corn. No seedsman can advance a single argument of value for not selling seed corn in the ear. Where shelled corn is supplied the farmer for seed, the danger of mixing and getting an inferior grade of seed is too great to be safely advocated. The only true way of preparing seed corn for market is to fire dry it and then store safely in a room for shipment. All seed corn should be shipped in the ear for which the grower should receive ample returns for his extra labor. By adhering strictly to the above principle, we will be able to throw new life and vigor into the corn plant and lead the world in production per acre. Ohio was the only state in America that led Wisconsin in yield of corn per acre in 1906.

Our experiments for the coming year are outlined in our last report and members of the Association who desire carrying on these experiments can be governed by these outlines and will be furnished report blanks in due time for the purpose of reporting the experiments.

We should bear in mind that whatever experiment is undertaken the Secretary should have knowledge of the same so as to be able to compile the data for publication.

In my travels throughout the state, I frequently visit members of the Association who are growing and testing seed grains, but do not think it necessary to make a report. The value and importance of the work is lost entirely to others if we neglect so important a duty. In order to be placed on the seed grower's list one must notify the Secretary of the kind and amount of seed, the price per bushel, a quart sample of the seed, and any other data that may be well for the Secretary to know.

The grower of pure bred seed grains should be a business man in the strictest sense and should have business cards and letter heads for business correspondence. These cards and letter heads should be modest, giving the name of the farm, the owner's name, the seed grains grown, and any specialties, put in practice upon the farm.

OUTLINE OF COOPERATIVE EXPERIMENTS.

Experiment 1.

Trials with Alfalfa to Determine if It Can be Grown in Wisconsin Successfully as a Forage Plant.

No forage crop has been given more attention in the United States during the past ten years than alfalfa, and while it is yet in the experimental stage in some parts of Wisconsin, where proper precautions are taken it can be grown with a reasonable degree of success on any of our older and well cultivated farms.

Wisconsin is a great dairy State and the milk products bring to our farmers annually some fifty million dollars. A considerable portion of this money is expended for high protein feeds as oil meal, oil cake, cotton seed meal, bran, etc., with which to balance the feed ration. The cost and the time expended in carting the feeds make them expensive for the farmer and take from him a large portion of that which would otherwise be profit.

Alfalfa supplies the dairymen and stockmen with valuable forage and saves for them a large portion of the money annually expended for high protein feeds. The value of alfalfa as a feed for all farm animals including swine and poultry, is so well known that it is unnecessary to speak extensively of its merits here. No single forage plant combines the materials for a profitable ration for dairy cows, sheep, and brood sows so well as does alfalfa.

For eight years alfalfa has been grown successfully on the Station Farm near Madison, and many tests made to determine the best method of growing it under different conditions of soil and climate. When grown in comparison with red clover, timothy, and brome grass during the season of 1904, the yield per acre of hay was 5.4 tons for alfalfa, 2.5 tons for clover, 2.3 tons for timothy and 1.3 tons for brome grass. As a green forage the weight of alfalfa grown per acre was double that of clover, three times that of timothy, and five times that of brome grass. The per cent of protein found in the hay was as follows: 18.7 for alfalfa, 13.28 for clover, 4.74 for timothy, and 6.07 for brome grass. In total yield of protein per acre alfalfa produced three times that of clover, nine times that of timothy and twelve times that of brome grass.

Alfalfa or lucerne is a perennial plant and belongs to the clover family. If not killed by frost, water or some other ele-

ment, it can be cut the second year after sowing three or four times per season for hay, for several years without re-seeding.

Locating the field.—Good growths of alfalfa are often secured in favorable seasons on level land, but better results will be obtained on land that is somewhat sloping, where water will not stand during any portion of the year. On level ground during sleet storms, water is apt to collect in all the depressions, forming on freezing an ice sheet which smothers many of the alfalfa plants. "Patchy fields" are hard to renew and generally necessitate replowing and reseeding. In no case should alfalfa be sown on land that is subject to overflow or where the water level is but two or three feet below the surface.

Character of the soil.—Alfalfa will grow on a wide variation of soil ranging from a rich sandy loam to a heavy clay, but a rich clay loam over a gravelly sub-soil seems to be best. It is practically useless to try to grow alfalfa on sandy or "worn out" soils without an abundant supply of good barnyard manure. Alfalfa will not do well on new and unsubdued soil, but develops best on the well cultivated soils.

Soil inoculation.—On fields that have not before grown alfalfa usually the germ necessary for its best growth are wanting. Where such conditions obtain it is well to scatter soil, taken from an old alfalfa field or from the roadside where sweet clover grows, at the rate of one ton per acre. The ground should be scattered over the field just previous to sowing the alfalfa seed and should be immediately harrowed.

An excellent plan for supplying the soil with the proper germs is to use a mixture of one-fourth alfalfa seed and three-fourths clover seed for general seeding. The clover hay will be of a better grade where alfalfa is grown in connection therewith. The alfalfa plants that survive become bacteria producers and distributers for future crops of alfalfa.

Some seedsmen have advertised cultures of organisms for inoculating alfalfa seed previous to seeding. The data obtained from experiments indicate that much more certain results can be secured by the use of the infected soil.

Soil preparation.—Good results have been obtained on both fall and spring plowed lands, depending upon the texture of the soil and freedom from weeds. With fall plowing it is well to plow early so as to cover weeds before they produce seed. Double disc in the spring as soon as the land works well, and put in garden condition with a fine tooth harrow. The ground should be heavily spread with barnyard manure before plowing, using from ten to twenty tons per acre. If seeding is done on spring plowed land, the ground should be heavily manured dur-

ing the winter and plowed in the spring. The fine tooth harrow should be used within a few hours after the furrows are turned to prevent drying and hardening of the soil. If the soil once becomes lumpy it is hard to put in proper condition for alfalfa seeding. A planker or roller should be used immediately before and after seeding, which aids much in firming the soil to permit of rapid germination of the seed.

Nurse crop.—Where ground is exceedingly weedy, it is preferable to use a nurse crop as it assists the alfalfa to keep down the weeds until it becomes established. When alfalfa is sown with a nurse crop the seed should be put into the ground as early as it is advisable to sow oats or barley. Barley at the rate of three pecks per acre has given best results as a nurse crop, and can usually be left to ripen without apparent injury to the alfalfa. If oats are used do not exceed one bushel of seed per acre, and if the season is dry cut the oats for hay at the time of heading.

Land on which tobacco, sugar beets, or any highly cultivated crop has been grown the preceding year can be seeded to alfalfa without a nurse crop with the best chances of getting a good, thick stand. Where alfalfa is seeded without a nurse crop the ground should be cultivated with a disc and a fine tooth harrow until June 1. Weeds will then have been quite thoroughly killed and the ground will be in fine condition to sprout the alfalfa seeds in the shortest possible time. Where a nurse crop is not used, a cutting of alfalfa can usually be secured by September 1 the season of sowing. An excellent method of getting a good stand of alfalfa is to manure the ground heavily in the fall and plow. As soon in the spring as the land works well disc and drag at intervals until June 1st. The discing and dragging not only put the ground in good tilth but aid in the sprouting and killing of weeds. Sow twenty pounds of good alfalfa seed per acre and drag once after sowing with fine tooth harrow. After eight years' experience with alfalfa on the station farm and elsewhere we are firmly convinced that sowing alfalfa seed about June 1, after going through a weed killing process without a nurse crop is the best method to pursue to secure a good catch of alfalfa which will last several years.

REPORT BLANK, EXPERIMENT 1.

Best Method of Getting a Stand of Alfalfa and Testing the Relative Value of Soil Inoculation and Sowing with and without a Nurse Crop.

Name of experimenter .....
P. O. .....; County .....; State .....
1. Date of sowing oats or barley and alfalfa.....
2. What variety of alfalfa used? .....
3. Nature of soil? .....
4. How prepared? .....
5. When were the alfalfa plants first noticeable? .....
6. Was the grain crop left to ripen? .....
7. Did you secure a good thick stand of alfalfa?.....
8. At what rate did you sow the alfalfa seed per acre? .....
9. At what rate did you sow the oats or barley per acre?.. .....
10. At what time did you sow the alfalfa seed without a nurse crop? .....
11. Which seems preferable, sowing with or without a nurse crop? .....
12. Did you examine the roots of the plants on both sections of the field for bacteria-laden nodules? .....
13. Were any nodules found?.....
14. Were the nodules as plentiful on the roots of the plants growing on that portion of the field that was not inoculated as where the ground was scattered? .....
15. Could you detect any difference in the growth of the alfalfa?
16. Date of making this report? .....
17. Give in a brief way your opinion on growing alfalfa in Wisconsin, and the benefit, if any, from the inoculation of the soil.

EXPERIMENT 1. A.

Alfalfa after First Year's Seeding.

Through the encouragement of the Experiment Association many of its membership sowed in past years from one to two acres of alfalfa. The Association is desirous to learn the success of those who have sown alfalfa previous to 1908 and will send blanks and return envelope to any one who will agree to send in report.

REPORT BLANK, EXPERIMENT 1. A.

Report of Alfalfa after First Year's Seeding.

To be sent to the Secretary by October 1, 1909.

Name of experimenter .....
Post Office .....; County ..... State.....
1. Year and season alfalfa was sown.....

2. Was the alfalfa sown with or without nurse crop?.....
3. Variety of alfalfa seed used .....
4. Amount of seed per acre.....
5. Was the crop cut for hay the year of sowing?.....
6. If so, the amount obtained per acre.....
7. Nature of the soil.....
   (Clay, muck, highland, lowland, etc.)
8. Was good stand noticeable before the fall frosts?.....
9. What per cent, if any, winter killed? .....per cent.
10. How many cuttings did you get the year after seeding?.....
11. Weight of hay from all cuttings for the season—
    (actual) ....(estimated) .....
12. Did you experience any difficulty in curing the crop for hay?....
13. Did you use hay caps? .. ..
14. Did the plants develop the proper nodules on their roots?.....
    ....
15. Was the ground on which the alfalfa was sown inoculated with alfalfa or sweet clover soil?
16. Date of making this report .....

Please give in a brief way your method of growing alfalfa and your views as to its value as a forage plant for Wisconsin.

Experiment No. 2.

Wisconsin Seed Corn—Ten Ear Test.

Considerable has been done the past six years in Wisconsin in the way of breeding good seed corn and taking care of the season's crop.

We feel that by judicious selection of seed, and proper curing of the same, farmers of the state can increase the yield from ten to twenty-five bushels per acre. We know that members of the Experiment Association can do much good for the communities in which they reside by growing choice varieties of corn. Due care must be exercised in planting, cultivating the soil harvesting and curing the crop as well as rigid selection of the seed. No matter how good the seed if planted on weedy or poor worn-out soil and not properly cared for we can not expect a good crop.

We expect to see great strides made in the improvement of corn within the next few years and may not the Wisconsin Experiment Association be the factor to bring this improvement about?

Twenty-five ears of corn are given to each member who desires to assist in corn improvement, only 10 ears of which will be used in the experiment proper. The corn from each ear is to be planted in a separate row.

Use the ear with the least number of kernels first. Plant in hills three and one-half feet apart in the row and the same dis-

tance between the rows. The corn left from the different ears after planting individual rows can be mixed with the corn shelled from the remaining 15 ears and planted in close proximity.

Plant at least forty rods from any other corn, a greater distance, if convenient. Avoid having a field of corn near the west or south of the plot as the prevailing wind during the pollenizing season is from that direction and the corn is liable to cross.

REPORT BLANK No. 2.

Wisconsin Seed Corn—Ten Ear Test.

Name of experimenter .....
Post Office.....; County.....; State.....

1. Variety of corn planted .....
2. Where was seed secured? .....
3. Germinating test per cent .....
4. Date of planting .....
5. Nature of soil .....
6. Fall or spring plowed .....
7. Following what crop? .....
8. How planted? .....
9. When first noticeable above ground?.....
10. Did corn germinate evenly? .....
11. Give number of times and method of cultivation? .....
12. Did corn mature well? .....
.....
13. Total number of stalks in each row .....
14. Number of barren stalks in each row .....
15. How harvested? .....
16. Yield per acre, actual .....; estimated.....
17. Yield per acre, any other variety, actual .....
estimated .....
18. Compare yield with home variety of corn if possible.
19. The yield should be determined on the shelled corn basis, two bushels of ears being considered one bushel of shelled corn.

REPORT BLANK.—EXPERIMENT NO 2

Wisconsin No. 7 Corn.

Name of experimenter .....
Post Office.....; County.....; State.....

1. Where was seed secured? .....
2. Germinating test, per cent .....Date of planting.....
3. Nature of soil .....
4. Fall or spring plowed? .....
5. Following what crop? .....
6. How planted? .....
7. When first noticeable above ground? .....
8. Did corn germinate evenly? .....

9. Give number of times and method of cultivation.....
.....
10. Did corn mature well? .....
11. Did corn smut badly? Approximate amount of smut.....
.....
12. What per cent of barren stalks was noticeable?.....
To find per cent of barren stalks, count the whole number of barren and fruitful stalks present in a definite number of hills and divide the number representing the barren stalks by the number representing the whole number of stalks. Counts can be made in four or five places in the field and averaged.
13. How harvested? .....
14. How many acres harvested? .....
15. Yield per acre, actual .....; estimated .....
16. Yield per acre best other variety, actual .....
estimated .....
17. Compare yield with home variety of corn if possible. The yield should be determined on the shelled corn basis, two bushels of ears being considered one bushel of corn.
18. How many bushels of fire-dried corn in the ear will you have to sell for seed? .....

Give brief description of what you think of the No. 7 corn.

REPORT BLANK.—EXPERIMENT NO. 2.

Wisconsin No. 8 Corn.

Name of experimenter .....
Post Office.....; County.....; State.....
1. Where was seed secured? .....
2. Germinating test, per scent .....Date of planting.....
3. Nature of soil .....
4. Fall or spring plowed? .....
5. Following what crop? .....
6. How planted? .....
7. When first noticeable above ground? .....
8. Did corn germinate evenly? .....
9. Give number of times and method of cultivation.....
10. Did corn mature well? .....
11. Did corn smut badly? Approximate amount of smut .....
12. What per cent of barren stalks was noticeable? .....
To find per cent of barren stalks, count the whole number of barren and fruitful stalks present in a definite number of hills and divide the number representing the barren stalks by number representing the whole number of stalks. Counts can be made in four or five places in the field and averaged.
13. How harvested? .....
14. How many acres harvested? .....
15. Yield per acre, actual ....., estimated .....
16. Yield per acre best other variety, actual .....
estimated .....
17. Compare yield with home variety of corn if possible. The yield should be determined on the shelled corn basis, two bushels of ears being considered one bushel of corn.
18. How many bushels of fire-dried corn in the ear will you have to sell for seed? .....

Give brief description of what you think of the No. 8 corn.

Experiment No. 3.

Treating Seed Oats to Prevent Smut.

Smut affecting oats is prevalent in all parts of this and adjoining states.

Method of Treating Seed Oats for the Prevention of Smut.—The method that has proved to be the most effective during the past nine years, and that now generally used by the farmers of the state, is the formaldehyde method. If the desire is to treat one hundred bushels of seed oats, purchase at least four pints of formaldehyde from your druggist, and make up the solution by pouring one pint of the formaldehyde into thirty-six gallons of water. Put the solution in barrels or in a tank and submerge the sacks of seed oats in the solution at least ten minutes. Raise the sacks of oats from the solution and let them drain for a minute or two, in order to save solution, and then empty on a threshing floor, platform, or on a canvas to dry. Do not spread out immediately, but let the oats remain in a heap for two hours after treating. If the wet sacks or a canvas is spread over the pile of oats after treating it will prevent the rapid escape of the formaldehyde gas and make the treatment more effective. After the expiration of two or three hours the oats should be spread out and shoveled over at intervals, to facilitate drying.

It is the desire of the Association to know the effectiveness of this treatment by many observers, and to publish determinations in the next annual report.

Where smut has been noticeable in the oats the previous year all seed should be treated to prevent a re-occurrence.

For the following experiment it will be necessary to treat about three bushels, sufficient to sow an acre, in accordance with plan outlined in its instructions.

Experiment.—1. Take three bushels, or the usual allowance for seeding one acre, that were threshed from a field that was worse affected with smut the past season, and treat as stated in directions.

If the experimenter has no oats, he probably can obtain some from a neighbor whose grain has been afflicted with oat smut.

2. Take the same quantity from the same lot of oats and do not treat.

3. Sow both quantities on adjoining plots of one acre each. Be sure to have a distinct separation from the plot sown with the oats treated and that on which the oats are not treated.

4. After the oats are headed take an ordinary barrel hoop and make several counts on the plot where oats were treated and on the plot where oats were not treated. This can be done by placing a hoop over the oats and counting all the heads within the circle and then note the number affected with smut thus getting data to determine the percentage.

REPORT BLANK, EXPERIMENT NO. 3.

Treating Seed Oats to Prevent Smut.

Name of experimenter .....
P. O.....; County .....; State .....
1. Did you treat oats according to directions? .....
2. How much treated for the experiment? .....
Size of plot.....
3. How much was sown on experiment that was not treated?
Size of plot .....
4. Did you treat your seed that was sown for general purposes?..
.....
1. Date of sowing seed not treated .....
2. Date when smut was first noticeable .....
3. When were oats cut? .....
1. Date of sowing seed treated .....
2. Date when smut was first noticeable .....
3. When were oats cut? .....
5. Did you make several counts after the oats were headed using the hoop in the manner suggested? .....
6. What per cent of oats were affected with smut on plot where seeds were treated to prevent smut? .....
7. What per cent of oats were affected on plot where seed was not treated? .....
8. Per cent saved by treatment .....

The data obtained by counting the heads within the circle of a hoop that are affected and those not affected is a fairly accurate method of arriving at the percentage of oats affected with smut.

EXPERIMENT NO. 4.

Tests with Swedish Select Oats.

The Swedish Select oats (Wis. No. 4) through several years' tests have proven to be satisfactory on the high well drained lands and on the poorer grades of soil in Wisconsin. On rich loose prairie soils the oats are such rank growers that they often lodge. The desire is now to have them grown as extensively

as possible by members of the Association so that the variety will be in reach of all farmers.

In order to be placed on the list of seed growers it will be necessary to comply with certain conditions:

1. All seed oats must be treated for the prevention of smut previous to sowing that were at all affected the year previous.
2. Must be sown on land that is free from Canada thistles, mustard or quack grass.
3. If possible a comparison with another variety of oats should be made.
4. All oats shipped for seed purposes must be well cleaned with fanning mill or grain grader and have the following information on tag: Name of seedsman, purity of seed, foreign matter, germination of seed and obnoxious weed seeds.
5. A report must be sent to the Secretary immediately after threshing.

REPORT BLANK, EXPERIMENT NO. 4.

Swedish Select Oats.

Name of experimenter .....
P. O. .....; County .....; State .....

1. Date of sowing .....
2. Amount of seed sown .....
3. Amount of land covered (approximately) .....
4. Nature of soil? .....
5. Fall or spring plowed? .....
6. Sown with seeder or drill? .....
7. Were heads of any other grain noticeable within the plot on which the oats were sown? .....
8. Were they removed? .....
9. Did the oats stand up well? .....
10. Did you treat the seed for the prevention of smut? .....
11. Did you notice any smut? .....
12. How much? .....
13. Was the ground on which oats were sown free from Canada thistles, mustard and quack grass? .....
14. Did oats rust? .....
15. When were oats cut? .....
16. Yield per acre of Swedish Select oats .....
17. Yield per acre of any other variety of oats grown .....
18. How many of the Swedish oats on hand do you intend to sell for seed oats? .....
19. Please give a brief description of what you think of the Swedish Select oats.

Experiment No. 5.

Test with Oderbrucker Barley.

(Wis. No. 55.)

In 1898 the Wisconsin Experiment Station received from the Ontario Agricultural College five pounds of barley known as the Oderbrucker. This barley had been obtained from Germany and grown several years on the college farm at Guelph, previous to being secured by the Wisconsin Station.

For ten years this barley has been grown on experiment in comparison with fifty other varieties and improved by selection until we feel confident that it is superior to other varieties of barley. The Oderbrucker barley is a stiff-strawed, heavy yielding, six-rowed, bearded variety, and is the most satisfactory barley from all points of view grown on the Station Farm. From malting tests made by the Wahl-Henius Institute of Fermentology, Chicago, the Oderbrucker barley compares favorably with all other barleys on test for malting purposes. It is a high protein barley, containing from 12 to 14 per cent of that element which makes it a good feeding barley.

At the present time Wisconsin farmers are growing many scrub breeds and types of barley which should be discarded. The Experiment Station with the aid of our Association is desirous of getting pure bred grains of the best breeding into the hands of the general farmer at the earliest possible moment. Ten hundred bushels of this high grade barley has been given to five hundred members of the Experiment Association and acre tests will be made in every county of Wisconsin. Members carrying on the experiments are requested to report as soon as the tests are completed. Blanks for making the reports will be sent by the Secretary in due time for the report.

Report Blank, Experiment No. 5.

Oderbrucker Barley.

(Wis. No. 55.)

Name of experimenter .....
P. O. .....; County .....; State .....

1. Date of sowing .....
2. Amount of seed sown .....
3. Amount of ground covered (approximately) .....
   (As near as possible try to cover one acre with seed obtained.)

4. Nature of soil? .....
5. Fall or spring plowed? .....
6. Sown with drill or seeder? .....
7. Following what crop in rotation? .....
8. Were heads of any other grain noticeable within the plot on which barley was sown? .....
9. Were they removed? .....
10. Did the barley stand up well? .....
11. Was the ground on which the barley was sown free from Canada thistles, mustard and quack grass? .....
12. Did the barley rust? .....
13. Was any smut noticeable? .....
14. When was barley cut? .....
15. Yield per acre of Oderbrucker .....
16. Yield per acre of any other variety of barley grown .....
17. May we put you on the seed growers' list? .....
18. Please give a brief description of what you think of the Oderbrucker barley, Wisconsin No. 55.

Experiment No. 6.

Soy Beans.

The soy bean was probably introduced into the United States from Japan about fifty years ago and has been cultivated with success in the southern states. In Japan and China it is used extensively as a human food, but in this country it is grown for the seed, as a forage plant, and a soil renovator. As a forage its use as a soiling crop is becoming recognized by stockmen and dairymen, as it withstands the drought exceptionally well and will give a good cutting of green forage at the time when other feeds are shriveled and wilted. Soy beans of the late variety gave a cutting of 9.9 tons green forage per acre at the Wisconsin Experiment Farm in 1900 and yielded thirty-eight bushels of seed per acre in 1902, and forty bushels per acre in 1903. It makes an excellent hay, and at the Kansas Station a yield of about three tons of cured hay per acre was secured.

Like the clover, the soy bean is a nitrogen gatherer and enriches the soil on which it is grown. It is said to grow on soil quite low in fertility, but a mellow, fairly rich soil is preferable. It requires a well drained porous soil; in no case should the seed be sown on low ground that is saturated with water during most of the growing period or on a heavy clay soil that is inclined to bake.

When sown for hay or a soiling crop, a drill or broadcast seeder can be used to advantage. If sown for seed, use a corn

or bean planter and sow in drills about thirty inches apart and about three inches apart in the drill. When planted in drills as described, two or three pecks of seed per acre should be used.

Soy beans should not be planted while the ground is cold; immediately after corn planting is a favorable time.

Sow in accordance with suggestions above given, for growing soy beans for seed, one-tenth of an acre.

When desired for hay, soy beans should be cut when the pods are partly developed. Try a few square rods sown broadcast for a soiling crop and for hay. When grown for seed they should be harvested and threshed as our common variety of beans and put in a large open bin and shoveled over frequently to prevent heating.

If you have a silo try soy beans with corn. Plant in drills with the corn planter using one-third soy beans and two-thirds corn mixed. When planting with corn for the silo use the Medium Green variety as this variety is noted for its great leaf development. No difficulty will be experienced cutting the soy beans with the corn harvester at the time of harvesting corn. For pasture, hay or seed the Ito San variety will give excellent satisfaction and will usually ripen before the fall frosts.

Secure a sack of bacteria-laden soil from the Experiment Station and scatter on a portion of the field that you desire to plant to soy beans, and note the development of nodules. The roots of the soy bean plants growing on that part of the field add much fertility to the soil. When a few square rods of ground are inoculated and soy beans are grown thereon, henceforth ground can always be secured from this source of supply to scatter on other fields where the desire is to have the nodules develop.

REPORT BLANK, EXPERIMENT NO 6.

Soy Beans.

Name of experimenter .....
P. O. .....; County .....; State .....

1. Date of planting soy beans .....
2. Character of soil .....
3. What crop had been grown the previous year? .....
4. Was the land used, fall or spring plowed? .....
5. Give your method of planting .....
6. How long after planting were beans first noticeable? .....
   ....
7. Give your method of cultivation .....
8. Did you try a few square rods for forage? .....
9. How many pounds of green forage did you cut from a square rod?
10. How many pounds of cured hay did you get from a square rod?

11. Did the stock eat the green and cured forage readily?.....
12. What kind of stock did you feed it to? .....
13. Did the beans left for seed ripen evenly? .....
14. Date of harvesting? .....
15. Manner of harvesting? .....
16. Method of threshing .....
17. Yield per acre of marketable beans .....
18. Did you use any bacteria-laden soil for inoculation purposes?.....
19. Were nodules noticeable on the roots of the soy beans at any time during the growing period where such soil was used?
20. Were they noticeable where the soil was not used?.....
21. Date of sending report .....
22. Give in a general way your opinion of soy beans as seed and forage plant for Wisconsin.

Experiment No. 7.

Field Beans.

No one important crop receives so little attention in Wisconsin as field beans. Annually the U. S. imports over three million bushels from Bulgaria and Austria and we pay a duty of forty-five cents per bushel on the same. Why not raise the needed quantity of beans in Wisconsin? Our lighter soils are admirably adapted to bean raising, and if farmers would plant such soils to beans instead of trying to raise cereal crops, their net returns would be much greater.

Beans are a good money crop to put on the market as the price is generally above two dollars per bushel. With the up-to-date bean machinery and with the growing and planting of improved varieties there is no reason why Wisconsin should not lead all states in America in bean production.

The beans used for this season's test have been grown for several years and improved by a member of the Experiment Association. We trust they will be carefully grown, harvested and threshed and a report sent to the Secretary.

Report Blank, Experiment No. 7.

Field Beans.

Name of experimenter .....
P. O. .....; County .....; State .....
1. Date of planting beans .....
2. Nature of soil .....
3. How prepared? .....

4. How were the beans planted? .....
5. How many times were the beans cultivated? .....
6. How harvested and threshed? .....
....
7. Were they in any way injured by insect enemies or fungus diseases? ....
8. Yield in bushels, per acre .....

DIVISION OF SOILS.

PLAN OF WORK FOR THE COMING YEAR.

Experiment No. 8.

A. R. WHITSON.

It is the object of this department to solve different soil fertility problems as they occur in the various sections of the state. In order to accomplish this, the party that wishes to experiment expresses his intention to this department. We then inspect the soil conditions and drainage on this farm, and if possible select a plot typical of that section of the country. If favorable conditions are found the fertilizer is shipped. If just one fertilizer is used a plot of about an acre in area is selected and divided into two equal parts, one half being treated with fertilizer and the other half run blank. If the experimenter wishes to apply both potash and phosphorus, a plot of about two acres is selected and divided into four equal parts: the first, is blank; second, potash; third, phosphorus; and fourth, potash and phosphorus. Last season corn, oats, and barley were grown on the different plots, and the experimenters were asked to make the following report:

Name of experimenter .....
P. O. .....; County ..... State .....
Size of experimental plot .....
Kind of soil on the plot (clay loam, sand, or peat) .....
Is plot flat or rolling? .....
Drainage of plot .....
What fertilizer has been applied the last five years? .....
What crops have been harvested for the five years preceding this experiment? .....
What results were gotten from former crops? .....
Date of present seeding or planting .....
Date of application of fertilizer .....
Kind of fertilizer applied .....
Difficulties experienced in carrying out experiment .....

Did the fertilizer show any effect on the crop as to color, height and yield as compared with the blank? .....
Which fertilizers showed the best results? .....
Was this a favorable season? .....
If not, why not? .....
Yield of fertilized plot in pounds .....
Yield of blank in pounds .....
Date of making this report .....

REPORT ON WEED WORK.

A. L. STONE.

Weeds, both native and introduced, have been spreading rapidly over our state. Many of the plants we now call weeds were not so until the land came under cultivation. Many native plants of no agricultural importance were as well able to take advantage of the new conditions as the cultivated and useful crops and multiplied rapidly under the new environment. While many of these native plants have proved troublesome, using soil moisture and fertility which the grain crop needed, it still remains true that our most noxious weeds have been introduced either from some foreign country or from some other state.

Among the introduced weeds which have become troublesome in Wisconsin are the following: Canada thistle, Quack-grass, Wild Mustard, Dodder, Perennial Sow Thistle, Toadflax, or Snapdragon, Corn cockle, Night flowering catchfly, Buckhorn or English Plantain, Russian Thistle, Wild oats, Green and Yellow Foxtail and many others.

This list is a formidable one and when we consider that the larger number of these have been introduced in seeds purchased from outside the state, it seems that quick action of some sort should be taken. Only as farmers co-operate in this matter can much be done, and no farmer would hesitate to aid in the work if he realized the yearly loss caused by weeds.

In an attempt to secure information concerning the number and distribution of weeds in the state, report blanks were sent to 245 members of this Association, situated in 57 counties of the state.

The questions, with a summary of the replies received, and some comments on the same are given herewith. The results while somewhat incomplete, are still very interesting and draw

attention in a graphic way to the need of attention to the weed problem.

1. Have you weeds on your farm? Affirmative 213 and negative 23.

2. What are the most common and troublesome weeds?

The following table gives these answers in a summarized form:

Weed.	Counties.	Persons reporting.	Average area per farm.
Canada thistle	40	98	9 acres.
Quack grass	50	4[illegible]	3 acres.
Mustard	25	17	32 acres.
Dock	22	50	.....
Sow thistle	10	17	.....
Ox-eye daisy	4	4	.....

The reports show that these weeds are well distributed throughout the state. Some areas are however, infected most with a certain kind of weed. Canada thistle and quack grass, are most thickly scattered on the eastern part of the state. Mustard seems most prevalent in the southwestern part, and in the Lake Shore counties in the eastern part.

The fact that there are 98 farms with an average of nine acres each of Canada thistles, certainly indicates that the time has arrived for something to be done to prevent their spread.

When it is realized that these reports come from a comparatively small number of the total number of farms in the state and also from some of the more progressive farmers, it seems that farmers must get together and aid one another in this work.

3. What per cent of pasture is spoiled by weeds?

The maximum answer to this question was 50%, and the average 9%. The weeds in the pasture are confined to certain classes. Many of those growing in fields are killed by grazing and tramping.

4. What methods of eradication have you used?

The answers to this question were somewhat unsatisfactory. Some of the methods reported were burning, salting, digging, smothering and pulling. Out of the 245 reporting 108 reported that they were successful in killing their weeds and 59 partially, and 29 not successful.

5. What was the cost of killing the weeds?

In summarizing the answers to this question it was found that the total cost with the 245 farmers was $5,471.78, and the average $33.77.

In answer to a question regarding the amount of total taxes on the 245 farms it was found that it was $10,684.61 or $68.05 each on an average. The cost of eradicating the weeds on these farms so far as it was possible to accomplish this end was therefore over one-half the amount of taxes paid. This cost included only the work of cutting, digging, smothering, etc., and does not take into account the cultivation necessary to keep down weeds in corn, sugar beets and other cultivated crops. Had the cost of cultivation been included the tax of weed eradication would have equalled or exceeded the property tax about which farmers are wont to complain.

The next question—What do you consider land infested with Canada thistle, quack grass, sow thistle, and wild mustard worth when clean land is worth $100 per acre?

The average of the answers to this was $54.88. On an average therefore, a depreciation of nearly 50%. This illustrates the need of at once taking means to prevent the further spread of these noxious weeds. No farmer can afford to thus lose one half the money value of his farm.

The last question was—Would you be willing to help enforce a strict weed and seed law?

Out of the 245 persons reporting, 218 were willing to aid another indication that farmers are awakening to the need of fighting weeds.

At the last session of the Legislature a weed law was passed for the purpose of providing for a test of all agricultural seeds sold in the state. In accordance with this law 665 samples of seeds were last year tested by the Department of Agronomy. The law was, however, framed hastily and consequently falls short of the demands of the situation. In view of the needs of the work and the danger threatening the agricultural interests of the State from the spread of weeds, the legislature should at once provide for a more efficient law and means for carrying on that work.

FARMERS' LOSS FROM WEEDS.

Experiment No. 9.

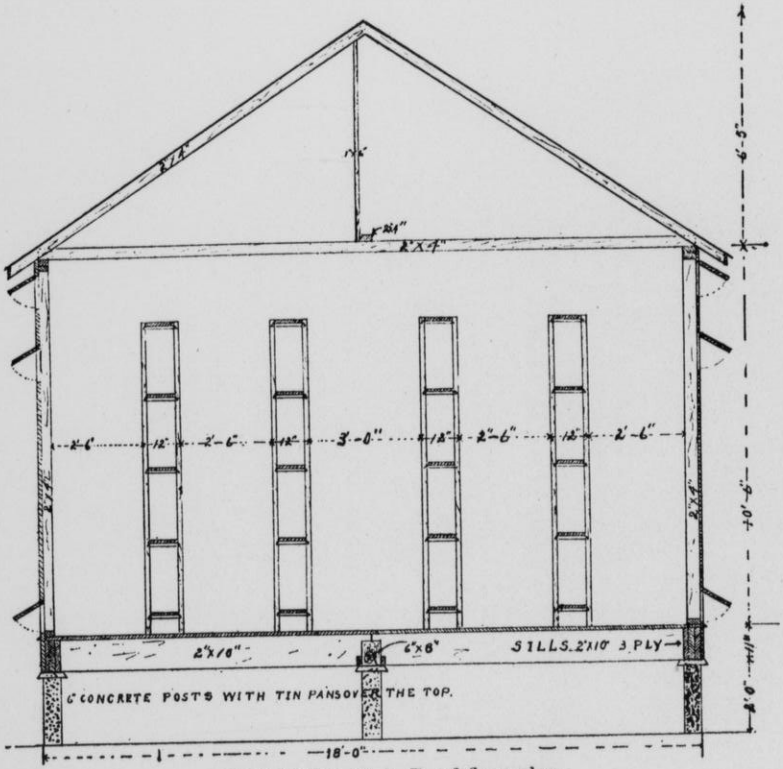
Name of experimenter .....
P. O. .....; County .....; State .....

1. Please fill in spaces below giving actual time to kill weeds either by cultivation, cutting, digging, smothering, or any other means. Reckon the labor of men and teams at the usual rate for your locality. Cultivation to include all work put on corn, potatoes, sugar beets, etc., where cultivation is for killing weeds only and not to conserve moisture.

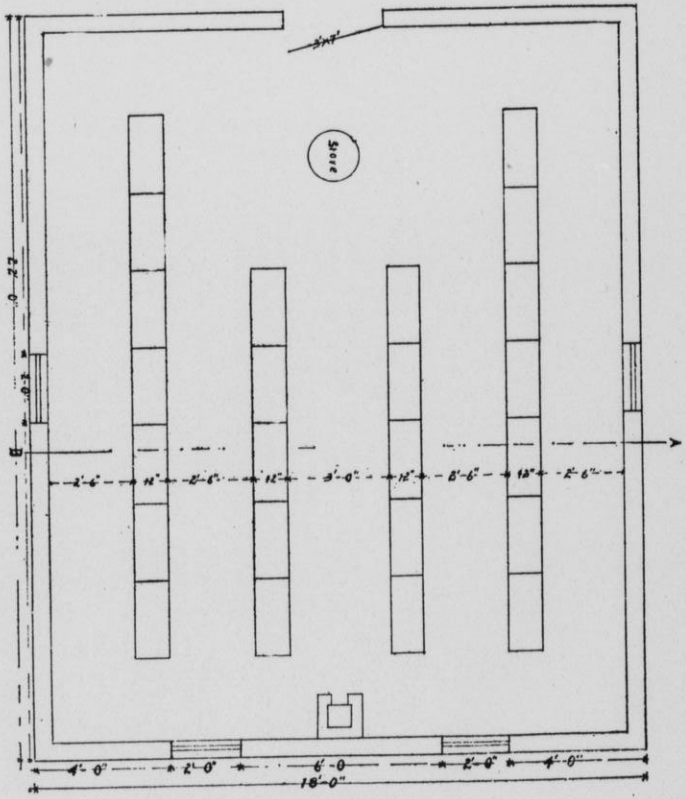
Date.	Labor.		Cost.		Work done—cultivating, cutting etc.
	Men.	Teams.	Dollars.	cents.	
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

2. What was the amount of tax paid to the town treasurer on your farm last spring? .....
3. How many acres in the farm? .....
4. Do you have noxious weeds anywhere on the farm? (See note below) ..... If so what, and how large an area?.....
.....
5. Have you ever allowed them to go to seed? .....
6. What means have you taken to get rid of them?.....
Were you successful? .....
7. What was the character of the season when you made the attempt? .....
8. If land free from weeds is worth one hundred dollars an acre, what do you consider land to be worth per acre which is infested with quack grass, Canada thistles, sow thistles, or wild mustard? .....
9. Name the most common and troublesome weeds in your locality.
.....
10. What per cent or what part of your pasture is spoiled by weeds?
.....
11. Would you be willing to assist in enforcing strict weed and seed laws? .....

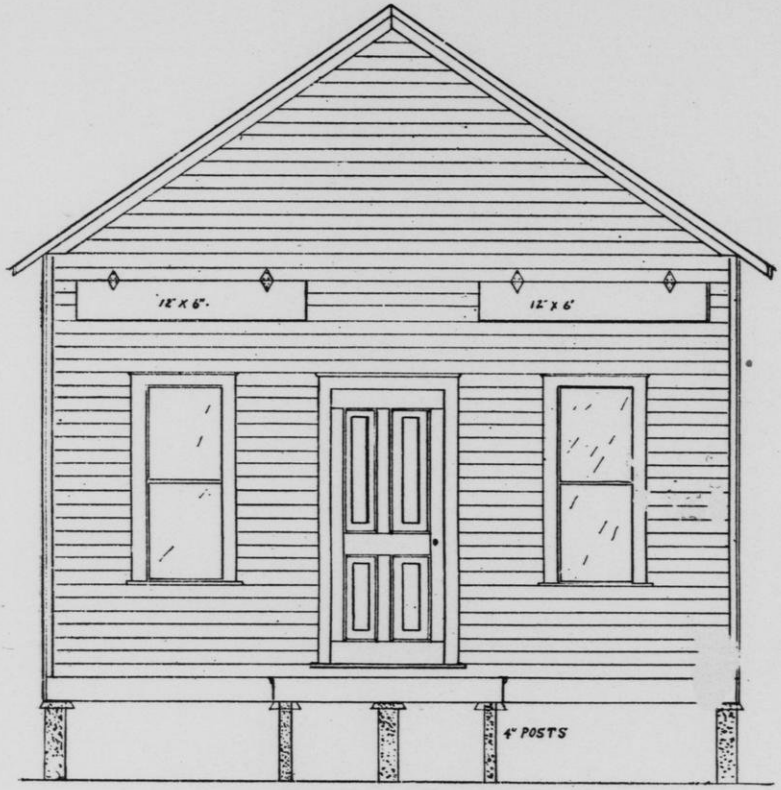
Note: The list of noxious weeds named in the Wisconsin statutes is as follows: Canada thistles, quack grass, burdock, white or ox-eye daisy, snap dragon or toad flax, cockle bur, sow thistle, sour dock and yellow dock, mustard, wild parsnip, and Russian thistle.



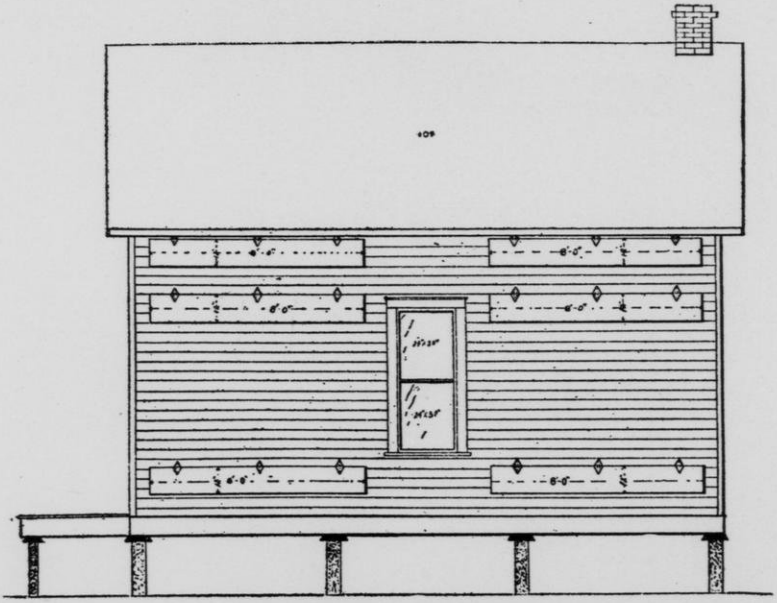
Cross section at A. B. of floor plan.



Corn-curing house—floor plan.



Corn-curing house—front elevation.



Corn-curing house—side elevation.

DIVISION OF AGRICULTURAL ENGINEERING.

C. A. OCOCK.

A BUILDING FOR CURING SEED CORN

ALL CORN DESIRED FOR SEED SHOULD BE FIRE-DRIED.

The illustrations which are here shown represent a modern corn-curing house, which is simple and economically built.

The structure rests upon twelve concrete posts six inches in diameter and two feet high. Over the top of each post is placed an inverted tin pan. This will prevent mice or rats from entering the building. The only means of their entering, with such a construction will be by being carried in with grain which is being stored. To construct the posts is an easy matter, for all that is necessary is a couple of galvanized iron forms slit up one side, but lapped over in such a manner as to prevent leaking while being filled. Two clamps should be provided and so placed as to hold the form securely while being filled with concrete. A good footing should also be provided for each post, and should be below the frost line to prevent heaving.

The sills of the building may be either solid timber or built up. The girder which carries the joist in the middle should be of good material and may be built up if the owner so desires. To aid in carrying the joist a pice of 1″x 2″ is nailed to each side of the girder. This will overcome the necessity of mortising and tennoning, and also adds strength to the girder.

The floors should be laid as soon as the joist and sills are ready. The studding should be erected after the floor has been laid, a piece of 2″x 4″ being laid upon the floor as shown in the cross section.

A good grade of drop siding is recommended for the sides and ends. The roof may be of any material desired, so long as it is water tight.

In the floor plan may be seen the arrangement of the stacks for holding the corn, while being dried, or it may be desirable also to leave the corn here for storage. The stove should be placed as shown and connected to the chimney. The chimney is built upon brackets. The brackets should be of number one material and securely fastened to the wall high enough to be out of the way of a person's head.

The ventilating doors shown in the side elevation should be built alike in both sides. Two windows and two ventilating doors should be placed in the back end, the same as shown in the front elevation. Wooden rachets may be made and hinged to the ventilating doors to hold them open to the desired width.

BARN CONSTRUCTION.

The farmers of the state being those who make provisions for the physical life by furnishing food supplies, demand accommodations for crops and stock. It is essential that good houses and barns be erected, but this does not imply that it is necessary to be extravagant. The barn problem at the present time is a perplexing one; not alone regarding cost but with reference to arrangement and method of construction.

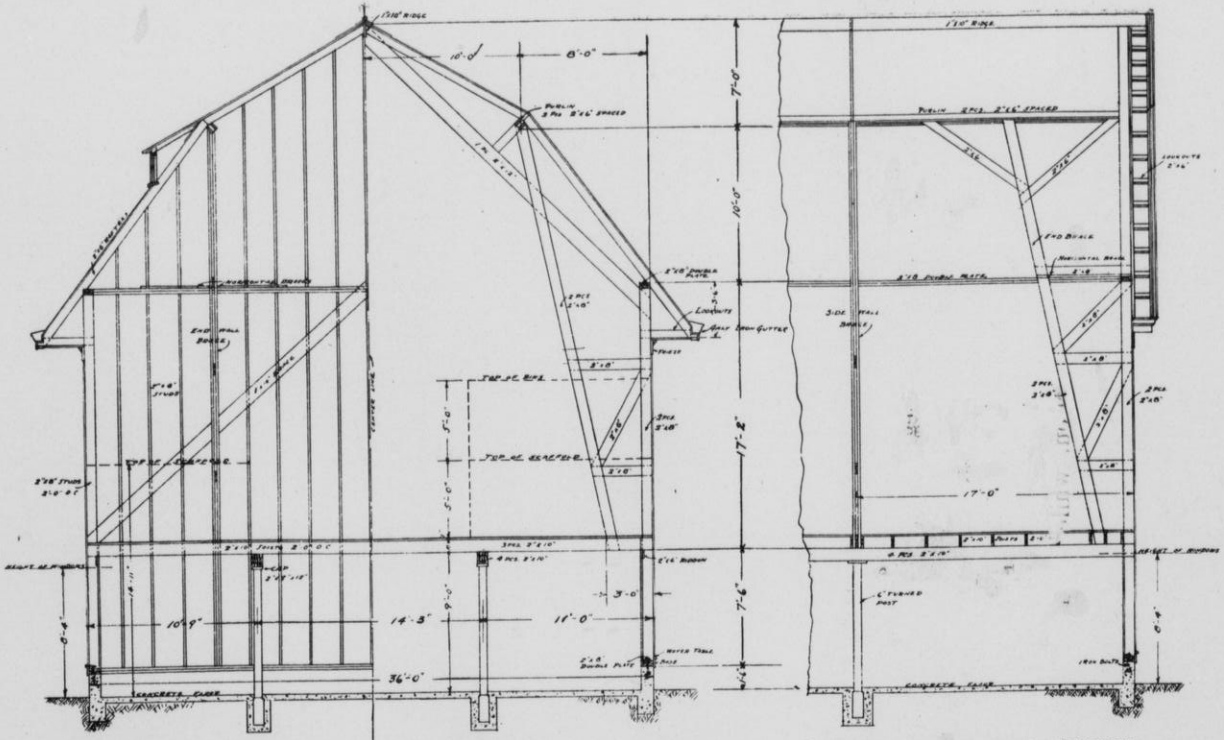
Modern barns should replace those of our ancestors when necessary. Because a barn answered the purpose of our grandfather is no reason for us to pattern after it. The times have changed with the progress of civilization and we have to build for the present and future. The past demanded moderate structures, varying in size, but in these little if any thought was given to the general utility and sanitation of the building. Dairying and stock breeding as carried on under modern conditions demands attention in both these respects. It is generally conceded that to be successful in either one of these pursuits, a barn should be so arranged that the maximum amount of work may be accomplished with the minimum amount of labor.

The arrangement of the floor plan is usually a personal matter. There are, however, the same general plans which are followed to a greater or less degree, but these do not interfere with the construction.

The construction of barns in many localities, especially where timber is scarce and with the prevailing prices of lumber, is a momentous question. The old style timber frame barn seems to be almost out of the questio[illegible] the number of plank frame barns is rapidly increasing, due to their cheaper construction.

A plank frame is constructed from lumber 2″ in thickness and varying from four to twelve inches in width depending upon the stress to be placed upon the several pieces. These pieces also vary from one to six ply for the same reason.

The accompanying illustrations show a plank frame which was used for the "Hill Farm" barn on the University Farm.



Plank Frame Barn, University Hill Farm.

The drawing at the left shows both the interior and end bents. The interior bent when completed with roof and sides forms a compound truss. It is considered to be one of the best constructions for barns at the present time. The end bent does not have the same mode of construction. It would be somewhat weaker than the interior bent were it not for trusses which extend to the purline plates. These trusses to a certain extent fill the same office as the purline posts in the interior bents. A section of an end bent with truss is shown in the drawing to the right. Constructing the end bent with these trusses is considered much better than the old method without them.

The average farmer would not care to construct a barn in the style of architecture shown here, for the cost would be somewhat higher than with simpler lines.

If it is desirable for the basement to have a wall in place of the wood, this is accomplished by constructing the bents without legs. It will, of course, be necessary to use a wall of masonry where excavations are made for barn construction.

The cost of such a barn is somewhat less than a timber frame of the same proportions, usually estimated from 15 to 20% less. These prices are sure to vary and no definite estimate can be made.

For further information, write to the Agricultural Engineering Department, University of Wisconsin in regard to barn construction.

VENTILATION OF BARNS.

REPORT BLANK—EXPERIMENT NO. 10.

Name of experimenter .....
P. O. .....; County .....; State .....

1. Are your barns ventilated? .....
2. When was system installed? .....
3. System of ventilation? .....
4. Size of portion ventilated? .....
5. No. of animals kept in ventilated part? .....
6. Kinds and No. of each? .....
7. No. of fresh air intakes? .....
8. How do these enter barn? .....
9. No. of foul air flues? .....
10. Inside dimension of fresh air intakes .....
11. Inside dimension of foul air flues? .....
12. Where are foul air flues carried out of barn? .....
13. How high are they above ridge of barn? .....
14. How high above the roof? .....
15. How high above the ground? .....
16. Are these flues fairly straight? .....
17. Materials used? .....
18. How are flues constructed? .....

19. Are ceilings and walls fairly air tight? .....
20. Is the system satisfactory? .....
21. If not, why? .....
22. Cost of system? .....
23. Have any of your neighbors a system of ventilation?.....
24. Is it satisfactory .....

SILOS.

REPORT BLANKS—EXPERIMENT 11.

Name of experimenter .....
P. O. .....; County .....; State .....

1. Have you a silo? ..... How many? .....
2. Has any of your neighbors? .....
3. Give names of neighbors .....
4. Is silo home made or manufactured? .....
5. Name of silo .....
6. By whom manufactured? .....
7. Where manufactured? .....
8. Material used? .....
9. How constructed? .....
10. When constructed? .....
11. Dimensions of silo? .....
12. Capacity of silo? .....
13. Cost of silo? .....
14. Does the silage freeze in winter? .....
15. If so, to what extent? .....
16. To what do you feed silage? .....
17. When do you feed? .....
18. Before or after milking? .....
19. Does it affect the milk? .....

BOVINE TUBERCULOSIS IN WISCONSIN.

CONRAD HOFFMAN.

IMPORTANT PART PLAYED BY THE MEMBERS OF THE WISCONSIN EXPERIMENT ASSOCIATION IN ITS ERADICATION.

The close of the tuberculin-testing season for 1907–08 marked the termination of a most active and successful three years' campaign against bovine tuberculosis in Wisconsin. The active part played by the members of the Experiment Association in this campaign during the last year is particularly noteworthy

and merits proper discussion. Before proceeding, however, with the data pertaining to the same, it apears advisable to briefly explain the policy which has made it possible for our students to become so important a factor in this campaign.

Wisconsin's policy on the whole has been a most liberal one, one of education rather than compulsion. The endeavor has always been made to educate the farmer, the man most vitally concerned, to realize the true significance of bovine tuberculosis. The test was in no way made compulsory, but remained a matter of volition on the part of the farmer. The economic aspect, the side concerned with the farmer's pocket book has been consistently emphasised throughout, the hygienic side of the problem being invariably made a secondary feature.

Probably the most important feature in crystallizing popular sentiment into a realization of the dangers connected with the presence of tuberculosis in a herd, has been the post mortem demonstration work. Beginning with demonstrations on the farms where reacting animals had been found, this phase of education has gradually been extended to the different courses in the College of Agriculture at Madison, to the State Fair, numerous county fairs, Farmers' Institute meetings and to county agricultural schools.

In this way many thousands of farmers and students have been reached, and have been most emphatically and undeniably convinced of the importance of fighting the disease of tuberculosis. They have been made acquainted with the characteristic lesions of the disease and impressed with the fact that external appearances are no criterion of the animal's condition with reference to tuberculosis. The lectures usually accompanying these demonstrations have taught the farmer how to deal with the disease, how to get rid of it, what precautionary measures to observe so as to avoid it, as well as the details regarding how to apply the test in order to detect the presence of the disease.

In pursuance of the educational side of the problem, numerous bulletins have been issued from time to time by the Experiment Station as well as under the auspices of the Farmers' Institutes. All of these deal explicitly with the practical side of the subject of bovine tuberculosis, and in all the employment of the tuberculin test has been persistently advocated. Means of protection against infection, treatment of affected herds, sources of contamination, are some of the many other problems discussed in these bulletins.

At the Agricultural College practical instruction in the manipulation of the test has been given to all students in agri-

culture These students join the Experiment Association and by reason of said instruction have been enabled, upon their return to their respective communities, to test not only their own herds but those of their neighbors as well. Thus at each point where one of these students went a small center was formed from which information regarding the tuberculin test radiated out into the surrounding territory. The data subsequently appended will show more clearly the influence thus exerted by the short course men in this particular.

The free distribution of tuberculin to all parties making proper application therefor, did much to stimulate interest and to give impetus to the extensive testing of animals for tuberculosis.

Too much credit can not be given the Live Stock Sanitary Board for its hearty cooperation in this matter, especially in the disposal of the reacting animals. Tests made by farmers or members of the Experiment Association were accepted on practically the same basis as those made by veterinarians, thus rendering it possible for the work to be carried on on an extensive scale. Reacting animals found, were disposed of in accordance with the laws of the State relative to the same. Three options were available to the farmer who found reacting animals in his herd: First, shipment to some packing center through the agency of the State and the receipt of the net proceeds in case the animal passed federal inspection. Second, acceptance of two-thirds the appraised value of the animal, maximum appraisal not to exceed $50.00. Third, the placing of valuable animals in quarantine so as to raise healthy offspring therefrom by the Bang system.

Up to the current year any person was permitted to make a test, provided the record of the same proved satisfactory to the proper authorities. To this procedure one can naturally raise the objection that persons entirely ignorant of the principles of the test could nevertheless make the same and furthermore that tests made by such parties would undoubtedly in many cases discredit the efficiency of the tuberculin test. This objection is worthy of consideration, and should lead to some modification of the existing conditions so that the test will be limited to such parties as have properly demonstrated their ability as tuberculin testers to some board of examiners. A change of this character will be most desirable, and would place an official stamp on all tests whether made by veterinarians or other parties.

While the objection above mentioned is a serious and pertinent one, it can not be denied that the policy on the whole has

proven most efficient in securing the extensive testing of animals throughout the State, as well as in eliminating and decreasing the number of tuberculous animals in the herds of the State.

The following data gives a detailed summary of the work actually accomplished during the last three years by the Experiment Station and State Veterinarian:

Year.	No. animals tested.	No. animals affected.	Per cent. affected.	No. herds tested.	No. herds affected.	Per cent affected.
1905-06.....	9,718	1726	17.7	485	257	52.8
1906-07.....	15,816	1291	8.1	868	314	36.1
1907-08.....	40,993	2334	5.6	2416	651	26.9
Total 1905-08..	65,527	5351	8.0	3750	1222	32.5

It is apparent from the above that there has been an ever increasing amount of testing performed during the last three years. In that time over 66,000 tests have been made. Perhaps the most encouraging feature and one that should not be ignored is the marked decrease in the percentage of reacting animals as well as affected herds. At the present time there are but one-half as many reacting animals as three years ago, and what is more important, just about one-half less the number of herds have reacting animals at the present time than three years previous. This means that there has not only been a decrease in the number of herds which were affected with tuberculosis, but also that the number of reacting animals in these herds has considerably decreased.

Now let us consider the role played by the members of the Experiment Association in this matter. Unfortunately data on this phase of the subject is available only for the season 1907-08, but the same will suffice for present needs.

Of the 27,000 tests received by the station 19,000 were made by members of the Experiment Association who were former students of the Agricultural College.

These tests represent the work of 195 members, largely short course men. Some of the latter tested only their own herds while others engaged in this work on a most extensive scale. Thus 27 men tested an aggregate of 13,900 head. Mr. G. E. Schwartz heads the list with 1,531 head to his credit, while Mr. Robt. Lachmund comes second with 1,440 head tested. Next in order come Melvin Thompson, LeRoy Larson, Henry Peck,

Samuel Boss and N. H. Brue, each of whom tested over 500 head last year.

On arranging the data by counties and comparing the percentage of student tests with the number of students in each respective county, we have the following instructive figures:

Thirty-four of the counties of the state had more than 100 head tested in their territory. Of these, 30 counties had 20 or more short course students.

Eleven counties had 500 or more tests and in 10 of these there were 40 or more short course students.

Of the 8 counties with 1,000 or more tests, 7 had 40 or more short course students. In these 8 counties, 78% of all the tests secured were made by short course students, as the following table reveals.

County.	Total tests.	Student tests.	Per cent of tests made by students.
1. La Crosse	4086	3803	93.0
2. Dane	3580	2470	69.0
3. Winnebago	2719	2097	77.1
4. Walworth	2351	1918	81.5
5. Barron	2100	1290	61.4
6. La Fayette	1223	1000	81.7
7. Waukesha	1044	766	73.3
8. Waupaca	1026	834	81.2
Total	18,129	14,178	78.0

It is evident from the above that in those counties in which tuberculin testing was most active three-fourths of the work was performed by former students of the agricultural college.

Furthermore, it cannot be denied that had the test been confined to the veterinary profession, consisting as it does, of a limited number of men in comparison to the number of animals tested, not near so many tests could have been made. Accordingly, by permitting properly qualified members of the Experiment Association to apply the tuberculin test, the eradication of bovine tuberculosis from Wisconsin will be greatly hurried and more quickly accomplished.

It is admitted that the past policy had faults which should be remedied, particularly in reference to who shall be permitted to apply the tuberculin test. Nevertheless the marked diminution in the number of reactors as well as of affected herds which

said policy has accomplished is sufficient argument in favor of a continuance of Wisconsin's past policy in fighting tuberculosis. A complete eradication of the disease will ultimately result if the same is promoted, and it is to be hoped that the farmers of the State will rise to the occasion and secure satisfactory legislation when this matter is taken up at the present meeting of the Assembly. With a few modifications the educational policy of the State as conducted in the past should prove the most effective way of eliminating tuberculosis from the herds of Wisconsin and place her in a unique and much to be envied position, a State without tuberculosis, where the breeders of the world would be insured of securing animals free from that dread disease.

REPORT OF THE SECRETARY OF THE FOND DU LAC COUNTY ORDER OF THE WISCONSIN EXPERIMENT ASSOCIATION.

HENRY MICHELS, MALONE, FOND DU LAC COUNTY.

On March 28, 1908, there was held in the Court House, at Fond du Lac, a meeting of the County's alumni of the Agricultural College. This assemblage was organized under the name of the Fond du Lac County Order of the Wisconsin Experiment Association. The object set forth in the constitution is to promote the agricultural interests of the county.

1st. By cooperating with the Wisconsin Experiment Association in growing and marketing seed grains.

2nd. By having association exhibits at agricultural fairs.

3rd. By holding annual meetings in order to report and discuss topics beneficial to the members of the Association.

The constitution was adopted and signed by thirty-six charter members. After the business meeting, which lasted throughout the forenoon, several prominent men of the county delivered addresses on agricultural topics which concerned the new organization.

One of the objects of the association was to unite the many different seed grain centers in the county. These centers have become so numerous throughout the state, that it is impossible for the Experiment Association to pay much direct attention to them, and their connection is only nominal.

Since the members of Fond du Lac county united they work together and are a much more effective body than heretofore. It should in time, be to the county, what the Wisconsin Experiment Association is to the state. Our County Order being smaller in membership and scope than the latter, it can give more attention to local matters, for the interests of the larger body must necessarily be more general.

During its brief career, thus far, our organization has accomplished but little. A year from now we hope to be able to tell you more.

A creditable display of grains and forage plants was made by our order at the county fair last fall. The call for contributions to this exhibit was extended to members only, and if the generous response can be construed as being a token of loyalty of the members, I feel justified in hoping for great things in the future. The object of making an exhibit was to arouse the interest of the residents of the county, whose support is essential to our prosperity. The fair officials feel kindly disposed toward our organization and granted us all concessions that were in their power. The county newspapers also rendered valuable assistance in giving publicity to our work.

After the county fair, the entire exhibit was sent to Milwaukee to be displayed in the booth of the Experiment Association at the state fair. Unfortunately it arrived there too late, and only a small part of it could be shown With this our work for the year practically ended. It had been the intention to get out a seed growers' list at the end of the season but lack of funds prevented. Next year we hope to have a much larger membership, and we will then be able to do our work in a more thorough manner.

REPORT OF THE SECRETARY OF THE MANITOWOC COUNTY ORDER.

O. R. WIEGAND, CLEVELAND, MANITOWOC COUNTY.

Mr. President and Fellow Members of the Experiment Association: On the 15th day of October, 1908, Mr. W. E. Larson, who was at the head of the schools of Manitowoc county, but now our State Rural School Inspector, called a meeting of all persons eligible to become members of the Wisconsin Agricultural Experiment Association and some of the teachers

of the county, for the purpose of organizing a County Order of the Experiment Association.

At this meeting the purpose and object of such an association was discussed in general. When sufficient interest was shown by those present, a committee was appointed whose duty it should be to draw up a constitution and further arrange for another meeting to be held in connection with the meeting of the Manitowoc County Horticultural Association. This meeting was held on the 16th day of January, 1909, when our Association was founded with a charter membership of eighteen. We will have our next meeting on the 19th and 20th days of March, when we expect to have with us Prof. R. A. Moore, and other speakers to talk along different lines of work the association contemplates to pursue.

The officers elected at the time of organization: Herman Roethel for President, J. C. Paulsen for vice-president, and O. R. Wiegand for secretary and treasurer.

The object of the Manitowoc county order of the Wisconsin Agricultural Experiment Association shall be to promote the agricultural and live stock interests of the county.

1st. By co-operating with the Wisconsin Agricultural Experiment Association in the growing and marketing of worthy varieties of farm seeds and forage plants, etc.

2nd. By having association exhibits at agricultural fairs.

3rd. By holding annual meetings in order to report on and discuss topics beneficial to its members.

4th. To promote the dairy industry of the county and the breeding of pure bred live stock.

THE WISCONSIN CORN CROP.

Breeding, Growing, Judging and Dissemination.

R. A. MOORE.

For many years Wisconsin has been handicapped in corn growing. Our southern neighbors have told us that we were out of the "Corn Belt." and unless we could come over into the corn belt, there was little use of growing anything except flint corn in Wisconsin.

A careful survey of the climate and other conditions seemed to show that Wisconsin is not out of the corn belt, but is very

much inside and underneath the belt proper. All that seems necessary is to stop purchasing air dried seed corn in accordance with the scoop-shovel method and stop trying to adapt southern grown corn for our conditions. The corn needed is Wisconsin corn belt corn, bred and acclimated especially for different localities of the state. The Wisconsin Experiment Station undertook the task of developing these varieties of corn and with the aid of the Experiment Association within seven years have established Wisconsin corn, "true Badger corn," in every county of the state.

Seven years ago Wisconsin produced 28.2 bushels of shelled corn per acre. Secretary Wilson sent forth in the U. S. crop Reporter the remarkable yield for Wisconsin of 41.2 bu per acre for the year of 1906. Wisconsin's yield per acre was only surpassed by the state of Ohio, which had a yield of 42.6 bushels per acre.

Parties who have not understood what has been going on in the state of Wisconsin in regard to corn breeding, can hardly realize what is meant by the figures I have given. What that means is this, that Wisconsin in 1906 grew twenty million bushels more corn on approximately the same acreage than she did in 1902.

The climatic conditions seriously affected the corn crop of 1907, and while the acreage of corn was increased to the extent of one million acres in the United States over that planted in 1906, the crop was five hundred million bushels less. Wisconsin suffered like other states and our general yield reduced to thirty-two bushels per acre. Members of the Wisconsin Experiment Association received an average yield of sixty-five bushels per acre and the Experiment Station on best acre field received the remarkable yield of 98.6 bushels of shelled corn per acre.

The breeding, acclimating and dissemination of select varieties of corn for various sections of the state has been an important factor in bringing about this increased yield. The Wisconsin Experiment Association has come to the rescue for better corn production. By the establishment of several thousand corn centers, the improved varieties have been grown and acclimated in all sections of the state and farmers now have within easy reach good seed corn, which they can purchase fire dried in the ear that has been grown under their own local conditions.

It is surprising what an association of 1,500 young farmers can accomplish when all proceed in a systematic way along one line of effort.

During the seven years' work with corn at the Experiment Station a few things have been learned that are of vital interest to the Wisconsin corn breeder and will be herewith given with the hope that some farmer will be benefited thereby.

For improvement of yield we should observe careful selection of seed ears when stalk study is permissible. The ears should not be taken from the stalks till well matured. Seed corn should not be dumped on a floor but hung in a well ventilated room or top of corn crib to dry. A well ventilated furnace room is an admirable place to cure corn. Small outside buildings, well ventilated, with corn racks arranged and shielded stove in center of room is preferable for drying large amounts of seed corn. After seed corn is well dried, it will stand cold weather without serious results providing it is kept in a dry place.

The ear we desire should be cylindrical and true to type; tapering ears are objectionable as they do not carry uniform kernels. Kernels should be of medium depth and of practically the same width from butt to tip with edges fitting closely from crown to cob. Ears having sixteen to twenty rows are preferable for our latitude, as by carrying that number of rows, they dry out more readily than if carrying more. A slightly roughened seed coat is desirable and the corn should come well down around the shank, which should be of medium size. The tips of the ears should be fairly well filled, but the ear should not be discarded if a few tip kernels are missing when other good characteristics are present.

Ears should be of uniform size, 8 to 10 inches in length, and 6 to 7 inches in circumference. Uniformity in size of ear usually carries with it uniformity in size of kernels.

The secret of good crops is largely in the seed. Only the best should be planted. No uniformity of stand can be secured unless seed has good germinating power. All corn of doubtful character should be tested. General test should first be made by taking at least two kernels from each of fifty ears and making test in simple plate tester. If test is from 99 to 100% strong and vigorous, and corn was cured under similar conditions, the farmer can be reasonably certain the corn is all right. Resort to the ear test, if general test is low, or if any doubt exists, as it will amply repay for time and trouble.

Before testing make general selection of ears that have kernels of about the same size. Use planter plate that will plant by check row system three or four kernels to a hill. Stay by planter until it will drop four kernels eighty out of a possible one hundred times.

Shelled corn should not be purchased for seed. Every corn grower should insist on having seed corn shipped in the ear so that he can test the same before planting and discard it if of no value. There is no good reason why any honest seed corn dealer should refuse to sell corn in the ear.

Bear in mind that in order to lock the vitality of seed corn in the kernel until time of planting the corn should be fire dried and then stored in a safe place.

As an aid to members of the Experiment Association, who will not have an opportunity to take up the systematic judging of corn, I will herewith give the score card used by the students in the college together with explanations and suggestions to emphasize corn improvement in Wisconsin.

WISCONSIN OFFICIAL CORN SCORE CARD.

		1		2		3		4		5	
1 Trueness to type or Breed characteristics	10										
2 Shape of ear	10										
3 Color: a. Grain	5										
b. Cob	5										
4 Market condition	10										
5 Tips	5										
6 Butts	5										
7 Kernels: a. Uniformity of	10										
b. Shape of	5										
8 Length of ear	10										
9 Circumference of ear	5										
10 Space: a. Furrow between rows	5										
b. Space between kernels at cob	5										
11 Percentage of corn	10										
Total	100										

EXPLANATION OF POINTS IN CORN JUDGING.

1. *Trueness to Type or Breed Characteristics*: The ten ears of the sample should possess similar or like characteristics and should be true to the variety which they represent.
2. *Shape of ear*: The shape of the ear should conform to variety type, tapering slightly from butt to tip, but approaching the cylindrical.
3. *Color: a. Grain; b. Cob.* Color of grain should be true to variety and free from mixture. White corn should have white cobs, yellow corn, red cobs.

4. *Market condition*: The ears should be sound, firm, well matured and free from mould, rot, or injuries.
5. *Tips*: The tips of the ears should not be too tapering and should be well filled with regular uniform kernels.
6. *Butts*: The rows of kernels should extend in regular order over the butt, leaving a deep impression when the shank is removed. Opened and swelled butts are objectionable.
7. *Kernels: a. Uniformity of; b. Shape of.* The kernels should be uniform in shape, size and color, and true to the variety type. The kernels should be so shaped that their edges touch from tip to crown. The tip portion of the kernel is the richest in protein and oil, and hence of the highest feeding value. For this reason the tip portion should be full and plump.
8. *Length of ears.* Northern section 8 to 9 inches, central section 8¼ to 9¼ inches, southern section, 8½ to 9½ inches. Long ears are objectionable because they usually have poor butts and tips, broad, shallow kernels, and hence a low percentage of corn.
9. *Circumference of ear.* Northern section 6 to 6½ inches, central section 6¼ to 6¾ inches, southern section 6½ to 7 inches.
10. *a. Furrow between rows; b. Space between furrows at cob.* The furrow between the rows of kernels should be small. Space between kernels near the cob is objectionable.
11. *Percentage of corn:* The percentage of corn is determined by weight; depth of kernels, size of cob and maturity all affect the percentage.

RULES TO BE USED IN JUDGING.

1. *Length of ear*—The deficiency and excess in length of all ears not conforming to the standard should be added together, and for every inch thus obtained a cut of one point be made.
2. *Circumference of ear*—The deficiency and excess in circumference of all ears not conforming to the standard should be added, and for every inch thus obtained a cut of one-half point should be made. Measure the circumference at one-third the distance from the butt to the tip of the ear.
3. *Percentage of corn.*—Per cent of corn should be from 85 to 87. In determining the percentage of corn, weigh and shell every alternate ear in the sample. Weigh the cobs and subtract from weight of ears, giving weight of corn. Divide the weight of corn by total weight of ears, which will give the per cent of corn. For each per cent short of standard, a one-point cut should be made.
4. *Color of corn and cob.*—A red cob in white corn, or a white cob in yellow corn, should be cut five points. For each mixed kernel a cut of one-tenth point should be made. Kernels missing from the ear shall be counted as mixed. Difference in shade or color, as light or dark red, white or cream color, must be scored according to variety characteristics.
5. *Scoring tips.*—Where one inch of the cob is exposed, a cut of one-half point should be made, and a proportionate cut as the cob is less exposed. Regularity of the rows near the tip and the shape and size of the kernels must also be considered in scoring tips.
6. *Scoring butts.*—If the kernels are uniform in size and extend over the butt in regular order, give full marking. Small and compressed or enlarged or open butts are objectionable, as are also those with flat, smooth, short kernels, and must be cut according to the judgment of the scorer.
7. Ten ears of corn constitute a sample for scoring.

EXPLANATION OF POINTS AND RULES FOR JUDGING DENT CORN.

Points.	Perfect score.	Things to consider.	Rule for cuts.
1 Trueness to type or breed characteristics.	10	Approximate approach to type in form of kernel, indentation, shape of ear and color of grain	Cut ½ point for each ear badly off type and less as judgment of scorer dictates.
2 Shape of ear.	10	Ear shape should conform to standard for variety. Should not be crooked, too pointed, etc.	Cut 1 point for each poorly shaped ear.
3 Color. (a) Grain.	5	Should be free from mixed or missing kernels and true to color for the variety.	Cut 1-10 point for each mixed or missing kernel. Variations in color of grain to be cut according to judgment of scorer.
(b) Cobb.	5	Cob should be a dark, cherry red for yellow corn and a glistening white for white corn.	Cut 5 points for every white cob in yellow corn or red cob in white corn.
4 Market condition.	10	Corn should be ripe, sound and free from injuries or disease. Should be bright in color.	Cut 1 point for every diseased, chaffy, injured or immature ear.
5 Tips.	5	Kernels should extend over the tip in regular rows. Should cover the tip and be uniform in size and shape.	Cut ¼ point for every badly covered tip. Cut 1 point for every inch of exposed tip.
6 Butts.	5	Kernels should extend over butts in regular rows and should be well developed, not flat. But should be well covered.	Cut 3-10 point for every butt, well covered but with flat kernels. Cut ½ point for every uncovered butt.
7 Kernels. (a) Uniformity.	10	Should be alike in shape and size.	Cut 1 point for each set of kernels lacking in uniformity.
(b) Shape.	5	Kernels should be perfect wedge shape, narrower or wider according to variety.	Cut ½ point for each poorly shaped set of kernels.
8 Length of ear.	10	Should have standard length for the section where corn is grown.	Cut one point for every inch of excess and deficiency in length.
9 Circumference of ear.	5	Should have standard circumference for section.	Cut ½ point for every inch of excess and deficiency in circumference.
10 Space. (a) Furrows between rows.	5	Space between kernels at crowns. Furrows should be straight.	Cut ¼ point for 1-32—1-16 inch in width. Cut ½ point for 1-16 inch and above.
(b) Between Kernels at cobb.	5	Space between the tips of kernels at point of attachment to cob.	Cut ½ point for each ear showing space between kernels at the cob.
11 Proportion of grain to ear.	10	Should conform to standard for the variety.	Cut 1 point for each per cent. short of standard weight for the variety.

CORN JUDGING. LESSON I.

Trueness to Type or Breed Characteristics.

The study of corn like the study of stock is now taken up from a practical and scientific standpoint, and we trust will be carried forward to a successful issue. Score cards have been adopted by colleges in different states where the subject of corn judging is taught, with slight variations. By following the suggestions acompanying the score card and the general discussions given therein on the different divisions under which corn is judged one may without an instructor become quite familiar and proficient in judging corn under the score card system.

Fairs and other associations where prizes are given for best display should provide that ten ears should be considered as a sample, as that number is now used at exhibitions in other states and should become uniform throughout Wisconsin. This number is taken as it furnishes an easy basis for calculation. The samples of corn should be arranged on tables so that the judge can have easy access to the same, pass judgment in a comfortable position and have abundant space for comparison.

The first subject to be considered in judging a sample is trueness of type or breed characteristics for which ten points are allowed if the sample is perfect. Corn like cattle belongs to a great family, this family being subdivided into species or types. We are interested in particular with the flint and dent species of corn which are grown generally. Other species we might mention are pop corn, pod corn, sweet corn and soft corn. Each of the above species are divided into numerous breeds or varieties, which is brought about by the ingenuity of man combined with variation in climate, soil, cultivation, etc. The Dent corn is the great commercial corn of the United States, and that with which so much progress has been made by breeding during the past five or six years, consequently we will consider this corn specifically and the other groups generally.

The score card is arranged for Dent corn and the rules and suggestions given in connection with the score card refer to the Dent in general.

Different breeds of corn, like different breeds of cattle, have distinctive characteristics by which they are recognized. Those breeds having a particular color are easy to distinguish between as Boone County White from Reid's Yellow Dent, or either of

these races from the Calico or Strawberry Dent. When one wishes to distinguish between breeds of the same color it is more difficult, and it is only by actual experience in handling and studying the markings that one can become proficient. The markings of pure breeds are quite distinct as the breeder working for improvement has been trying to make prominent one or more desirable characteristics. This is plainly noticeable in the Reid's Yellow Dent and the Leaming, two of the pure yellow breeds of Illinois. These varieties differ in shade of color, the Reid's being a pale yellow while the Leaning is more highly colored, approaching an orange color. In other characteristics the Reid's Yellow Dent has a cylindrical ear and furrows running from butt to tip, while the Leaming has more of a tapering ear and occasionally drops one or more furrows at the middle of the ear. Different seed coats are allowable in the Reid's Yellow Dent, which may be either rough or smooth with a variation in the indentation from a round dimple dent to a wide narrow dent. The Leaming has a roughened seed coat which is characteristic of the breed. The breeds of the white corn like the yellow have certain characteristics peculiar to each, and are readily distinguished after an acquaintance is formed.

The corn breeders of Wisconsin by becoming acquainted with the desired characteristics of seed corn will work with a common interest of producing and improving these desired qualities in the different breeds of corn that are to become standard varieties in various portions of the state. By several hundred working with the same purpose in view a breed of corn will be bred having the characteristics which will be known on account of those similar traits and the more nearly the corn conforms to this type the higher the marking can be given to it in uniformity and breed characteristics.

CORN JUDGING. LESSON II.

Shape of Ear, Cob and Kernels.

In judging a sample of ten ears of corn after considering trueness to type and breed characteristics we next examine closely the shape of the ear. Ten points are allowed if the ears are perfect in shape but it is difficult to find an ear of corn perfect in shape as it is to find cows, horses, and sheep perfect in shape.

The shape of ears of the different varieties of corn differ as widely as the shape and form of the different pure-bred breeds of cattle. Each race and variety has a characteristic shape peculiar to the variety to which it belongs. For example, the Boone County White Corn has a long cylindrical ear, large in circumference, while the Leaming has an ear considerably shorter, finer in cob and a general taper to cob and ear.

If the characteristic shape desired in the Leaming corn were found in Boone County White, or Reid's Yellow Dent, it would be scored severely as it would not be characteristic of those breeds.

The shape most desirable to be found in corn is a cylindrical ear from butt to tip, and corn breeders are trying to secure this shape in all varieties, consequently we may expect to find in the future more uniformity in shape in the different breeds of corn.

Where ears are inclined to taper it will be noticed that two or more rows, as a rule, are dropped near the middle of the ear, otherwise the kernels on the cob are irregular being deeper and larger at the butt than at the tip. This makes the kernels vary in size throughout the ear, and renders the corn almost totally unfit for seed. No planter can plant kernels of this type so as to give a uniform stand, one of the desired characteristics of field corn.

In scoring corn on shape one must take in consideration the soil and climatic conditions, under which the corn is grown.

The shape of an ear desirable for central Illinois would differ in many respects from the shape most desirable for central Wisconsin. Our shorter season demands a shallower kernel which will carry with it a different characteristic shape than that grown further south.

The characteristic wedge shape of kernel is the most desirable and this should receive consideration in judging samples or in the selection of seed for the season's crop. The wedge shape kernel carries with it a greater depth, more rows to the ear, and a greater preportion of corn to cob.

Prof. A. D. Shamel, former instructor in corn, judging at the University of Illinois, says: "It has been found that there is a correlation between the shape of the kernel and the composition. For instance, a kernel having a thin tip is low in per cent of oil and protein and high in per cent of starch. It is usually true that such pointed kernels are low in vitality or lack constitution. The most desirable shape is plump tips,

having about the same thickness as the upper portion of the kernel.

No set rule can be given as to the exact number of points to be taken from the full score on account of any particular weakness in regard to shape. The scorer after carefully noting the deficiency in shape will rely on his individual judgment in marking the score and not be dependent on any set rule.

CORN JUDGING. LESSON III.

Color of Grain and Cob.

Having already considered breed characteristics and shape of ear, the next essential to examine is color which we consider under two heads, viz., color of grain and color of cob. Five points are allowed on color of grain and five on color of cob where each is perfect.

Yellow corn should have a red cob and white corn a white cob in pure-bred varieties. Anything to the contrary would show defectiveness in purity of breeding and should be cut severely by the corn judge and rejected as seed by the corn breeder.

The color of the corn varies with the breed, the Reid's Yellow Dent has a pale yellow color, while the Leaming has a brighter shade of yellow and these shades predominate and are characteristic of the breed. Other yellow breeds vary slightly in color from a pale yellow to a deep orange, and are only known by a thorough acquaintance with the variety of corn under consideration and are then cut accordingly.

The cob in yellow corn should be a bright cherry red and as the color of cobs vary from this standard, a cut should be made by the scorer. A bright cherry red cob denotes health and vigor in corn, and a pale or dark red cob denotes lack of constitution or vitality. The white cobs should be a glistening white and not a dead pale color. The above points should be considered when scoring corn at fairs or when the corn breeder is carefully selecting seed for the season's crop.

General questions, however, are often asked as to whether it is preferable to grow white or yellow corn, and which is the richest in the food elements, and which will produce the most grain and forage per acre, etc.

From tests made by careful breeders of corn, and by Experiment Stations, it has been found that in general, color makes no difference as far as quality is concerned, and it is merely a matter of taste to the grower as to the color of corn he desires.

White or yellow corn through careful breeding of one variety and neglect of the other would soon show a marked difference in regard to yield and quality in favor of the variety to which attention had been given regardless of color.

Like the breeder of live stock, the corn grower had better select that breed of corn that suits his ideal taste best, keeping in mind that the quantity and quality of marketable corn per acre are the essential characteristics sought for.

CORN JUDGING. LESSON IV.

Market Condition.

Ten points are allowed on the score card where market condition is perfect. By market condition we mean general excellence and that degree of ripeness or maturity that is taken note of from the grower's or feeder's standpoint. Corn that shows immaturity and a tendency to be loose on the cob with wide space between the kernels should be cut severely on the score card under market condition. Where market condition is perfect or nearly so, the kernels are firm on the cob and the ear gives a rasping sound when twisted. The kernels fit closely together lengthwise upon the cob between the rows and crosswise between the kernels of each row. Corn when scored from the feeder's standpoint is not cut so severely as from the grower's or seedsman's standpoint. When we consider that a bushel of corn plants approximately six acres and the importance to be attached to uniformity of stand we will fully appreciate the value of considering the market condition from the grower's standpoint in a critical way.

No one head under which corn is judged is so important to Wisconsin farmers as market condition, and all farmers of the state should not only be able to judge corn from that standpoint but should understand how to work for the perfection of that characteristic.

Several standard varieties of corn will have to be established in the state that will ripen properly under the conditions peculiar to that section in which the different varieties are intro-

duced. This can only be done by securing seed corn having those desirable traits that would naturally adapt it to a certain section of the state, and put it through a test. If farmers were to try this plan individually it would be many years before known varieties would be established, but Wisconsin is fortunate in the fact that it has an association of fifteen hundred young men who are working on the corn problem at the present time, and definite results may be looked for in a reasonable period.

The utmost importance is attached to market condition in carrying on trial tests as a variety of corn would be of little value to a community or division of the state, if it would not properly mature. Much can be done in the way of planting and cultivating the crop to hasten maturity, and this should be resorted to.

The check-row system of planting admits more sunlight and a freer circulation of air through the corn than the drill system.

The cultivator can be worked more effectually to retain moisture, and keep down the weeds which enables the corn to gain several days in the race for maturity over corn of the same variety that has been planted in drills. Corn will gradually become accustomed to its environment and will adjust itself to varying conditions. By selecting those ears for seed that show good market conditions, even if there be but few in the entire field the earliness of the corn can be improved upon materially.

It is possible to mature the Illinois dent corns in certain portions of Wisconsin by giving them special conditions, such as location, and planting merely one kernel in a hill the ordinary width of the planter. It seems that Wisconsin with her 1½ million acres of land annually devoted to corn should propagate in the shortest possible time, varieties best adapted for various localities, and then to hold to those established strains that annually show good market condition.

CORN JUDGING. LESSON V.

Butts and Tips.

In scoring butts and tips we allow five points for each if perfect, but cut down in accordance with imperfections. A well filled butt that is symmetrical and not bulging is desirable. The corn should come well over toward the shank so when

snapped a rounded hollow space would be plainly noticeable. The corn breeder desiring to get a large proportion of corn to cob often goes too far in breeding for a small shank and full covered butt. Where the shank is too small the ears drop off during the ripening period or readily tear off while harvesting. Where this weakness is noticeable the butt should be cut accordingly on the score card. Poorly filled butts are caused by the first silks developing too far in advance of the pollen and drying to such an extent that they do not become fertilized when the pollen ripens. All ears, where the butts are partially filled, should be rejected or this characteristic may become permanent or partially so. If an earlier variety of corn or corn more advanced should be in an adjoining field the butt kernels are liable to be mixed by being fertilized with this foreign pollen instead of the pollen from their own variety. It is largely on account of chance crossing that occurs to the butt and tip kernels that those kernels are rejected when planting. Their peculiar formation makes them non-uniform which interferes in planting evenly and they also seem weaker in germination and more tardy in growth than kernels from the middle or intermediate parts of the ear. The tip kernels are apt to be flinty and pop corn shape which is undesirable in dent corn.

A perfect tip which has a center kernel termed a cap is hard to find but occasionally a few are found where large quantities of corn are handled. In a perfect tip the rows of corn should come over the tip in regular order and meet near the apex. The kernels should be uniform in size and shape and should not be mixed or shallow. Where bare tips are noticeable to quite an extent throughout the field, we allude the same to the fact that the silks formed last, which represent the tips, were too late for the pollen, and as a result were not fertilized.

By planting ears having defective tips that undesirable characteristic would soon become permanent or nearly so. Open tips have a tendency to increase the shallowness of kernels on the tip half of the ear which makes the corn on that portion of the ear undesirable for planting on account of the lack of uniformity compared with the kernels on the butt portion of the ear.

From the standpoint of the corn judge, butts and tips that do not meet the standard should be scored quite severely, and should carefully be rejected by the corn grower where the defect is too prominent.

CORN JUDGING. LESSON VI.

Kernel Study.

The seventh division under which ear corn is judged is kernel study for which 15 points out of 100 are allowed; 10 for uniformity and 5 for shape.

The kernels should be uniform in shape, size, and color and true to the variety type. The shape should be such that the edges of the kernels touch from tip to crown. The tip portion of the kernel, that part attached to the cob and which contains the germ, is rich in protein and oil and hence of the highest feeding value. For this reason the tip should be full and plump. A plump tip also denotes vitality and constitution. Corn growers should regard with suspicion corn that has weak and shriveled tips no matter how well the outside of the ear may look. At least 85 per cent of all the oil in the kernel is in the germ which extends from within the tip upward, hence corn of high oil content is preferable for factories where the manufacture of corn oil is emphasized. The time is approaching when corn may be purchased on a basis represented by its chemical constituents instead of by the pound or bushel. Milk and cream are now purchased almost universally by their butter fat content and grains will be the next in order. Tests by the Illinois Experiment Station show that the oil content in corn may vary from 2½ to 7½ and protein from 6½ to 16 per cent. Protein is valued at 5 cents per pound while starch is less than 1 cent. It does not seem fair for a farmer who has used care in selecting high protein seed corn to be obliged to take the same price per bushel for his crop as one who is raising only ordinary corn. When Wisconsin farmers market more corn we feel confident that the matter of selling by the test will be carefully investigated. At the present time nearly all the Wisconsin corn is marketed through farm animals which undoubtedly is the best possible way of marketing farm crops. By so doing we put our animals in proper condition for the market and save middle men's profits on our crops as well as retaining the fertilizing elements contained therein to keep up the fertility of the farm.

If seed corn high in protein and oil content is planted the progeny will be high in those desirable characteristics. One bushel of seed corn will plant about six acres, four kernels to the hill. Will it not then pay Wisconsin farmers to carefully select seed corn that is high in oil and protein?

CORN JUDGING. LESSON VII.

Circumference and Length of Ears.

The time will arrive in Wisconsin as it has in some of the older corn breeding states when each distinct variety of corn will have its respective measurements as to circumference and length. We have a standard measurement for corn that has been grown in northern, middle and southern Wisconsin. In general the circumference should be three-fourths the length. The lenghth may vary from eight to nine and one-half inches within the state and the circumference from six to seven inches. The chief reason for distinct measurements is to secure uniformity and compactness in ears. We cannot accept those that are out of natural proportion but must be governed by some set uniform standard.

CORN JUDGING. LESSON VIII.

Furrows Between Rows and Space Between Kernels at Cob.

The straight rows are the most desirable as they give character and uniformity to the ear and admit of the kernels being placed in a more exact position. The kernels on ears with spiral rows are irregular as to depth, width, and shape of kernel and consequently are not wanted. From breeding experiments at several Stations it has been determined that irregularities are transmitted by the mother ear to the progeny, therefore if we desire to make the most rapid advancement in breeding to a highly developed type we should select only the most regular in all characteristics.

The furrow or grove should not descend to any great depth but merely mark the dividing line between the kernels from butt to tip. Where the furrow is deep thereby exposing a large portion of the surface of the kernel it indicates a reversion of the dent corn to that of a flint type. The space between kernels at cob determines the maturity to quite an extent, the kernel tip in immature corn is shriveled and therefore leaves a space readily detected. In well matured corn no appreciable space will be detected but tips of kernels will fit tightly together from tip to crown. Abundant space between kernels near cob is an indication of immaturity, low viability and lack of vitality.

CORN JUDGING. LESSON IX.

Percentage of Corn on Cob.

Good, well matured corn should give a percentage of from eighty-five to eighty-seven corn to cob. In other words if we were to shell one hundred pounds of ear corn we should expect approximately eighty-five pounds of kernel corn and fifteen pounds of cob. The tendency with some corn-growers is to work for a small cob, thinking that feature of corn to be the leading desirable characteristic. In many instances the small cob theory has been practiced to such an extent that the yield has been materially reduced. We desire a medium sized cob that will carry from sixteen to twenty rows of kernels of medium depth; if we reduce the size of the cob the ear simply drops its rows by pairs until we have but ten or twelve rows remaining. If on the other hand the cob is too small and the grower has been working for high percentage of corn to cob, the kernels are apt to be of too great depth to mature well in Wisconsin latitude.

When judging corn for percentage of corn to cob we weigh five ears of the sample and record total weight. The corn should then be shelled and the kernel corn weighed and recorded. Divide decimally the number representing the weight of the shelled corn by the number representing the weight of ear corn and the result will be the percentage of corn on cob.

Example: If total weight of five ears of corn is 60 oz., and the kernel corn from the five ears weighed 51 ounces, 51 divided decimally by 60 hundredths equals 85, which is the percentage of corn.

Immature and chaffy corn always gives a relative low percentage of corn to cob compared with well ripened corn.

LESSON X.

Selecting Corn of High Oil and Protein Content.

From careful experiments carried out by the Illinois College of Agriculture extending through a series of years it has been determined definitely that the composition of the corn kernel can be materially changed. From many thousand tests at the

Chicago Glucose factories it has been found that the composition of whole corn is approximately as follows:

Starch	70.0%
Water	11.4%
Protein	10.5%
Oil	4.5%
Fiber	2.2%
Ash	1.4%

It will be noted that the starch content is extremely high compared with the other elements, hence the claim that corn is a one sided ration for farm animals.

The farmer is particularly interested in the oil and protein content of the corn, consequently the richer the corn is in these elements the more money value per bushel the corn is worth for feeding purposes. Plants, like animals do not improve if left merely to nature's laws but strive to maintain a certain standard. It has remained for man to step in and by changing environment and following certain definite principles accomplish beneficial results.

In the improvement of corn the farmer can by the proper selection of seed materially change the constituents most desired, from a lower to a higher degree thus growing a corn of higher value for feeding farm animals. The composition of different kernels of corn taken from the same ear are approximately the same, hence a single kernel from an ear is a fair index of the composition of all the remaining kernels of that particular ear. By planting corn that is high in oil and protein the crop grown from that select seed is also high in those desirable elements.

By a physical examination of one kernel from each ear the relative composition as to oil and protein can be approximately determined. No difficulty will be experienced in distinguishing between ears that are high and low, in protein and oil after a few comparisons are made.

To make these determinations all the apparatus necessary is a pocket knife. Remove at least two kernels of corn from the ear and examine closely, if that portion of the kernel next to the cob known as the tip is pointed, shriveled and has a small face mark covering the germ, discard the ear at once, as it will be found not only low in oil but low in vitality as well. The face mark under which the germ is found should be broad and extend from the tip well up toward the top or crown of the kernel. This indicates a large germ beneath. Practically 85% of all

the oil in the kernel is found in the germ which is also rich in protein, hence the desirability of a large and well developed germ. The kernel has to be cut in order to determine the protein content as that is noticeable within. The kernel should be cut from tip to crown through the narrow and broad dimensions, this will bring plainly to view the germ which is of a dark gray color; the starch is white, and a flinty composition which is of a grayish white in white corn, and a dull yellow in yellow corn. The large portion of the protein contained in the kernel is found in this flinty matter. If the flinty portion of the kernel fits closely to the germ and crowds the white starchy matter into comparatively small space, the corn upon the ear from which the kernel was selected is high in protein. After the examination of a few kernels one will make note of the relative size of the parts at a glance.

It seems that it will amply repay any farmer to select a few bushels of seed corn in this way from year to year until a high standard of corn is obtained.

WHEAT.

Points to be Observed.

1. All kernels of the sample should resemble one another in shape, color and general appearance.
2. Kernels should be the same size and shape throughout to secure uniformity.
3. Grain should all be the same color. No mixture of red and white kernels.
4. There should be no mixture of oats, barley or any other grain. Must be pure wheat.
5. The sample as a whole should be large and plump, not small or shrunken.
6. The sample should be free from any kind of dirt or weed seeds. The percentage of foul material is determined by the use of sieves and scales. Remove and weigh the foul material. Then divide weight of foul material by weight of whole sample. This will give you percentage of foul material. Should the foul material consist of noxious seeds the cut on sample should be made more severe than if it is composed of practically harmless materials.
7. The sample should be free from smutty, musty or bin-burned kernels. Take one hundred average kernels and count the number of each of smutty or otherwise injured kernels. The number found will be the percentage of poor kernels.
8. Good wheat should weigh 60 or more pounds to the measured bushel. The weight per bushel may be determined by the use of the Winchester measure.
9. Wheat should give a germination of not less than ninety-five per cent.

WISCONSIN COLLEGE OF AGRICULTURE.

MADISON.

DEPARTMENT OF AGRONOMY.

OFFICIAL WHEAT SCORE CARD.

NAME OR NUMBER OF SCORER ..... DATE .....
SAMPLE NO. ..... TABLE .....

		1	2	3	4	5
1. Trueness to type or breed characteristics	10	....	....	....	....	.....
2. Uniformity in size and shape of kernel	10	....	....	....	....	.....
3. Color of grain	10	....	....	....	....	.....
4. Freedom from mixture with other grains	15	....	....	....	....	.....
5. Size of kernel	10	....	....	....	....	.....
6. Per cent and nature of weed seed, dirt and other foreign material	15	....	....	....	....	.....
7. Per cent of damaged, smutty or musty kernels	5	....	....	....	....	.....
8. Weight of grain	10	....	....	....	....	.....
9. Viability	15	....	....	....	....	.....
Total	100	....	....	....	....	.....

Reasons for student's score on test sample.

Numbers below refer to the various heads under which the sample of grain has been judged.

1 .....
2 .....
3 .....
4 .....
5 .....
6 .....
7 .....
8 .....
9 .....

Rule for cuts.

1. Take 100 kernels, constituting a fair sample of the grain. Count out the kernels not true to type. For each kernel off type, cut 1-10 point.
2. Proceed as above and for each small or shrunken kernel cut 1-10 point.

3. For discoloration cut according to extent. If only slightly discolored cut ¼ point and more as judgment dictates.
4. Weigh the whole sample, separate and weigh the foreign grain. Divide weight of foreign grain by weight of whole sample. This will give percentage of other grains. For every per cent so found cut ½ point.
5. Sample should consist of large plump kernels not small ones. Cut as judgment dictates, considering variety characteristics.
6. Cut sample one point for each per cent of foul material.
7. Cut sample one point for each per cent of smutty, bin-burned and musty kernels.
8. Cut one point for each pound below sixty pounds in weight.
9. Cut ½ point for each per cent the germination falls below 95%.

OATS.

Points to be Observed.

1. All kernels of the sample should resemble one another in shape, color, and general appearance.
2. Kernels should be the same size and shape throughout to secure uniformity.
3. Grain should all be white in color for white oats, bright yellow for yellow oats and a glistening black for black oats.
4. There should be no mixture of wheat, barley or any other grain.
5. The sample as a whole should be large and plump, not small or shrunken.
6. The sample should be free from any kind of dirt or weed seeds. The percentage of foul material is determined by the use of sieves and scales. Should the foul material consist of noxious weed seeds the cut on sample should be made more severe than if it is composed of practically harmless materials.
7. The sample should be free from smutty, musty or bin-burned kernels as indicated by the odor, which shall be sweet. Take one hundred average kernels and count the number of each of smutty or otherwise injured kernels. Repeat this three times and find the average of the three trials. The number found will be the percentage of poor kernels.
8. Good oats should weigh 32 or more pounds to the measured bushel. The weight per bushel may be determined by the use of the Winchester measure.
9. Oats should give a germination of not less than ninety-five per cent.

Rule for Cuts.

1. Take 100 kernels, constituting a fair sample of the grain. Count out the kernels not true to type. Repeat three times and find average for the three trials. For each kernel off type, cut 1-10 point.
2. Proceed as above and for each small or shrunken kernel cut 1-10 point.
3. For discoloration cut according to extent. If only slightly discolored cut 1 point, and more as per cent of discoloration increases. Cut 1-10 point for each black, red or yellow oat in white oats.
4. Take 100 grains constituting a fair sample of the grain. Count out the foreign grain. Repeat three times and take the average of the three trials. This will give the percentage of foreign grain. For every per cent so found cut ½ point.

5. Sample should consist of large plump kernels not small ones. Cut as judgment dictates, considering variety characteristics.
6. Cut sample one point for each per cent of foul material.
7. Cut sample one point for each per cent of smutty, bin-burned and musty kernels. If sample has musty odor cut 10 points.
8. Cut one point for each pound below 32 pounds in weight.
9. Cut ½ point for each per cent the germination falls below 95%.

WISCONSIN COLLEGE OF AGRICULTURE.

MADISON.

DEPARTMENT OF AGRONOMY.

OFFICAL OAT SCORE CARD.

NAME OR NUMBER OF SCORER..... DATE.....

SAMPLE NO..... TABLE.....

		1		2		3		4		5	
1. Trueness to type or breed characteristics	10	....	....	....	....	....	....	....	....	....	....
2. Uniformity in size and shape of kernels.	15	....	....	....	....	....	....	....	....	....	....
3. Color of grain	5	....	....	....	....	....	....	....	....	....	....
4. Freedom from mixture with other grains	5	....	....	....	....	....	....	....	....	....	....
5. Size of kernel	10	....	....	....	....	....	....	....	....	....	....
6. Per cent and nature of weed seed, dirt and other foreign material	15	....	....	....	....	....	....	....	....	....	....
7. Oder—musty, smutty, sulphur	10	....	....	....	....	....	....	....	....	....	....
8. Weight per bushel	10	....	....	....	....	....	....	....	....	....	....
9. Percent of meat to hull	5										
10. Viability	15										
Total.....	100										

Reasons for student's score on test sample.

Numbers below refer to the various heads under which the sample of grain has been judged.

1.....
2.....
3.....
4.....
5.....
6.....
7.....
8.....
9.....
10.....

BARLEY.

Points to be Observed.

1. All kernels of the sample should resemble one another in shape, color, and general appearance.
2. Kernels should be the same size and shape throughout to secure uniformity.
3. Grain should all be light in color.
4. There should be no mixture of oats, wheat or any other grain. Must be pure barley.
5. The sample as a whole should be large and plump, not small or shrunken.
6. The sample should be free from any kind of dirt or weed seeds. The percentage of foul material is determined by the use of sieves and scales. Should the foul material consist of noxious weed seeds the cut on sample should be made more severe than if it is composed of practically harmless materials.
7. The sample should be free from smutty, musty or bin-burned kernels. Take one hundred average kernels and count the number of each smutty or otherwise injured kernels. Repeat this three times and find the average of the three trials. The number found will be the percentage of poor kernels.
8. Good barley should weigh 48 or more pounds to the measured bushel. The weight per bushel may be determined by the use of the Winchester measure.
9. Barley should give a germination of not less than ninety-five per cent.

Rule for Cuts.

1. Take 100 kernels, constituting a fair sample of the grain. Count out the number not true to type. Repeat three times and find average for the three trials. For each kernel off type, cut 1-10 point.
2. Proceed as above and for each small or shrunken kernel cut 1-10 point.
3. For discoloration cut according to extent. If only slightly discolored cut 1 point, or more as per cent of discoloration increases.
4. Weigh the whole sample, separate and weigh the foreign grain. This will give percentage of other grains. For every per cent so found cut ½ point.
5. Sample should consist of large plump kernels not small ones. Cut as judgment dictates, considering variety characteristics.
6. Cut sample one point for each per cent of foul material.
7. Cut sample one point for each per cent of smutty, bin-burned and musty kernels.
8. Cut one point for each pound below 48 pounds in weight.
9. Cut ½ point for each per cent the germination falls below 95%.

WISCONSIN COLLEGE OF AGRICULTURE.

MADISON.

DEPARTMENT OF AGRONOMY.

OFFICIAL BARLEY SCORE CARD.

NAME OR NUMBER OF SCORER..... DATE.....

SAMPLE NO..... TABLE.....

		1		2		3		4		5	
1. Trueness to type or breed characteristics	10	....	....	....	....	....	....	....	....	....	....
2. Uniformity in size and shape of kernel	15	....	....	....	....	....	....	....	....	....	....
3. Color of grain	15	....	....	....	....	....	....	....	....	....	....
4. Freedom from mixture with other grains	15	....	....	....	....	....	....	....	....	....	....
5 Size of kernel	5	....	....	....	....	....	....	....	....	....	....
6. Per cent and nature of weed seed, dirt and other foreign material	10	....	....	....	....	....	....	....	....	....	....
7. Per cent of damaged or smutty kernels	5	....	....	....	....	....	....	....	....	....	....
8. Weight of grain	10	....	....	....	....	....	....	....	....	....	....
9. Viability	15	....	....	....	....	....	....	....	....	....	....
Total...	100	....	....	....	....	....	....	....	....	....	....

Reasons for student's score on test sample.

Numbers below refer to the various heads under which the sample of grain has been judged.

1.....

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DISCUSSION ON THE JUDGING OF SMALL GRAINS

Trueness to Type or Breed Characteristics.

A. L. STONE.

Trueness to type in any sample of grain consists of the characteristics which distinguish that sample from another of the same class. To be true to type all the kernels in any sample of grain should bear a close resemblance to each other. Some kernels may be smaller than the others but should have the same general appearance.

Some varieties of oats, for instance, have short plump grains, others have long, slender or pointed grains. Some with short plump grains have large kernels, others small, and the same is true of those having long, slender kernels. These same observations apply in a greater or less degree to barley, wheat and rye.

In general the points which determine type are color, size and shape of kernel, presence or absence of awns and hulls in oats; presence or absence of beards and hulls and the straightness or crookedness of the kernel furrows in barley, the color, and size and shape of kernels in wheat. Oats may be hulled or hull-less. They may be white, yellow, gray, red or black, or have different sizes and shapes of kernels depending upon the variety. There should be no mixture of one with the other.

Barley may be either hulled or hull-less, bearded or beardless, black or white. The kernels may be long and slender or short and plump.

The furrows in the kernels of barley may be straight or crooked depending upon the arrangement on the flower stem. In six rowed barley two-thirds of the grains have crooked furrows. In two rowed barley the furrows are all straight.

No admixture of these various classes is allowable.

Wheat may vary in color from white to a dark red depending upon the variety and the region where grown. The kernels may possess a wrinkled surface or be perfectly smooth, or some be long and pointed and others short and oblong, depending upon varieties. It is important that these different types be not found in the same sample if it is to be true to type.

Uniformity in Size and Shape of Kernel.

In an ideal sample of grain all the kernels should be the same size and shape. They may all be small or all be large but must be *uniform.* This is important because the grain will be sown at a more uniform rate and all plants are apt to be of equal strength and vigor.

Color of Grain.

All kernels in the sample should be of the same color. No black, red, gray or yellow oats should be found in a sample of white oats. No black barley mixed with white, or white amber or macaroni wheat mixed with red. The last rule, of course, applies equally to the grains of other colors. This point must be closely watched as it is an indication of mixture or a lack of breeding.

Freedom From Mixture With Other Grains.

Little need be said in explanation of this point as every one realizes that the value of grain for seed is greatly reduced whenever there is a mixture of other grains. Special application of this point can also be made to wheat and barley. Wheat to make the best flour should be absolutely pure and the best prices can only be obtained for it when it is pure.

In the manufacture of malt maltsters wish to use only pure barley and a mixture of other grain is undesirable. Oats in barley are especially noxious as it is extremely difficult to separate the two.

Size of Kernel.

The matter of *uniformity* of kernels has already been discussed. The *size* of the kernels is now to be considered. In any grain it is desirable to have the kernels as large as possible up to a certain limit.

Therefore all the grains of a sample should be large for the variety as this is an indication of a well matured and probably prepotent grain. In other words, while not exactly uniform in size the kernels should be large, not undersized or shrunken. A grain buyer will always pay more for a lot of grain containing large kernels.

Per Cent and Nature of Weed Seed, Dirt and Other Foreign Material.

The grain should be free from all kinds of foul material. For exhibition purposes or for sale, a sample is at once scored against if not thoroughly clean. The cut should be much more severe if among the weed seeds in the grain there are those of noxious weeds such as Canada thistle, quack grass, wild mustard, etc. Much of the material in the way of cracked and shrunken grain and weed seeds can, by grinding, be converted into a very good grade of ground feed for stock. The farmer should make this separation himself. The increased price obtained for the cleaned grain will ordinarily more than pay for the decreased weight resulting from the cleaning and the farmer still has the screenings for his own use. The grain can be cleaned on rainy days or in winter when the value of labor is low. Few farmers have yet come to a realization of the money which can be saved by the use of a good fanning mill.

Weight of Grain Per Bushel.

The weight of grain per measured bushel is generally an indication of quality and the principal point by which grain inspectors and buyers determine the grade and market value of grain.

In wheat high weight is indicative of comparatively high protein or, more specifically, gluten content, and it is the amount of gluten in wheat which determines its bread making qualities.

In barley the same thing is true. Brewers in the United States wish a high protein barley. They mix corn and rice grits with barley in the manufacture of beer. This cheapens the cost of beer production and as corn and rice are both high in starch content they furnish sufficient sugar so that the barley need have but little starch but must be high in protein. A good brewing barley for the use of the United States brewers then must be high in protein and as protein is heavier than starch a good barley is determined largely by its weight per bushel.

In oats, the higher the percentage of meats the better the feeding value of the oats. The heavier the oats weigh the higher the percentage of meats and the lower the percentage of hulls. As the hulls consist largely of crude fiber the smaller proportion of them there is the better. The average per cent of meats to hull for oats in the United States is seventy per cent but

may vary greatly depending upon the season and on the variety of oats.

The standard weights of grains in Wisconsin are as follows: Barley, 48 lbs.; Oats, 32 lbs.; Wheat, 60 lbs., and Rye, 56 lbs. per measured bushel.

Viability.

No grain should give a germination of less than ninety-five per cent for the best results. The higher the percentage of germination the better. That all the grain germinates is not sufficient, however. The germination should be strong and vigorous resulting in a strong rapidly growing young plant. As the success or failure of the crop depends upon it this is an important point.

Besides these general points which apply to all the grains there are special points which apply to each grain separately and these will be taken up in detail.

Wheat and Barley—Per Cent of Damaged, Smutty or Musty Kernels.

Wheat should contain no smutty or musty kernels. The smut darkens the flour and gives it a bitter flavor. If musty kernels exist in any quantity in the wheat the flavor can at once be detected in the flour. Both of these conditions lower the value of the wheat for any purpose and where very bad render it utterly useless for flour making.

Barley should also be free from these same defects as the quality of the beer will otherwise be affected. As the manufacture of a good beer depends upon a good malt, and a good malt depends upon uniform and as nearly complete germination of the grain as it is possible to get, there should be no cracked or broken kernels in the barley. These broken kernels will not germinate but mold or rot and they destroy the flavor of the beer. Smutty or musty barley also makes poor feed for stock.

Oats—Odor.

The odor of oats should be sweet. There should be no musty or burnt odor showing that oats are not in good keeping condition or that they have been over heated in bin or stack.

Such conditions have a tendency to destroy both the seed and feed value of the grain. Oats should also be free from smut.

Elevator men often resort to a process of bleaching to whiten oats which have been blackened or otherwise injured by exposure to the weather. Sulphur is used as the bleaching agent and oats thus treated often retain the scent of sulphur. Oats treated in this way should be avoided as they are apt to be injurious as feed and often the vitality or germinating power is also destroyed.

WISCONSIN SEED GRAIN GROWERS 1909.

Members of the Experiment Association are rapidly becoming the seed growers of the state, and by systematic selection of seed and care in culture and curing of the crop, produce a fine grade of pure-bred seed grains. These seed grains are sold by the producers either in small or large quantities, at reasonable rates.

Growers of Swedish Select Oats (Wisconsin No. 4).

Barron County

Chrislaw, A. M. .....Rice Lake
Heldstab, C. O. .....Rice Lake
Poulter, C. J. .....Cumberland

Bayfield County

Tomkins, A. Pearce..Ashland R. 2

Brown County

Nies, Peter .....Greenleaf, R. 3
Roeckel, Joseph P. .....Lark

Buffalo County

Joos, Frank B. ....Fountain City
Muehleisen, Gottlieb .....Tell
Spaulding, L. C. .....Mondovi
Suhr, A. A. .....Cochrane

Calumet County

Peterson, H. N. ....New Holstein

Chippewa County

Christiansen, W. O.....
Chippewa Falls, R. 6
Guptill, L. R.....New Auburn
Kramer, H. F. .....Bloomer
Lebeis, F. J. .....Bloomer
Martiny, L. P.....Chippewa Falls

Clark County

Zerbel, Paul.....Humbird

Columbia County

Cannon, E. A. .....Pardeeville
Chipman, W. R. ....Morrisonville
Ellickson, A. C. .....Arlington
Lloyd, Evan B.....Cambria

Crawford County

Accola, Lawrence .....Steuben

Dane County

Accola, John..Madison, U. W. Farm
Benson, Ed. E. .....Mt. Horeb
Chatterton, R. W. .....Basco
Hopkins, B. F. .....Morrisonville
Hopkins, J. W. .....Morrisonville
Kaltenberg, Anthony...Waunakee
Mikkelson, Carl .....Deerfield
Mitchell, J. T. ....Cottage Grove
Renk Bros. .....Sun Prairie
Thorstad, N. H. .....Deerfield
Toepfer, Otto .....Madison, R. 7
Wernich, Wm. H. .....De Forest

Dodge County

Bussewitz, W. E. .....Juneau
Ehrhardt, Daniel .....Knowles
Goetsch, Albert A. .....Juneau
Grebe, F. P. .....Fox Lake
Jones, John G. ..Beaver Dam, R. 4
Howitt, Chas. H. .....Randolph
Jones, Owen R., Jr., Beaver Dam
Jung, J. W. .....Randolph
Krueger, H. E. .....Beaver Dam
Owens, H. C. .....Fox Lake
Schiller, Claude E....Beaver Dam
Steiner, W. H. .....Brownsville

Door County

Boucsein, Gust L., Detroit Harbor
Erickson, Ole C. ..Detroit Harbor

Douglas County

Lindberg, E. J. .....Itasca

Dunn County

Kent, H. W. .....Rusk
Millar, Will .....Menomonie

Eau Claire County

Donaldson, H. A., Eau Claire, R. 6
Russel, A. C. .....Augusta
Wright, W. C. .....Eau Claire

Fond du Lac County

Bonzelet, J. P. .....Eden
Briggs, L. W. .....Peebles
Briggs, J. W. .....Peebles
Carpenter, L. A.....Fond du Lac
Hargrave, Robert L.....Ripon
Hinz, A. F.....Ripon
Hintz, William F..Oakfield, R. 26
Kuehn, Chas. A.....Brandon
Mathews, Lee G.....Brandon
Meekin, H. W.....Fond du Lac
Stroup, Fred G.....Fond du Lac
West, R. N.....Ripon
Whittaker, Horace E., Fond du Lac

Grant County

Barron, R. E. .....Platteville
Booth, Guy A. .....Cuba City
Searles, Wm. L. .....Boscobel
Wiseman, Paul .....Bridgeport

Green County

Biglow, L. F. .....Brooklyn
Dettwiler, John .....Monroe
Marty, Matthias .....Monticello
Smith, H. B. .....Brooklyn

Iowa County

Gordon, A. L. .....Mineral Point
Gordon, C. D. .....Mineral Point
Gordon, J. Roy ....Mineral Point
Jones, Owen Lloyd.....Hillside

Jackson County

Dettinger, Wm. F.....Hixton
Engleman, John .....Hixton

Jefferson County

Anthes, Henry .....Jefferson
Bell, William C.....
Oconomowoc, R. 27
Brueckner, Justus....Ft. Atkinson
Church, A. P. .....Whitewater
Guttenberg, Frank, Jr...Jefferson
Ward, W. Rodell.....
Ft. Atkinson, R. 1

Juneau County

Wagner, J. M.....Union Center

Kenosha County

Achen, Wm. .....Bristol
Bradley, J. Frank .....Somers
Brook, J. W. .....Salem
Myrick, Mead O.....Bristol
Orvis, L. C. .....Salem
Roberts, F. W.....Woodworth

Kewaunee County

Katel, W. C. .....Kewaunee, R 1
Oestreich, R. C. .....Kewaunee
Smithwick, Jas. .....Kewaunee

La Crosse County

Griswold, H. W.....West Salem
Jones, E. E. .....Rockland
Nuttleman, Alfred ....West Salem
Nuttleman, Adolph ....West Salem
Sandman, W. D.....Holmen

La Fayette County

Bridgman, C. R.....Darlington
Stewart, J. W.....Blanchardville
Vinger, Milo J.....Argyle

Lincoln County

Lewerenz, Roy B.....Tomahawk

Manitowoc County

Clusen, Reinhold .....Manitowoc
Garey, James .....Grimms
Klann, Adolph .....Hayton, R. 1
Roethel, Herman .....Kiel
Strowig, Wm. A..Cleveland R. 1
Sullivan, James A.....Grimms
Wiegand, Otto R.....Cleveland

Marathon County

Baesemann, Otto .....Edgar

Marinette County

Falarsh, Frank .....Peshtigo
Olson, Otto W.....Walsh

Marquette County

Houslet, Neal .....Packwaukee

Milwaukee County

Basse, Wm. H.....
Milwaukee, St. A. R. 4
Butler, Ed..No. Milwaukee, R. 11
Pierner, Fred .....No. Milwaukee

Monroe County

Ebert, Edmund D.....Tomah
Ebert, Francis E.....Tomah
Fox, C. L. .....Leon
Freeman, G. A.....Sparta
Harris, R. E.....Warrens
Howell, H. P.....Sparta
Leverich, J. W.....Sparta

Outagamie County

Letts, Edw. F.....Appleton, R. 4
Merkel, Henry .....Appleton
Mueller, Edw. O.....Appleton
Wussow, Chas. A.....Seymour
Zahrt, F. H.....Hortonville

Ozaukee County

Clausing, Adolph .....Thiensville
Kieffer, Mike .....Fredonia
Kohlwey, Otto .....Grafton
Pierner, John W.....Thiensville
Wulff, Fred .....Grafton

Polk County

Gullickson, Chas. E.....Cushing
Nelson, Peter C.....Milltown

Portage County

Hanson, N. P..Amherst Jct., R. 2

Racine County

Ghastin, Wm. J.....Union Grove
Holloway, John W...Racine, R. 1
Klofanda, Reuben .....Burlington

Richland County

Wilson, William C...Twin Bluffs
Post, H. L. .....Sextonville
Turgasen, J. H....Richland Center

Rock County

Austin, A. G.....Janesville, R. 6
Devine, C. B.....Evansville
Hoague, Chas. C..Janesville, R. 7
Howe, Louis H.....Brodhead
Smith, L. E.....Beloit

Rusk County

Beebe, A. G.....Bruce
Pritchard, John T.....Flambeau

St. Croix County

Brunner, R. W.....Hudson
Imholt, B. A.....Houlton
Paulson, P. A.....Hudson

Sauk County

Capener, W. R.....Baraboo
Clavadatscher, Tobias, Sauk City
Frederickson, Fred, Spring Green
Riek, Anthony .....Plain
Toole, W. A.....Baraboo
Volz, Robert .....Ableman

Shawano County

Berg, C. J.....Tigerton
Klovdahl, John J.....Wittenberg

Sheboygan County

Dennerlein, Arthur J....Plymouth
Eastman, F. A...Sheboygan Falls
Illian, W. L.....Adell, R. 19
Parrish, J. O. .....Plymouth
Wagner, Arthur L.....Haven

Trempealeau County

Hegge, E. A.....Pigeon Falls
Mattison, Thos .....Blair
McCauley, Rex .....Osseo

Vernon County

Cass, Leonard E.....Viroqua
Sebion, Cornelius .....Westby

Walworth County

Anderson, Alvin M....Whitewater
Coburn, Ora .....Whitewater
Dunbar, Harry D.....Elkhorn
Meurer, Paul .....Genoa Jct
Ranney, E. P. C.....Elkhorn
Warmington, Prentice .....
Honey Creek

Washington County

Gruhle, W. H.....Barton
Puls, John .....Hartford

Waukesha County

Bartlett, Geo. W.....
Menomonee Falls
Burton, Roy .....Eagle, R. 35
Rosenow Bros.....Oconomowoc
Schafer, Chas. H..Waukesha, R. 7
Schroeder, F. C. .....Hartland
Spaulding, C. E.....Oconomowoc
Swoboda, F. G.....Dousman
Van Buren, E. W.....
Waukesha, R. 2
Williams, Arthur R....Waukesha
Williams, D. T., Waukesha, R. 8
Wright, H. W.....Waukesha

Waupaca County

Feathers, O. C.....Manawa
Kneip, William .....Weyauwega
Larson, LeRoy .....Iola
Pirner, Fred .....Sugar Bush

Waushara County

Clark, J. J.....Berlin R. 4

Winnebago County

Blakely, Albert J.....Neenah
Blodgett, Gordon R.....Neenah
Miller, Henry C.....Allenville
Schaefer, R. J.....Appleton

Wood County

Kieffer, J. C.....Auburndale

NON-RESIDENTS

Illinois

Hitchcock, H. R.....Pecatonica
Phillips, Jesse .....Elizabeth

Iowa

Thompson, Thos., Jr.....Wadena

Michigan

Meyer, A. J.....Howell, R. 7

Growers of Oderbrucker Barley (Wisconsin No. 55).

Adams County

Johnson, Billie....Strongs Prairie
Lee, Royal D.....Arkdale
Rodger, Almon .....Endeavor

Ashland County

Johnson, L. M.....Ashland, R. 2

Barron County

Allen, Eugene S.....Cumberland
Bartlett, Ray .....Barron
Chrislaw, A. M.....Rice Lake
Heldstab, C. O.....Rice Lake
Hustad, K. E.....Rice Lake
Hustad, Milon .....Rice Lake
Kamrath, Wm. .....Cameron
Matthys, Walter .....Barron
Poulter, Chas. J.....Cumberland
Rauchenstein, John....Rice Lake
Sackett, Clyde .....Cumberland

Bayfield County

Daly, Richard E.....Washburn

Brown County

Nies, Peter.....Greenleaf, R. 3
Roeckel, Joseph P.....Lark

Buffalo County

Arms, Edward .....Fountain City
Engel, George H....Fountain City
Fetting, Edwin .....Alma
Florin, Emil J.....Cochrane R. 2
Florin, Henry.....Cochrane R. 2
Joos, Frank B. .....Fountain City
Knospe, Chas. G. Jr..Alma, R. 1
Muehleisen, G .....Fell
Rosenow, H. G. .....Waumandee
Rosenow, Wm. F.....Waumandee
Rosenow, L. J. .....Waumandee
Spaulding, L. C. .....Mondovi
Stuber, John H.....Cochrane
Suhr, Adolph A.....Cochrane
Suhr, Otto A.....Cochrane

Calumet County

Kircher, H. W. .....Chilton, R. 3
Peik, Arthur .....Chilton
Peik, Edmund .....Chilton
Peterson, Hy. N.....New Holstein

Chippewa County

Bailey, Alfred B.....Jim Falls
Christianson, W. O.....
Chippewa Falls, R. 6
Finsnes, A. I.....Chippewa Falls
Guptill, L. R.....New Auburn
Johnson, Albert I.....Bloomer
King, Wm. .....Jim Falls
Kramer, Henry F.....Bloomer
Lebeis, F. J.....Bloomer
Martiny, L. P.....Chippewa Falls
Siepert, F. W.....Chippewa Falls
Upton, Harold F.....Jim Falls

Clark County

Beach, Glenn H.....Loyal
Huckstead, A. A. .....Neillsville
Hughes, Jas.....Neillsville, R. 1
Imig, Arthur H....Neillsville, R. 1
Ives, L. W.....Granton
Krause, Fred W.....Thorpe
Nelson, Carl .....Greenwood
Schultz, Walter W.....Neillsville
Umlauft, Rudolph .....Dorchester
Zerbel, Paul.. .....Humbird

Columbia County

Anaaker, Bernhard .....Portage
Chipman, W. R.....Morrisonville
Chrisler, Harley .....Lodi
Curtis, Ray .....Poynette
Dalton, Ernest E.....Pardeeville
Dalton, Roy E.....Pardeeville
Ellickson, A. C.....Arlington
Gloeckler, Theo .....Portage
Grove, Albert.....Columbus, R. 6
Grove, Christian .....Columbus
Hoffman, Herman .....Portage
Jones, R. G.....Columbus
Livingston, E. C.....Randolph
Lloyd, Evan B. .....Cambria
McElroy, W. H.....Pardeeville
Owen, Thos. M.....Portage
Roberts, A. C....Pardeeville, R. 7
Sharpee, Endre A.....Rio, R. 1
Sharpee, J. A.....Rio, R. 1
Steuber, L. J.....Lodi

Crawford County

Accola, Lawrence .....Steuben
Davis, Neli .....Soldiers Grove
Hjelle, Ole K.....Soldiers Grove
Johnson, E. T. .....Soldiers Grove

Johnson, J. E....Ferryville, R. 3
Lawrence, W. J.....DeSoto
Nagle, Lee .....Bridgeport

Dane County

Accola, John, Madison, U. W. Farm
Angvick, Lars.....Cottage Grove
Anthony, D. C.....Oregon
Beck, J. D.....Madison
Bendickson, I. E.....Cambridge
Benson, Ed. E.....Mt. Horeb
Berge, Wm. .....Cambridge
Bewick, W. W.....Madison
Birkinbine, Frank.....Sun Prairie
Boyce, Charlotte .....Dane
Brickson, Abram .....McFarland
Brickson, Andrew...Cottage Grove
Brigham, Chas. I.....Blue Mounds
Britzke, Paul .....London
Brue, N. H.....De Forest
Charles, Ed. S.....Madison
Chase, J. P. .....Sun Prairie
Chatterton, R. W.....Basco
Christianson, Irvin .....Deerfield
Cobb, Homer A.....Sun Prairie
Coldwell, John .....Mazomanie
Colladay, W. E.....Stoughton
Daley, E. S.....De Forest
Daley, Julius .....De Forest
Daley, O. S.....De Forest
Daley, S. S.....De Forest
Danielson, K. O.....Mt. Horeb
Davison, R. W.....Sun Prairie
Dineen, Michael.....Blue Mounds
Doerfer, Wm.....Madison, R. 6
Dreger, E. L.....Madison
Egre, John S.....Cambridge
Eley, T. B.....Madison, R. D
Erdall, M. N.....Deerfield
Felland, George....Madison, R. 1
Gay, John .....Madison
Gillies, J. H.....Stoughton
Gillette, R. A.....Verona
Goecks, Wm.....Madison, R. 1
Graves, E. H.....Madison
Grinde, L. S.....Morrisonville
Grady, Geo. .....Oregon
Hanna, O. O.....Mt. Horeb
Henning, Walter .....Mazomanie
Hill, Otto C.....Mt. Horeb
Holmen, O. H.....Belleville
Holscher, A. C.....Cottage Grove
Hopkins, B. F.....Morrisonville
Hougen, Halvor O.....Stoughton
Hougen, S. O.....Stoughton
Howe, T. R.....Sun Prairie
Kaltenberg, Anthony ..Waunakee
Kaupunger, Gilman T., ..Stoughton
Kendall, Geo. W.....Sun Prairie
Kittlerm, Knut .....Mt. Horeb
Kneeland, Peter .....Windsor
Knudsen, Henry .....Mt. Horeb
Koltes, Jos. F.....Dane
Larson, Albert.....Madison, R. 1
Larson A. C. .....Madison
Larson, Lewis .....Madison, R. 1
Lee, Oliver .....Klevenville
Lunde, K. I.....Edgerton
Lythjohan, Carl ....Cottage Grove
Mac Lean, Geo.....Madison, R. 6
Mandt, Lawrence.....Sun Prairie
McConnell, Oren M....McFarland
Meilke, F. D.....Windsor
Meilke, J. E.....Basco
Mikkelson, Thos. .....Deerfield
Mikkelson, Carl .....Deerfield
Mitchell, Geo.....Cottage Grove
Mitchell, J. T.....Cottage Grove
Moen, Herman .....Cambridge
Naef, Jacob .....Riley
Nellen, Jac .....DeForest
Ohman, Alfred .....Deerfield
Ohman, S. S.....Deerfield
Ohnstad, K. O....Stoughton, R. 1
Palmer, Levi .....Verona
Peck, Henry M.....Marshall
Pierstorff, Henry W., Madison R. 6
Pope, Roy W.....Sun Prairie
Raftery, Agnes .....Windsor
Reindahl, A. K.....Madison
Reiner, Andrew.....Sun Prairie
Renk Bros.....Sun Prairie
Rhiner, Albert .....Riley
Rhiner, Caspar .....Riley
Rorge, A. O.....Stoughton
Rorge, A. J.....Stoughton
Royston, Thos. .....Mazomanie
Ryan, Gerald.....Sun Prairie
Showers, M. W.....Mazomanie
Silver, C. R.....Belleville
Skare, Albert .....McFarland
Smithback, Marvin.....Cambridge
Stensly, Anton ....Cottage Grove
Stensly, Ed. P.....Cottage Grove
Strommen, Geo. K.....Cambridge
Swerig, Carl .....Stoughton
Thorstad, Harlon .....Deerfield
Thorstad, N. H.....Deerfield
Tjugum, E. E. .....Sun Prairie
Toepfer, Otto.....Madison, R. 7
Veium, Tillef.....Stoughton, R. 3
Wernich, Wm. H.....De Forest
Wittenberg, E. F.....Middleton
Wrabetz & Semb....Madison, R. 6
Zabel, Edward .....Deerfield, R. 1

Dodge County

Adams, Lester B.....Lowell
Barnes, Amy B.....Waupun
Barstow, J. E.....Randolph
Bohl, Anton.....Beaver Dam, R. 1
Bussewitz, W. E.....Juneau
Craig, Geo. D.....Oconomowoc
Dirks, Arthur .....Waupun
Ehrhardt, Daniel .....Knowles
Goetsch, Albert A.....Juneau
Grebe, Fred P.....Fox Lake
Howitt, Chas. H.....Randolph
Hutchinson, Wm. D.....Rubicon
Johnston, Oney .....Watertown
Jones, John G..Beaver Dam, R. 4
Jones, Owen R., Jr...Beaver Dam
Jones, Seneca T..Watertown, R. 1
Jung, J. W.....Randolph
Krueger, Alexander.....
Watertown, R. 2
Krueger, Henry E....Beaver Dam
Lehmann, Mrs. A. W., Woodland
Lehmann, T. A.....Watertown
Luebke, D. W.....Watertown, R. 1
Mahoney, David.....Juneau
Neuberger, William ....Reeseville
Owens, H. C.....Fox Lake
Randall, S. M.....Waupun
Rockhill, Wm. E.....Waupun
Rex, Edgar .....Burnett
Roberts, Wm. E.....Randolph
Rusink, H. G.....Waupun
Schiller, Claude E...Beaver Dam
Schumann, Hugo.....Beaver Dam
Steiner, W. H.....Brownsville
Ulrich, Erwin C.....Horicon
Voigt, Alvin, Oconomowoc, R. 26

Door County

Antholt, Chas. .....Brussels
Boucsein, Gust L..Detroit Harbor
Bowman, Wallace..Detroit Harbor
Buschman, Hugo .....Forestville
Delcorps, Louis.....Sturgeon Bay
Erickson, Ole C....Detroit Harbor
Keogh, Harry .....Forestville
Larson, Eli .....Sawyer
McLeod, H. S....Sturgeon Bay
Sorenson, Camillo..Sturgeon Bay
Sullivan, J. J.....Forestville

Douglas County

Lindberg, E. J.....Itasca

Dunn County

Chase, A. .....Knapp
Knapton, W. E.....Downing
Meacham, C. .....Downing
Millar, Will .....Menomonie
Snell, Earl D.....Downing

Eau Claire County

Allen, C. L.....Eau Claire
Carlson, Axel T. ....Augusta, R. 4
Donaldson, H. A. ..Eau Claire R. 6
Faast, Ben F. .....Eau Claire
Konz, John Sr. .....Fairchild
Mayo, John H. .....Eau Claire
McDermid, G. A. .....Eau Claire
Russell, A. C. .....Augusta
Wright, W. C. ...Eau Claire, R. 4

Florence County

Burgess, A. J. .....Florence

Fond du Lac County

Adams, A. E. .....Eden
Adams, Richard F...Campbellsport
Beilke, Walter.....Fairwater
Bonzelet, J. P. .....Eden
Briggs, L. W. .....Peebles
Briggs, J. W. .....Peebles
Bristol, Wm. A. .....Oakfield
Donovan, Frank.....Van Dyne
Giebel, Karl A..Fond du Lac, R. 7
Hargrave, Robert O. .....Ripon
Hinz, A. F. .....Ripon
Hintz, William F...Oakfield, R. 26
Howland, W. L. .....Waupun
Hunter, Hobart R....Fond du Lac
Jacky, Gilbert G.....Malone, R. 39
Jacky, H. L. .....Malone, R. 39
Kastein, Herman.....Waupun
Kuehn, Chas. A. .....Brandon
Lawson, W. A. .....Rosendale
Mathews, Lee G. .....Brandon
Maug, Arthur J. .....Ripon
Meekin, H. W. .....Fond du Lac
Meier, Edward F. .....Eden, R. 36
Messner, Edwin F. .....Oakfield
Michels, Henry.....Malone
Mihills, D. R. .....Fond du Lac
Mihills, G. N. .....Fond du Lac
Miller, A. H. .....Waupun
Northrup, Jesse.....Waupun
Patric, William.....Waupun
Peebles, S. S.....Fond du Lac R. 8
Porter, W. L. .....Fond du Lac

Rieman, Elmer.....Ripon
Sheldon, Ben F. .....Brandon
Stroup, Fred G.....Fond du Lac
West, R. N. .....Ripon
Whittaker, Horace E..Fond du Lac

Forest County

Grandine, Marton D.North Crandon

Grant County

Andrew, Geo., Jr. .....Livingston
Barron, R. E. .....Platteville
Bennett, Ora F. .....Glen Haven
Booth, Guy A. .....Cuba City
Booth, Lester G. .....Cuba City
Bryant, Clinton A. ....Hazel Green
Bryant, R. J. .....Hazel Green
Carmody, Daniel.....Mt. Ida
Carmody, P. J. .....Mt. Ida
Cubela, Jos. M. .....Muscoda
Dieter, Wm. A. .....Montfort
Draves, Henry F., Jr. ....Montfort
Farwell, Roy R. .....Ridgeway
Frey, E. J. .....Mt. Hope
Graham, P. S. .....Fennimore
Kaiser, Wm. .....Louisburg
Orth, A. F. .....Muscoda
Rodda, Matt. .....Hazel Green
Runde, Aloysius.....Cuba City
Runde, August.....Sinsinawa
Rundell, Dale E. .....Livingston
Searles, Wm. L. .....Boscobel
Simmons, Will.....Cuba, R. 1
Stivarius, Geo. A. .....Fennimore
Trewartha, Edw. J. ...Hazel Green
Wayne, Joseph.....Boscobel
Wieland, Charles.....Lancaster

Green County

Austin, Elmer E.....Brodhead
Barmore, T. J.....Monroe
Bechtolt, A. B.....Browntown
Bechtolt, J. D.....Browntown
Biglow, L. F.....Brooklyn
Blumer, Ezra, Jr. .....Monroe
Collentine, Arthur .....Monroe
Cornelius, E. C.....Monroe
Dettwiler, John .....Monroe
Gapen, C. E.....Monroe
Grenzow, Jesse H.....Juda
Iverson, C. M.....Browntown
Marty, Matthias .....Monticello
Mau, H. G.....Brodhead
Olson, William ..Browntown, R. 2
Preston, Wm. N.....Juda
Purintun, C. G.....Monticello
Strommen, A. A.....Blanchardville
Taucher Bros. .....Monroe
Thompson, Gilbert G. .....
Blanchardville
Thorp, Eugene B. .....Monroe
Tochterman, C. Jr.....Monroe
Tschudy, B. O.....Monroe, R. 5
Waelti, John.....Monroe, R. 4
Ward, Harold .....Brodhead

Green Lake County

Block, Albert F.....Markesan
Davies, Elias .....Markesan
Robinson, Earl P.....Markesan

Iowa County

Aavang, Henry O.....Barneveld
Berryman, Chas. H.....Dodgeville
Buss, Will G.....Mineral Point
Chappel, Steve J.....Dodgeville
Colplin, Clarence .....Cobb
Davis, Llewellyn....Mineral Point
Gordon, A. L.....Mineral Point
Gordon, C. D.....Mineral Point
Gordon, J. Roy.....Mineral Point
Graber, Edward ....Mineral Point
Graber, Laurence F..Mineral Point
Griffith, James .....Ridgeway
Hanson, Carl O.....Hollandale
Jones, Chas. Lloyd.....Hillside
Jones, Orren Lloyd .....Hillside
Jones, T. O.....Rewey
Kitchen, Jos. H.....Edmund
Ley, Nicholas ....Dodgeville R. 4
Paulson, H. E.....Hollandale
Smedsrud, Melvin C....Hollandale
Steensland, August.....Hollandale
Theobald, John S.....Barneveld
Thomas, Roy E.....Dodgeville

Jackson County

Curran, W. F.....Taylor
Dettinger, W. F.....Hixton
Engleman, John .....Hixton
Hecketsweiler, O. J....Alma Center
Merrill, W. M.....Taylor
Thompson, Adolph, ...
Black River Falls

Jefferson County

Altpeter, Ed.....Ft. Atkinson
Brueckner, H. C.....Ft. Atkinson
Brueckner, Justus....Ft. Atkinson
Christ, Albert .....Cambridge

Church, A. P.....Whitewater
Guttenberg, Frank, Jr., ..Jefferson
Joice, Geo. E.....Waterloo
Keuler, Aaron F.....Helenville
Keuler, Harry .....Helenville
Klement, Otto C.....Ft. Atkinson
Leonard, Wm. R.....Jefferson
Linton, Gilbert A....Ft. Atkinson
Main, H. A.....Ft. Atkinson
Mathews, M. D.....Helenville
McIntyre, Ivan.....Ft. Atkinson
Norman, Frank .....Helenville
Parsons, Wm. A.....Ft. Atkinson
Papp, Arthur .....Jefferson, R. 2
Ward, Charles E.....Ft. Atkinson
Ward, Harold L.....Ft. Atkinson
Ward, Robert W.....Ft. Atkinson

Juneau County

Curtis, J. C.....New Lisbon
Hanzlik, Otto J.....Wonewoc
Salem, Edward .....Wonewoc
Smith, R. M.....Elroy, R. 1
Wagner, J. M.....Union Center

Kenosha County

Bradley, J. Frank.....Somers
Brook, J. W.....Salem
Bullamore, Roy .....Kenosha
Bullamore, R. G.....Kenosha
Curtis, Mark W.....Trevor
Curtis, Wm. V.....Trevor
Deuter, Walter S.....Kenosha
Holloway, John W....Union Grove
Mueller, Math J. .....Bristol
% P. J. Thom.
Myrick, M. O.....Bristol
Orvis, L. C.....Salem
Paddock, Alvin D.....Salem
Roberts, F. W. .....Woodworth
Sheen, Clarence J.....Trevor
Sheen, W. J.....Trevor
Thom, J. A.....Bristol, R. 30

Kewaunee County

Blahnik, Geo. F.....Algoma
Boudnik, John.....Kewaunee, R. 7
Collin, D. W.....Luxemburg
Hoffman, Jacob .....Algoma
Katel, W. C.....Kewaunee R. 1
Krofta, Rudolph....Kewaunee, R. 2
Oestreich, L. J.....Kewaunee
Oestreich, R. C.....Kewaunee
Smithwick, Jas. .....Kewaunee

La Crosse County

Bonsack, Theo. .....West Salem
Eggler, Victor H..La Crosse, R. 1
Engebretson, Edwin S..West Salem
Harr, Ernest B.....Bangor
Hass, Reinhold A..La Crosse, R. 1
Hemker, Fritz H.....West Salem
Jewett, Harry .....Bangor
Jones, E. E.....Rockland
Lawrence, F. W.....Bangor
Linse, Charles .....La Crosse
Nelson, Osan .....La Crosse
Nuttleman, Alfred L..West Salem
Nuttleman, Fred.....West Salem
Sandman, W. D.....Holmen

La Fayette County

Akins, Clyde E.....Warren, Ill.
Carey, W. H.....Argyle
Erickson, Clarence, South Wayne
Jorenby, Carl .....Blanchardville
McConnell, F. J. .....Darlington
Perry, Will H.....Gratiot
Rood Bros. .....So. Wayne
Sargent, Roy E.....Warren, Ill.
Stewart, J. W.....Blanchardville
Usher, Earl .....So. Wayne
Usher, J. M.....So. Wayne
Vinger, Milo J.....Argyle

Langlade County

Kalouner, Edward ....Antigo, R. 5
Persen, Alfred .....Bryant

Manitowoc County

Axley, Walter .....Cleveland
Ballestad, Lars .....Manitowoc
Bauer, Adolph H..Manitowoc, R. 2
Bruhn, John F....Two Rivers, R. 1
Berge, Otis I.....Valders
Clusen, Reinhold .....Manitowoc
Geraldson, Mervin, Manitowoc, R. 4
Gigstad, Benneth .....Valders
Gunderson, Clifford, Manitowoc R. 4
Gustaveson, Chas., Manitowoc, R. 4
Halverson, Almer,Manitowoc, R. 1
Heidemann, O. C. .....Kiel, R. 2
Hessel, Louis.....Manitowoc, R. 6
Kielsmeier, Rudolph C. ..Timothy
Klann, Adolph .....Hayton, R. 1
Knutson, Ed. A...Manitowoc, R. 4
Kolb, Ed. .....Cleveland, R. 2
Marken, Otis A.....Valders
Marken, Richard L.....Valders

Paulsen, J. E.....Manitowoc, R. 4
Rein, Robert.....Cleveland, R. 1
Roethel, Herman .....Kiel
Schulte, Peter J.....Cleveland
Straka, Edward E....Kellnersville
Strowig, Wm. A....Cleveland, R. 1
Sullivan, Jas. A.....Grimms
Tyler, J. G.....Valders
Wiegand, Otto R.....Cleveland
Wigen, Andrew .....Quarry
Wilkowske, Hugo .....Mishicot

Marathon County

Aschbrenner, H. H.....Stratford
Baesemann, Otto .....Edgar
Brehm, E. A.....Colby
Griffith, James .....Spencer
Heinke, Alvin E. .....Stratford
Nieman, Walter ....Hamburg, R. 1
Reinhardt, Walter H.....Wausau

Marinette County

Falarsh, Frank .....Peshtigo
Olson, Otto W.....Walsh

Marquette County

Cairns, J. H..... Montello
Gaffney, Ellery .....Oxford
Houslet, Neal .....Packwaukee
Johnson, Sam .....Westfield
Judd, Jasper .....Endeavor
Judd, Jesse L.....Endeavor
Landgraff, Henry .....Endeavor
McMillen, R. A.....Endeavor
Parrott, Alfred .....Endeavor

Milwaukee County

Basse, Wm. H. .....
Milwaukee, Sta. A., R. 4
Guenther, Nelson W. .....
So. Milwaukee, R. 17
Hardy, John .....Wauwatosa
Jelineck, Benjamin ....Milwaukee
935 Feutonia Ave.
Kurtze, Otto C...West Allis, R. 15
Meyer, Alfred ....Oakwood, R. 18
Pierner, Fred .....No. Milwaukee
Pierner, John W.....Thiensville
Warzynakoski, Arthur .....
Oakwood, R. 18

Monroe County

Aarness, O. C.....Cashton
Andrew, J. S.....Wilton
Ebert, Edmund D.....Tomah
Ebert, Francis E.....Tomah
Finegan, Louis .....Sparta
Foth, F. D.....Norwalk
Fox, C. L. .....Leon
Freeman, G. A.....Sparta
Grassman, Irwin .....Kendall
Hanchett, W. H. .....Sparta
Hansen Carl F.....Sparta
Harris, R. E.....Warrens
Heasty, Ralph .....Sparta
Hitchcock, Clarence .....Sparta
Howell, H. P.....Sparta
Jones, S. R.....Leon
Kirst, Ernest J.....Tomah
McDonald, James P.....Sparta
Peterson, John H.....Cashton
Whitehead, H. W.....Leon

Outagamie County

Jamison, Robert .....Appleton
Letts, Edward F....Appleton, R. 4
Merkel, Henry .....Appleton, R. 3
Mueller, Edward O.....Appleton
Ryan, Malachi .....So. Kaukauna
Schaefer, R. J.....Appleton, R. 1
Schmit, A. W.....Appleton
Schmit, Geo. .....Greenville, R. 16
Schmit, John A. .....Hortonville
Tubbs, Herbert .....Seymour
Wussow, Chas. A.....Seymour

Ozaukee County

Ahlers, Walter .....Grafton
Blank, George A.....Grafton
Clausing, Adolph .....Thiensville
Gould, Merrill .....Peshtigo
Meyer, A. H.....Grafton
Pierner, John W.....Thiensville
Port, Mike .....Port Washington
Wulff, Fred .....Grafton
Wulff, Wm. .....Grafton

Pepin County

Fleishauer, Chas. K.....Arkansaw
Hicks, Earl L.....Pepin, R. 1

Pierce County

Brown, Wm. .....Spring Valley
Dunbar, Geo. W., Sr., River Falls
Dunbar, Harold .....River Falls
Hanson, Henry O. ..Spring Valley
Heinze, Louis .....Prescott
Nelson, Emil .....River Falls
Neystrom, Archie....Maiden Rock

Otis, Frank .....Maiden Rock
Scheid, Byron J.....Bay City

Polk County

Christensen, Herman ....Milltown
Germanson, Herbert .....Luck
Hedlund, Adolph .....Clayton
Lindberg, Clinton, Dresser Jct., R. 1
Nelson, Peter C. .....Milltown
Peterson, Eni .....Amery, R. 4
Uhlin, Albin .....Clayton, R. 1
Uhlin, Frank .....Clayton

Portage County

Arnatt, Grace M.....Stevens Point
Cate, Geo. ....Stevens Point, R. 1
Gullickson, Gustave ....Nelsonville
Gullickson, Thos O....Nelsonville
Hanson, J. K.....Stevens Point
Hanson, N. P....Amherst Jct. R. 2
Lewis, Lloyd ..Stevens Point, R. 1
Precourt, L. A.....Plover
Smith, C. A.....Amherst
Wagner, Raymond G. .....
Stevens Point, R. 1
Wrolstad, Alfred M..Amherst Jct.

Price County

Klussendorf, Fred E..Phillips, R. 1
Hoffman, Conrad ....Phillips, R. 1

Racine County

Cook, Geo. L.....Burlington
Gehrand. Arthur A.....Rochester
Grass, Frank .....Rochester
Holloway, Ed. M., Union Grove, R. 8
Klofanda, Reuben....Racine, R. 1
Nau, Ray H.....Franksville
Renak, Edw.. .....Racine, R. 2
Robers, Wm. J., Burlington, R. 20
Rolfson, Clarence E. .....
Waterford, R. 25
Wilson, Wm. C. .....Burlington

Richland County

Ghastin, Floyd .....Twin Bluffs
Ghastin, Wm. J.....Twin Bluffs
James, Geo. A....Richland Center
Janecek, Cyril .....Bloom City
Jaquish, J. E. .....Twin Bluffs
Lord, Karl W. ...Richland Center
Nourse, Glen .....Sextonville
Post, H. L.....Sextonville
Schmitz, Edw. H. .....Lone Rock
Schmitz, Hubert .....Lone Rock
Turgasen, J. H....Richland Center

Rock County

Austin, Alpheus .....Janesville
Austin, Alva G.....Janesville, R. 6
Austin, Alvina L.....Evansville
Austin, Clifford P.....Janesville
Austin, George M..Janesville, R. 6
Austin, Wilbur B.....Janesville
Austin, Wilbur D.....Janesville
Babcock, J. G.....Evansville
Barker, E. S.....Janesville
Churchill, Arthur..Janesville, R. 7
Devine, C. B.....Evansville
Dougan, W. J.....Beloit
Ellis, E. J.....Evansville
Fish, Esli.....Janesville, R. 7
Godfrey, Burt K..Janesville, R. 1
Greene, J. I.....Clinton
Hoague, Chas. C....Janesville, R. 7
Jacobs, S. M.....Janesville, R. 3
Latta, F. L.....Clinton Jct.
Marston, Albert ....Beloit, R. 30
McCoy, Geo. L....Evansville, R. 20
Nelson, Martin .....Milton
Porter, J. K. P.....Evansville
Porter, L. W.....Evansville
Smith, L. E. .....Beloit, R. 30
Snyder, Clyde L.....Forestville
Snyder, Robt. B.....Clinton

Rusk County

Beebe, A. G.....Bruce
Pritchard, John T.....Flambeau

St. Croix County

Bennett, Wm. L....New Richmond
Brunner, R. W.....Hudson
Hecker, Paul .....New Richmond
Imholt, B. A.....Houlton
Kruschke, Geo. H..New Richmond
Paulson, P. A.....Hudson
Utgaard, Peter W.....Cylon

Sauk County

Borck, Sam .....No. Freedom
Clavadatscher, T.....Sauk City
Cobleigh, Rollo S.....Delton
Capener, W. R.....Baraboo
Emery, George .....Logansville
Frederickson, Fred..Spring Green
Gade, Adolph .....Reedsburg
Gallagher, J. G.....Reedsburg
Gasser, George W....Spring Green

Graves, D. W.....Baraboo
Hansch, Albert .....Baraboo
Hamburg, J. F.....Baraboo
Harvey, C. B.....Wonewoc
Hasz, Theodor .....Loganville
Henrichs, Ernest .....Reedsburg
Herwig, Richard .....Delton
Herwig, Theo .....Delton, R. 1
Hood, D. L.....Spring Green
Marshall, W. S.....Delton
Ochsner, Arthur C.....Plain
Pearson, Clarence...La Valle, R. 4
Raltzman, A. L.....Reedsburg
Rich, O. S.....Baraboo
Rich, W. V.....Baraboo
Riek, Anthony .....Plain
Robson, Melvin .....Spring Green
Rodewald, Walter C.....Baraboo
Rusch, E. W.....Reedsburg
Schaefer, Erwin S....Black Hawk
Schuette, Herman W. .....
Reedsburg, R. 3
Siggelkow, M. E.....Baraboo
Spencer, Hardy .....Baraboo
Stone, Riley .....Reedsburg
Volz, Robert .....Ableman
Vonder Ohe, Wm. H....Reedsburg
Weirich, Martin J.....Baraboo
Wischoff, Edwin .....Reedsburg

Sawyer County

Thulin, Edwin .....Hayward
Uhrenholdt, Jens .....Leonard

Shawano County

Berg, Carl .....Tigerton
Hildemann, E. S.....Belle Plaine
Klovdahl, John J.....Wittenberg
Norrborn, C. G.....Eland
Wedgwood, R. E.....Shawano

Sheboygan County

Blonien, Peter .....Elkhart
Dennerlein, Arthur J....Plymouth
Fisher, Louis .....Haven
Frauenheim, O. R.:Random Lake
Garside, Harry R....Cedar Grove
Herdrich, S. F.....Adell, R. 19
Illian, W. L.....Adell, R. 19
Oosterhuis, Alvin C. .....
Sheboygan Falls
Parrish, J. O.....Plymouth
Te Selle, Clarence J.....
Sheboygan Falls
Wagner, Arthur L.....Haven

Trempealeau County

Chrysler, Harvey .....Osseo
Cooke, Carl .....Independence
Coon, Leslie .....Osseo
Dean, Robert .....Eleva
Graul, Edw. J. .....Independence
Graul, Geo. W.....Independence
Hegge, Julius .....Galesville
Markham, F. C.....Independence
Mattison, Thos. .....Blair
McCauley, Rex .....Osseo

Vernon County

Aberg, Jacob .....De Soto
Bean, A. P.....De Soto
Cade, Jos. M.....Viroqua
Christensen, Johan...West Prairie
Kjelland, Christian .....Viroqua
Lewison, Thomas ....Viroqua, R. 5
McClurg, Walter.....Viroqua
Neprud, Nels O.....Coon Valley
Olson, Clarence.....Westby
Olson, Gilbert C.....Westby
Sebion, Cornelius .....Westby
Sebion, Tennis .....Westby
Sorem, Erick ..West Prairie, R. 1
Stegene, Chris .....Viroqua, R. 5
Stromstad, P. L.....Coon Valley

Walworth County

Anderson, Alvin M...Whitewater
Bromley, Fred G.....
Whitewater, R. 4
Cassidy, Wm. S. .....Whitewater
Coates, Clinton J.....Elkhorn
Anderson, Alvin M....Whitewater
Coburn, Ora .....Whitewater
Downey, U. J.....Whitewater
Dunbar, Harry D.....Elkhorn
Harris, Jesse S.....Delavan
Lean, R. J., & Son.....Elkhorn
Ledger, David .....Lake Geneva
Lewis, E. H.....Whitewater
Mack, Warren L.....Whitewater
Marck, Fred R.....Honey Creek
Meurer, Paul.....Genoa Jct.
Mitchell, Edw. H.....Delavan
Peters, Ezra .....Sharon
Peterson, Peter .....Walworth
Piper, Harry.....Sharon
Ranney, P. C.....Elkhorn
Robinson, A. S.....Lake Geneva
Thacher, Ed. F.....Zenda
Thacher, Louis E.....Zenda
Thompson, A. N.....Delavan
Thompson, Alfred .....Delavan

Washington County

Bast, Paul J.....Rockfield
Berg, Jacob .....So. Germantown
Dhein, Henry .....Rockfield
Groth, C. A.....Cedarburg
Hayes, Thos., Jr.....Richfield
Klumb, Albert .....Rockfield
Klumb, Hugo G.....Kewaskum
Klumb, Oscar .....Rockfield
Kressin, Gustav R.....Cedarburg
Milkee, George .....West Bend
Murphy, Lawrence .....Hartford
O'Connell, James .....Hartford
Puls, John .....Hartford
Schroeder, H. F.....West Bend
Schottler, Conrad J.....
So. Germantown
Schultz, Nelson F., West Bend R. 3
Stuesser, Eugene .....Richfield
Waldt, Hugo .....Jackson
Ziemer, Joseph .....Jackson
Ziemer, Paul .....Jackson

Waukesha County

Adams, Jay .....Waukesha, R. 5
Adams, M. J.....Waukesha
Baird, Wm. J.....Waukesha
Blackwell, Leslie C.....Waukesha
Cook, Irving O. ...Nashotah, R. 23
Dance, James .....Brookfield
Dibble, Roy A...Menomonee Falls
Fuller, Horace .....North Lake
Graser, Adam H.....Waukesha
Greene Howard ....Genesee Depot
Haylett, Henry O..Waukesha, R. 9
Heling, Paul.....Menomonee Falls
Jones, Albert .....Dousman
Kaul, E. H.....Waukesha, R. 7
Kuhtz, Harvey A. .....Waukesha
Longley, H. N.....Dousman
Montague, C. R.....No. Prairie
Nicolaus, Chas. A. .....Waukesha
Roberts, Jack.....Waukesha
Rosenow Bros. .....Oconomowoc
Rust, Shirley H.....Mukwonago
Schafer, Chas. H..Waukesha, R. 7
Schroeder, F. C.....Hartland
Shannon, M. J.....Oconomowoc
Spaulding, C. F.....Oconomowoc
Stewart, Joe H.....Wales
Swan, L. W.....Mukwonago
Swoboda, F. G.....Dousman
Tempero, Roy J., Menomonee Falls
Weir, W. W.....Mukwonago
Wetzel, Alvin ....Brookfield, R. 12
Williams, Arthur R....Waukesha
Williams, D. T....Waukesha, R. 8
Wright, H. W.....Waukesha
Zillmer, Wm. C. .....Brookfield

Waupaca County

Ashnum, C. S.....Waupaca, R. 2
Bestul, Martin J.....Scandinavia
Bestul, Otto O. .....Scandinavia
Bigford, W. W.....Manawa
Feathers, O. C.....Manawa
Gorges, H. F. .....New London
Harrington, Myron.....Waupaca
Heinrich, Otto W. ....New London
Klemm, Louis J. .....Welcome
Kneip, William.....Weyauwega
Larson, LeRoy.....Iola
Lemke, Albert.....Clintonville
Nace, Franklin.....Iola
Pinkerton, Altai, J.....Waupaca
Pirner, Fred.....Sugar Bush
Raisler, Theodore.....Welcome
Rosholt, Jacob A..Scandinavia R. 1
Spencer, Earl.....Waupaca, R. 3
Wied, Edward.....Waupaca

Waushara County

Anderson, Thos. E. .....Wild Rose
Bartleson, Harvey..Pine River, R. 1
Carey, Henry.....Redgranite
Clark, J. J. .....Berlin, R. 1
Eagan, J. J. .....Wautoma, R. 6
Harris, A. M. .....Plainfield
Knuteson, Ernest L. ....Wautoma

Winnebago County

Blakely, Albert J. .....Neenah
Blodgett, Gordon R.....Neenah
Bussey, W. P. .....Omro, R. 24
Cross, A. J. .....Allenville
Hoeft, Chas. A. .....Oshkosh,
Linwood Farm
Jackson, H. H. .....Oshkosh,
104 Main St.
Michels, Math. .....Picketts
Miller, Henry C. .....Allenville
Palfrey, John.....Omro
Rasmussen, Fred....Neenah, R. 11
Schaefer, R. J. .....Appleton
Smith, Seymour L. .....Oshkosh
Tanner, A. V. .....Omro, R. 24
Treleven, Guy T. .....Omro
Waite, Sumner R. ..Oshkosh, R. 7
Wood, Calvin D. ....Oshkosh, R. 4

Wood County

Christensen, Peter..Marshfield, R. 3
Hanifin, Leo.....Grand Rapids

Kieffer, J. C. .....Auburndale
Kronholm, V. E.....Grand Rapids

NON-RESIDENTS

Hauck, Nathan.....Alton, Calif.
McLeon, Donald..Denver, Colorado
704 Equitable Bldg.
Haas, Geo. H. .....Meriden, Conn.
Charles, Fred.....Woodstock, Ill.
Coffin, Russell H. ..Rockford, R. 7, Ill.
Fellows, Samuel M. ..Rockford, Ill.
George, W. R. .....Sterling, Ill.
Hitchcock, H. R. ...Pecatonica, Ill.
Halley, Guy R. .....Rockford, Ill.
Hoxsey, Edw. H. .....Serena, Ill.
Northrop, H. R. .....Chicago, Ill.
667 Winthrop Av.
Richardson, G. J. ...Spring Grove, Ill.
Smith, Russell....Crystal Lake, Ill.
White, Arthur.....Rockford, Ill.
503 N. Church St.
Anderson, Theo. ..Waterville, Iowa
Berns, Xavier....Guttenberg, R. 1, Iowa
Brooks, Homer H. .Hopkinton, Iowa
Hawkins, A. B. .....Farley, Iowa
Mathis, Adolph J. ..Lansing, Iowa
Thompson, Thor, Jr. .....Wadena, Iowa
Fernald, Paul E. ...West Oldtown, Maine
Eskil, Odin..Iron Mountain, Mich.
Meyer, A. J. ...Howell, R. 7, Mich.
Meyer, Wm. .....Ellsworth, Minn.
Smith, J. G. ...Farmington, Minn.
Hayes, Edwin H. ..Buffalo, N. York
593 W. Ferry St.
Doerschuk, John J. ...Shanesville, Ohio

Growers of Manshury Barley (Wisconsin No. 62).

Buffalo County

Muehleisen, Gottlieb .....Tell
Spaulding, L. C. .....Mondovi

Columbia County

Lloyd, Evan B. .....Cambria

Dane County

Koltes, Leo. J. .....Dane
Mitchell, J. T. .....Cottage Grove
Palmer, Levi.....Verona

Dodge County

Bohl, Anton.....Beaver Dam, R. 1
Krueger, Henry E. ....Beaver Dam

Eau Claire County

Allen, Chas. L. .....Eau Claire
Donaldson, H. A. .....Eau Claire
Konz, John, Sr. .....Fairchild

Fond du Lac County

Hinz, A. F. .....Ripon
West, R. N. .....Ripon

Grant County

Wiseman, Paul.....Bridgeport

Green County

Marty, Matthias....Monticello, R. 1

Kenosha County

Orvis, L. C. .....Salem

Kewaunee County

Oestreich, R. C. .....Kewaunee

La Crosse County

Sandman, W. D. .....Holmen

Manitowoc County

Garey, James.....Grimms

Marinette County

Falarsh, Frank.....Peshtigo

Racine County

Spartz, N. A. .....Union Grove

Richland County

Ghastin, Wm. J. .....Twin Bluffs

Rock County

Austin, Alpheus.....Janesville
Austin, W. B. .....Janesville

Sauk County

Capener, Walter R. .....Baraboo
Ochsner, Arthur C. .....Plain

Growers of Ito San Soy Beans.

Adams County

Lee, Royal D. .....Arkdale

Buffalo County

Bilderbach, Wm. .....Mondovi
Muehleisen, G. .....Tell

Calumet County

Peik, Arthur.....Chilton

Chippewa County

King, Wm. .....Jim Falls
Upton, H. F. .....Jim Falls

Columbia County

Lloyd, Evan B. .....Cambria
Owen, Thos. M. .....Portage

Crawford County

Hjelle, Ole K. .....Soldiers Grove
Stevenson, Carl.....Soldiers Grove

Dane County

Anthony, D. C. .....Oregon
Bewick, Wm. M. .....Sun Prairie
Birrenkott, M. J. .....Klevenville
Brigham, Chas. I. ...Blue Mounds
Davidson, W. L. .....Verona
Mitchell, J. T. .....Cottage Grove
Schroeder, Robert....Morrisonville
Wernich, Wm. H. .....DeForest

Dodge County

Bohl, Anton.....Beaver Dam
Buzzewitz, Raymond....Reeseville
Grebe, Fred P. .....Fox Lake
Jones, John G. .....Beaver Dam
Jones, Owen R. .....Beaver Dam
Neuberger, Wm. T. .....Reeseville
Schumann, Hugo.....Beaver Dam

Door County

Erickson, Ole C. ....Detroit Harbor

Eau Claire County

Allen, Chas. L. .....Eau Claire

Fond du Lac County

Hendrichs, J. H. ....Campbellsport
Meekin, H. W. .....Fond du Lac
Whittaker, Horace E. .Fond du Lac

Grant County

Carmody, P. J. .....Mt. Ida
Runde, Aloysius .....Cuba City
Runde, Martin C. .....Cuba City

Green County

Dettwiler, John.....Monroe
Tschudy, B. O. .....Monroe, R. 5
Ward, Harold.....Brodhead

Iowa County

Caldwell, John.....Mazomanie
Farwell, Roy R. .....Ridgeway
Fitzsimmons, Ira A. .Mineral Point

Jefferson County

Brown, A. A. .....Waterloo

Juneau County

Hall, W. H. .....Wonewoc

Kenosha County

Bradley, J. Frank.....Somers

Kewaunee County

Collin, D. W. .....Luxemburg

La Crosse County

Bonsack, Theo. .....West Salem
Van Loon, John.....La Crosse

La Fayette County

Akins, Clyde E. .....Warren, Ill.
Sargent, Roy E. .....Warren, Ill.
Usher, Earl.....So. Wayne

Langlade County

Stewart, Blaine G. .....Antigo

Manitowoc County

Bauer, Adolph H. ..Manitowoc, R. 2
Sullivan, Jas. A. .....Grimms

Marquette County

Cairns, J. H. .....Montello
McDowell, D. P.....Packwaukee

Milwaukee County

Guenther, Nelson W. .....
So. Milwaukee

Monroe County

Lee, L. .....Leon
Mistele, Wm. .....Kendall

Outagamie County

Jamison, Clarence...Appleton, R. 2
Jamison, Robert....Appleton, R. 2
Jamison, W. G. ....Appleton, R. 2
Koss, Otto W. .....Medina
Mills, Roscoe C. ....Appleton, R. 2
Schmit, Albert.....Appleton
Schmit, A. W. .....Appleton
Schmit, Geo. .....Greenville
Schmit, Wm. F. .....Appleton

Portage County

Hicks, S. E. .....Almond
Lewis, Lloyd...Stevens Point, R. 1
Wagner, Raymond G. .....
Stevens Point, R. 1

Richland County

Ghastin, Wm. J. .....Twin Bluffs
Nourse, Glen.....Sextonville
Post, H. L. .....Sextonville
Welsh, S. L. .....Tavera

Rock County

Hemingway, Geo. L. .....Hanover
Peik, Edmund.....Edgerton
Porter, J. K. P. .....Evansville

St. Croix County

Alberts, Will.....New Richmond
Kruschke, Geo. H. ..New Richmond

Sauk County

Clavadatscher, T. .....Sauk City
Gallagher, J. F. .....Reedsburg
Herwig, Richard.....Delton
Herwig, Theo. .....Delton, R. 1
Jens, Otto A. .....Sauk City
Ochsner, A. C. .....Plain
Riek, Anthony.....Plain
Rusch, E. W. .....Reedsburg

Sheboygan County

Dennerlein, A. J. .....Plymouth
Frauenheim, O. R. ..Random Lake
Illian, Wm. L. .....Adell, R. 19
Leonard, M. J. .....Plymouth
Ogle, James.....Waldo
Schaefer, Henry G. .....Plymouth

Vernon County

Neprud, Nels.....Coon Valley
Staley, John N.....Hillsboro

Walworth County

Lean, R. J. & Son.....Elkhorn
Peterson, E. C. .....Whitewater

Waukesha County

Dibble, Roy A. ..Menomonee Falls, R. 17
Heling, Wm. C. ..Menomonee Falls
Kaul, E. H. .....Waukesha, R. 7
Kuhtz, Harvey A. .....Waukesha
Rosenow Bros. .....Oconomowoc
Tempero, Roy J. ..Menomonee Falls

Waupaca County

Ashmun, C. S. .....Waupaca
Harrington, Myron H. ....Waupaca
Larson, LeRoy.....Iola
Pinkerton, Altai J. .....Waupaca
Spencer, E. H. .....Waupaca
Wied, Edward.....Waupaca

Waushara County

Winge, Wm. .....Wild Rose

Winnebago County

Bussey, W. P. .....Omro, R. 24
Cross, A. J. .....Allenville
Michels, Math.....Pickett
Miller, Henry C. .....Allenville
Palfrey, John.....Omro

Growers of Early Black Soy Beans.

Dunn County

Kent, J. S. .....Rusk

Manitowoc County

Sullivan, Jas. A. .....Grimms

Outagamie County

Schmit, John A. .....Hortonville
Wussow, Chas. A. .....Seymour

Pepin County

Hicks, Earl L. .....Pepin, R. 1

St. Croix County

Bennett, Wm. L. ..New Richmond

Sheboygan County

Frauenheim, O. R. ..Random Lake

Growers of Black Soy Beans.

Adams County

Walker, Ray C. .....Plainville

Columbia County

Dalton, Ernest E. .....Pardeeville
Dalton, Roy E. .....Pardeeville

Dodge County

Bohl, Joseph N. .....Beaver Dam
Howitt, Chas. H. .....Randolph
Jones, John G. ...Beaver Dam, R. 4
Jones, Owen R., Jr. ..Beaver Dam
Kreuger, Henry E. ....Beaver Dam
Schiller, Claude E. ....Beaver Dam

Iowa County

Jones, Orren Lloyd.....Hillside

Manitowoc County

Heidemann, O. C. .....Kiel, R. 2

Outagamie County

Mueller, Edw. O. .....Appleton

Richland County

Ghastin, Wm. J. .....Twin Bluffs

Sauk County

Ochsner, Arthur C. .....Plain

Sheboygan County

Garside, Harry R. ....Cedar Grove

Winnebago County

Schaefer, R. J. .....Appleton

Growers of Medium Early Green Soy Beans.

Dodge County

Ehrhardt, Daniel.....Knowles

Grant County

Runde, August.....Sinsinawa

Outagamie County

Wussow, Chas. A. .....Seymour

Waukesha County

Swoboda, F. G. .....Dousman

Growers of Yellow Soy Beans.

Dodge County

Howitt, Chas. H. .....Randolph
Kreuger, Henry E. ...Beaver Dam

Growers of Brown Soy Beans.

Fond du Lac County

Meekin, H. W. .....Fond du Lac

Monroe County

Whitehead, H. W. .....Leon

Walworth County

Peterson, E. C. .....Whitewater

Growers of Silver King Corn (Wisconsin No. 7).

Adams County

Lee, Royal D. .....Arkdale
Markham, F. C. .....Independence
Rodger, Ray.....Endeavor
Walker, Ray C. .....Plainville

Barron County

Bartlett, Ray.....Barron
Christlaw, A. M.....Rice Lake

Bayfield County

Kinstler, Clarence L. ...Washburn

Brown County

Nies, Peter .....Greenleaf, R. 3

Buffalo County

Arms, Edward.....Fountain City
Bilderbach, W. T. .....Mondovi
Engel, Geo. H. .....Fountain City
Joos, Frank B. .....Fountain City
Suhr, A. A. .....Cochrane
Whelan, John.....Mondovi

Calumet County

Kircher, H. W. .....Chilton, R. 3
Peik, Arthur.....Chilton
Peik, Edmund.....Chilton
Peterson, Hy. N. ....New Holstein

Chippewa County

Bekken, Oscar.....Bloomer
Martiny, L. P. ....Chippewa Falls

Clark County

Beach, Glenn H. .....Loyal

Columbia County

Cannon, E. A. .....Pardeeville
Chipman, W. R. .....Morrisonville
Dalton, Ernest E. .....Pardeeville
Dalton, Roy E. .....Pardeeville
Ellickson, A. C. .....Arlington
Emery, Geo. Q. .....Poynette
Gloeckler, Theo. .....Portage
Grove, Christian.....Columbus
Grover, Albert .....Columbus, R. 6
Jones, John R. .....Clumbus
Lloyd, Evan B. .....Cambria
Sharpee, Carl.....Columbus
Sharpee, Endre A. .....Rio, R. 1
Sharpee, J. A. .....Rio, R. 1
Steuber, L. J. .....Lodi

Crawford County

Accola, Lawrence.....Steuben
Bannen, R. E. .....Boscobel
Hjelle, Ole K. .....Soldiers Grove
Johnson, J. E. .....Ferryville
Stevenson, Carl.....Soldiers Grove

Dane County

Accola, John, Madison, U. W. Farm
Angvick, Lars.....Cottage Grove
Anthony, David C. .....Oregon
Aslakson, Alfred ..Mt. Horeb, R. 4
Bendickson, I. E. .....Cambridge
Bewick, Wm. W.....Madison
Birkinbine, Frank P. ..Sun Prairie
Bollig, F. A. .....Black Earth
Boyce, Charlotte.....Dane
Brigham, Chas. I. ....Blue Mounds
Brue, N. H. .....De Forest
Chamberlain, Geo. C. .....Windsor
Charles, E. S. .....Lake Geneva
Chase, J. P. .....Sun Prairie
Chatteron, Ray W. .....Basco
Christianson, Andrew.....Deerfield
Christianson, Irvin.....Deerfield
Clayton, A. W. .....So. Madison
Coldwell, John.....Mazomanie
Colloday, W. E. .....Stoughton
Davidson, Wm. L. .....Verona
Davison, R. W. .....Sun Prairie
Donahue, M. J. ..Madison, R. F. D.
Dreger, Emil.....Madison, R. 6
Elvehjem, O. J. .....McFarland
Elver, E. C. .....McFarland
Ford, J. F. .....Mazomanie
Gay, John.....Madison
Gillies, J. H. .....Stoughton
Gillette, R. A. .....Verona
Graves, E. H. .....Madison
Heineck, W. E. .....Madison
Hill, Otto C. .....Mt. Horeb
Hogan, Dominic.....Waunakee
Holscher, A. C. .....Cottage Grove
Holzhuter, Walter.....Marshall
Hopkins, J. W. .....Morrisonville
Howe, T. R. .....Sun Prairie
Jones, E. F. .....Sun Prairie
Kalscheur, Lawrence....Klevenville
Kaltenberg, Anthony.....Waunakee
Keenan, W. M., Jr. .....McFarland
Kendell, Geo. W. .....Sun Prairie
Koltes, Leo. J. .....Dane
Koltes, Jos. F. .....Dane
Lee, N. A. .....Deerfield
Lee, Oliver.....Klevenville
Lee, Severt A. .....Deerfield
Lunde, Gunder.....Stoughton
Lyman, C. A. .....Sun Prairie
Mandt, Lawrence.....Sun Prairie
Mickelson, Thos. .....Deerfield
Mielke, J. O. .....Basco
Mikkelson, Carl.....Deerfield
Mitchell, Geo. .....Cottage Grove
Mitchell, J. T. .....Cottage Grove
Moore, H. G. .....McFarland
Morgan, H. H. .....Madison
Morris, Geo. C. .....Madison
Nordlie, Alfred.....Deerfield
Nordlie, C. K. .....Rockdale
Ohman, Alfred.....Deerfield
Ohman, S. S. .....Deerfield
Patterson, Harley....Cottage Grove
Pope, Roy W. .....Sun Prairie
Radermacher, John.....Middleton
Raftery, Agnes.....Windsor
Reindahl, A. K. .....Madison
Rhiner, Albert.....Riley
Royston, Thos. .....Mazomanie
Ruhrmann, B. J. .....Cross Plains
Ryan, Gerald.....Sun Prairie
Schroeder, Robert....Morrisonville
Sharpee, P. A. .....Morrisonville
Showers, Milton W. ....Mazomanie
Simonson, S. K. .....Deerfield
Skare, Albert.....McFarland
Smithback, Marvin.....Cambridge
Stensly, Anton.....Cottage Grove
Stensly, Ed. P. .....Cottage Grove
Swalem, P. O. .....De Forest
Thielke, Emil.....Madison, R. 6
Thorstad, Harlon.....Deerfield
Thorstad, N. H. .....Deerfield
Toepfer, Otto.....Madison, R. 7
White, F. G. .....Oregon

Willmarth, E. E. .....Sun Prairie
Wratbetz & Semb....Madison, R. 6
Zabel, Edward.....Deerfield, R. 1

Dodge County

Adams, Lester B. .....Lowell
Barstow, Jas. E. ...Randolph, R. 1
Bohl, Anton, Jr. .Beaver Dam, R. 1
Bohl, Jos. N. .....Beaver Dam
Brooks, Ed. J. .....Watertown
Bussewitz, Raymond.....Reeseville
Bussewitz, W. E. .....Juneau
Goetsch, Albert A. .....Juneau
Grebe, Fred P. .....Fox Lake
Henke, Louis.....Lowell
Joice, Georg>.....Waterloo
Johnston, Oney.....Watertown
Jones, John G. ..Beaver Dam, R. 4
Jones, Owen R., Jr. ..Beaver Dam
Jones, Seneca T. ..Watertown, R. 1
Klatt, Ernest .....Beaver Dam
Krueger, H. E. .....Beaver Dam
Kuhlman, A. H. .....Lowell
Lehmann, Theo. .....Watertown
Lindemer, Geo. H. ...Juneau, R. 2
Mahoney, David.....Juneau
Miller, A. H. .....Waupun, R. 24
Neuberger, Wm. T. .....Reeseville
Owens, H. C. .....Fox Lake
Randall, S. M.....Waupun
Roberts, Wm. E. ...Randolph, R. 3
Schiller, Claude E.....Beaver Dam
Schumann, Hugo .....Beaver Dam
Sette O. E. .....Juneau
Ulrich, Erwin C.....Horicon
Voight, Alvin .....Oconomowoc

Door County

Bowman, Wallace ..Detroit Harbor
Hocks, Walter .....Sturgeon Bay
Mc Leod, H. S. .....Sturgeon Bay

Dunn County

Meacham, C. .....Downing

Eau Claire County

Allen, Chas. L. .....Eau Claire
Carlson, Axel T. ....Augusta, R. 4
Faast, Ben F. .....Eau Claire
Konz, John, Sr. .....Fairchild
Oliver, C. S. .....Eau Claire
Wright, W. C. ....Eau Claire, R. 4
Wyman, A. E. .....Eau Claire

Fond du Lac County

Adams, Richard F. ..Campbellsport
Adkins, M. V. .....Ripon
Briggs, E. T. .....Fond du Lac
Briggs, L. W. .....Peebles
Briggs, J. W. .....Peebles
Donovan, Frank .....Van Dyne
Fisher, W. J. ....Fond du Lac, R. 7
Hendricks, J. H.....Campbellsport
Hintz, Geo. E. .....Oakfield, R. 26
Hintz, Wm. .....Oakfield, R. 26
Hinz, A. F. .....Ripon
Halterman, R. K. Fond du Lac, R. 5
Hunter, Hobert R. Fond du Lac, R. 5
Kastein, Herman .....Waupun
Kitchen, J. H. .....Eldorado
Koenigs, Phillip .....Fond du Lac
Lawson, W. A. .....Rosendale
Maug, Arthur J. .....Ripon
Mc Cormick, Fred W. Fond du Lac
Meekin, H. W. .....Fond du Lac
Meier, Edward F. .....Eden, R. 36
Michels, Henry .....Malone
Oltery, Henry .....Fond du Lac
Peebles, E. C. .....Peebles
Peebles, C. E. .....Peebles
Rather, Armand ....Peebles, R. 37
Rather, W. A. .....Peebles, R. 37
Rieman, Elmer .....Ripon
Root, Alvin W. .....Fond du Lac
Root, Frank W. .....Fond du Lac
Smith, Samuel A. .....Oakfield
Stauchfield, S. C. .....Fond du Lac
Stroup, Fred G. .....Fond du Lac
West, R. N. .....Ripon
Whittaker, Horace E. .Fond du Lac

Grant County

Barron, R. E. .....Platteville
Bennett, Ora F. .....Glen Haven
Booth, Guy A. .....Cuba City
Bryant, Clinton A. ...Hazel Green
Carmody, Daniel .....Mt. Ida
Childs, S. S. .....Boscobel, R. 6
Dieter, Bert .....Livingston
Dieter, Wm. A. .....Montfort
Di Vall, W. F. .....Montfort
Draves, Henry F., Jr. ....Montfort
Farwell, Roy R. .....Ridgeway
Graham, P. S. .....Fennimore
Kaiser, Wm. .....Louisburg
Millman, D. R. .....Platteville
Rodda, Matt .....Hazel Green
Runde, August .....Sinsinawa
Runde, Martin C. .....Cuba City
Searles, Wm. L. .....Boscobel
Simmons, Will .....Cuba, R. 1

Stivarius, Geo. A. .....Fennimore
Trewartha, Edw. J....Hazel Green
Wayne, Joseph .....Boscobel
Wieland, Charles .....Lancaster
Wiseman, Paul .....Bridgeport

Green County

Bechtolt, A. B. .....Browntown
Bechtolt, J. D. .....Browntown
Collintine, Arthur .....Monroe
Dettwiler, John .....Monroe
Gapen, C. E. .....Monroe
Iverson, C. M. .....Browntown
Kundert, Wm. .....Monroe
Marty, Mathias .....Monticello
Mau, H. G. .....Brodhead
Murdock, C. R. .....Brodhead
Murdock, John C. .....Brodhead
Olson, Wm. .....Browntown, R. 2
Preston, W. N. .....Juda
Roderick, Lee M. .....Juda
Smiley, Jas. B. .....Albany
Stauffacher, A. J. .....Monroe
Strommen, A. A. ...Blanchardville
Thompson, G. G. ...Blanchardville
Tochtermann, C., Jr.....Monroe
Tschudy, B. O. .....Monroe, R. 5
Waelti, John .....Monroe, R. 4
Ward, Harold .....Brodhead
Wood, John .....Albany

Green Lake County

Block, Albert F. .....Markesan
Davies, Elias .....Markesan
Page, G. F. .....Berlin
Vine, Callice H. .....Marquette

Iowa County

Aavang, Henry O.....Barneveld
Berryman, Chas. H....Dodgeville
Buss, Will G. ....Mineral Point, R.
Coldwell, John .....Mazomanie
Dolplin, Clarence .....Cobb
Farwell, R. R. .....Ridgeway
Fitzsimmons, Ira A. .Mineral Point
Gordon, A. L. .....Mineral Point
Gordon, C. D. .....Mineral Point
Gordon, J. Roy .....Mineral Point
Graber, Edward .....Mineral Point
Jones, Chas. Lloyd .....Hillside
Jones, Orren Lloyd .....Hillside
Kitchen, Jos. H. .....Edmund
Ley, Nicholas ....Dodgeville, R. 4
Paulson, H. E.....Hollandale
Thomas, Roy E. .....Dodgeville

Jackson County

Curran, W. F. .....Taylor
Engleman, John .....Hixton
Sims, Orley F. .....Melrose
Thompson, Adolph Blk. River Falls

Jefferson County

Anthes, Henry .....Jefferson
Becker, Harry J. .....Ft. Atkinson
Bell, Wm. E. ..Oconomowoc, R. 27
Brueckner, Justus ...Ft. Atkinson
Church, A. P. .....Whitewater
Guttenberg, Frank, Jr. ...Jefferson
Joice, Geo. E. .....Waterloo
Klement, Otto C. ....Ft. Atkinson
Lehmann, Theo. ..Watertown, R. 1
Leonard, Wm. R. ....Ft. Atkinson
Main, H. A. .....Ft. Atkinson
Mc Intyre Bros. .....Ft. Atkinson
Nouman, Frank .....Helenville
Parsons, Wm. A. .....Ft. Atkinson
Popp, Arthur .....Jefferson, R. 2
Ward, Charles E. .....Ft. Atkinson
Ward, Harold L. .....Ft. Atkinson
Ward, Robt. W. .Ft. Atkinson, R. 1

Juneau County

Curtis, J. C. .....New Lisbon
Hall, W. H. .....Wonewoc
Hansen, Harry .....Camp Douglas
Mead, R. E. .....New Lisbon
Moore, Henry G. .....Mauston
Ritland, Carl .....Elroy
Salem, Edward .....Wonewoc
Wagner, J. M. .....Union Center

Kenosha County

Bradley, J. Frank .....Somers
Myrick, Mead O. .....Bristol
Northway, M. J. .....Kenosha
Orvis, L. C. .....Salem
Paddock, Alvin .....Salem
Sheen, W. J. .....Trevor
Thiers, L. M. .....Kenosha
Thom, J. A. .....Bristol

Kewaunee County

Collin, D. W. .....Luxemburg
Defnet, J. J. .....Casco, R. 2
Hoffman, Jacob .....Algoma

La Crosse County

Bonsack, F. M. .....La Crosse
Bonsack, Theo. .....West Salem
Eggler, Victor H. ..La Crosse R. 1

Griswold, H. W. .....West Salem
Harr, Ernest B. .....Bangor
Herold, Rudolph .....Stoddard
Jewett, Harry .....Bangor
Jones, E. E. .....Rockland
Kammlade, Stephen G. .....Bangor
Lawrence, F. W. .....Bangor
Mueller, Walter E. .....La Crosse
Mulder, B. W. .....Midway
Nelson, Osan .....La Crosse
Nuttleman, Adolph ...West Salem
Nuttleman, Alfred L. ..West Salem
Sandman, W. D. .....Holmen
Van Loon, John .....La Crosse

La Fayette Co.

Bridgman, C. R. .....Darlington
Jorenby, Carl .....Blanchardville
Rood Bros. .....South Wayne
Ruskell, L. E. .....Belmont
Usher, J. M. .....South Wayne
Vinger, Milo J. .....Argyle

Manitowoc County

Behm, Walter .....Manitowoc
Berg, Anton .....Valders
Berge, Otis I. .....Valders
Garey, James .....Grimms
Heidemann, O. C. .....Kiel, R. 2
Kielsmeier, R. C. .....Timothy
Klann, Adolph .....Hayton, R. 1
Paulsen, J. E. ....Manitowoc, R. 4
Pederson, Cornelius .....Cato
Pritzl, John .....Cato
Roethel, Herman .....Kiel
Tyler, James .....Valders
Wilkowske, Hugo .....Mishicot

Marathon County

Aschbrenner, H. H. .....Stratford

Marinette County

Gould, Guy .....Peshtigo
Gould, Merrill .....Peshtigo

Marquette County

Houslet, Neal .....Packwaukee
Judd, Jesse L. .....Endeavor
Mc Dowell, D. P. .....Packwaukee
Mc Millen, C. A. ...Endeavor, R. 1
Parrott, Alfred .....Endeavor

Milwaukee County

Basse, Wm. H. ....West Allis, R. 5
Butler, Ed. .North Milwaukee R. 11
Diderrick, N. A. .....
.....No. Milwaukee, R. 10
Fuller, S. L. Milwaukee, 126 26th St.
Gridley, Ben .....Wauwatosa
Guenther, Nelson W. So. Milwaukee
Jelinek, Benj. .....
..Milwaukee, 935 Feutonia Ave.
Kroeger, B. C. .....
.....Milwaukee, 403 1st. Ave.
Kurtze, Otto C. ..West Allis, R. 15
Mahr, Henry .....Caledonia
Meyer, A. J. .....Oakwood, R. 18
Muller, Geo. C. .....
.....Milwaukee, 232 Grove St.
Pierner, Fred ....North Milwaukee
Schlapman, Fred W. No. Milwaukee
Swan, Earling .....
.....Milwaukee Sta. B., R. 6
Unger, Edw. ..No. Milwaukee, R. 9

Monroe County

Andrew, J. S. .....Wilton
Babcock, H. E. .....Sparta
Boeder, Otto .....Milton
Ebert, Edmund D. .....Tomah
Ebert, Francis E. .....Tomah
Foth, F. D. .....Norwalk
Fox, C. L. .....Leon
Freeman, G. A. .....Sparta
Gamerdinger, John .....Kendall
Grassman, Irwin .....Kendall
Hanchett, W. H. .....Sparta
Hansen, Carl F. .....Sparta, R. 3
Hitchcock, C. E. .....Sparta
Hoard, L. R. .....Cataract
Howell, Horace P. .....Sparta
Kirst, Ernest J. .....Tomah
Lee, L. .....Leon
Leverich, J. W. .....Sparta
Miller, Lewis A. .....Sparta
Mistele, Wm. .....Kendall
Moseley, A. G. .....Cataract
Nathen, Paul R. .....Kendall
Peterson, John H. .....Cashton
Steinbach, Otto .....Kendall, R. 2
Whitehead, H. W. .....Leon

Outagamie County

Dietz, Ed. .....Greenville
Hanson, H. Edward .....Appleton
Jamison, Robert .....Appleton
Jochman, Peter ..Greenville, R. 16

Letts, Edward F. ...Appleton, R. 4
Ryan, Malachi .....So. Kaukauna
Schmit, A. W. .....Appleton
Schmit, Geo. .....Greenville, R. 16
Schmit, John A. .....Hortonville
Schmit, Wm. F. .....Appleton
Taege, John .....Appleton, R. 4
Wussow, C. A .....Seymour

Ozaukee County

Ahlers, Walter .....Grafton
McCarthy, Geo. .....Fredonia
Wulff, Fred ....Grafton

Pepin County

Hicks, Earl L. .....Pepin

Pierce County

Aastrum, Chas. J. .....
.....Spring Valley, R. 3
Bailey, H. E. .....River Falls
Nelson, Emil .....River Falls
Scheid, Byron J. .....Bay City
Smith, Fred .....River Falls, R. 6

Polk County

Christenson, Herman .....Milltown
Hedlund, Adolph .....Clayton
Peterson, Eni .....Amery, R. 4

Portage County

Arnott, Grace M. ....Stevens Point
Boston, W. J. .....Stevens Point
Gullickson, Gustave ....Nelsonville
Gullickson, Thomas ...Nelsonville
Hicks, S. E. .....Almond
Katerndahl, Carl ....Stevens Point
Wagner, Raymond G. .....
.....Stevens Point, R. 18
Wrolstad, Alfred M. ..Amherst Jct.

Price County

Hoffmann, Conrad .....Phillips

Racine County

Gehrand, Arthur A. .....Rochester
Holloway, Ed. M.....
.....Union Grove R. 8
Klofanda, Reuben .....Racine R. 1
Nau, Ray H. .....Franksville
Renak, Edw. .....Racine, R. 2
Robers, Wm. J. .....Burlington
Spartz, N. A. .....Union Grove
Wilson, Wm. C. .....Burlington

Richland County

Durnford, G. A.....Rockbridge
Ellsworth, Raymond .....Tavera
Ghastin, Wm. J. .....Twin Bluffs
James, Geo. A. ....Richland Center
Janecek, Cyril .....Bloom City
Nourse, Glen .....Sextonville
Post, H. L. .....Sextonville
Schmitz, Hubert .....Lone Rock
Thorpe, J. R. .....Tavera

Rock County

Austin, Alpheus .....Janesville
Austin, A. G. .....Janesville, R. 6
Austin, A. L. .....Evansville
Austin, W. B. .....Janesville
Bingham, E. L. .....Milton
Caig, Ernest M. .....Milton Jct.
Caldo, Leslie .....Janesville
Chase, Albert L. .....Milton
Cooper, M. W. .....Edgerton
Crandall, W. T. .....Milton
Devine, C. B. .....Evansville
Dougan, W. J. .....Beloit
Ellis, E. J. .....Janesville
Emery, Sydney .....Edgerton
Godfrey, Burt K. ...Janesville, R. 1
Greene, J. I. .....Clinton
Hemingway, Geo. L. .....Hanover
Hoague, Chas. C. ...Janesville, R. 7
Howe, Louis H. .....Brodhead
Lathers, Chas. F. .....Beloit
Latta, F. L. .....Clinton Jct.
Marston, Albert .....Beloit, R. 30
Marston, Roy C. .....Beloit
Moseley, H. B. .....Beloit
Peik, Edmund .....Edgerton
Pierce, Henry .....Milton Jct.
Seeger, Carl .....Beloit
Smith, L. E. .....Beloit, R. 30
Snyder, Clyde L. .....Footville
Snyder, R. B. .....Clinton

St. Croix County

Batten, Sidney .....Hudson
Bennett, Wm. L. ...New Richmond
Brunner, R. W. .....Hudson
Hecker, Paul .....New Richmond
Imholt, B. A. .....Houlton
Jerdee, Alfred O.....Deer Park

Sauk County

Clavadatscher, T. .....Sauk City
Capener, Walter A. .....Baraboo
Frederickson, Fred ...Spring Green
Gade, Adolf .....Reedsburg
Gallagher, J. F. .....Reedsburg
Gasser, Geo. W. .....Spring Green
Gasser, Roy .....Prairie du Sac
Grub, C. H. .....Baraboo
Harvey, C. B. .....Wonewoc
Herwig, Theo. .....Delton
Hood, D. L. .....Spring Green
Houghton, F. T. .....Reedsburg
Koenecke. Edw. H. Reedsburg, R. 5
Lachmund, Robert .....Sauk City
Luetscher, Irvin .....Plain
Marshall, W. S. .....Delton
Palmer, H. P. .....Baraboo
Pearson, Clarence..La Valle, R. 4
Raltzman, A. L. .....Reedsburg
Rich Bros. .....Baraboo
Riek, Anthony .....Plain
Robson, Melvin .....Spring Green
Rodewald, W. C. .....Baraboo
Rusch, E. W. .....Reedsburg
Schaefer, Ervin S. ....Black Hawk
Schuette, Herman W. .....
.....Reedsburg, R. 3
Steidtmann, Edwin.....Merrimac
Stone, Riley.....Reedsburg
Wichern, L. M. .....Baraboo, R. 4
Wischoff, Edwin .....Baraboo

Shawano County

Berg, Carl.....Tigerton
Jahnke, H. F. .....Regina

Sheboygan County

Blonien, Peter.....Elkhart
Garside, Harry R. .....Sheboygan
Herdrich, S. F. .....Adell
Leonard, M. J. .....Plymouth
Ogle, James L. .....Waldo
Oosterhuis, Alvin C. .....
Sheboygan Falls
Schaefer, Henry G. .....Plymouth
Wagner, Arthur L. .....Haven

Taylor County

McMillan, H. N. .....Medford

Trempealeau County

Graul, Edward J. ....Independence
Hegge, Julius.....Galesville
Hermann, F. F. .....Osseo

Vernon County

Aberg, Jacob.....De Soto
Bean, R. P. .....De Soto
Burris, W. E. .....Kendall, R. 5
Cass, Leonard E. .....Viroqua
Dach, C. B. .....Viroqua
Everson, Fred.....DeSoto, R. 2
Grimsrud, J. A. .....Coon Valley
Haverley, H. L. .....Victory
Staley, John N. .....Hillsboro

Walworth County

Anderson, Alvin M. ...Whitewater
Coates, Clinton J. .....Elkhorn
Cusack, M. E. .....Darien
Downey, U. J. .....Whitewater
Dunbar, Harry D. .....Elkhorn
Fuller, Leroy.....Lake Geneva
Harris, Ben F. .....Delavan
Harris, Jesse S. .....Delavan
Ledger, David.....Lake Geneva
Mack, Warren.....Whitewater
Meurer, Paul.....Genoa Jct.
Mitchell, Edward H. .....Delavan
Nichols, Vernon.....Walworth
Peterson, E. C. .....Whitewater
Peterson, Ezra.....Sharon
Peterson, Peter.....Walworth
Petrie, Merton.....Elkhorn
Piper, Harry.....Sharon
Ranney, P. C. .....Elkhorn
Robinson, A. S. .....Lake Geneva
Thacher, Ed. T. .....Zenda
Thompson, A. N. .....Delavan
Warmington, Prentice.Honey Creek

Washington County

Backhaus, Franklin G...Kewaskum
Bast, Paul J. .....Rockfield
Berg, Jacob.....So. Germantown
Dhein, Henry.....Rockfield
Hayes, Thomas, Jr. .....Richfield
Juergens, Henry.....Hartford
Klumb, Albert.....Rockfield
Puls, John.....Hartford
Schottler, Conrad J. .....
So. Germantown
Schultz, Nelson F..West Bend R. 3
Stuesser, Eugene.....Richfield
Ziemer, Paul.....Jackson

Waukesha County

Allen, Arthur J. ....Wales, R. 31
Baird, J. W. .....Waukesha
Baird, R. L. .....Waukesha

Bartlett, Geo. W..Menomonee Falls
Blackwell, Leslie.....Waukesha
Boller, J. F. .....Nashotah
Burton, Roy.....Eagle, R. 35
Christensen, John L. .....Hartland
Dance, George.....Brookfield
Dibble, Roy A. ..Menomonee Falls
Dopp, Paul B. .....Oconomowoc
Evans, Wm. H. .....Wales, R. 1
Fuller, Horace.....North Lake
Graser, Adam H. .....Waukesha
Greengo, A. L. ..Menomonee Falls
Hall, Frank.....Hartland, R. 21
Hart, C. B. .....Brookfield
Hart, Wm. C. ....Brookfield, R. 12
Heling, Paul.....Menomonee Falls
Hicken, Alfred B. .....Pewaukee
Hill, Chas. T. .....Brookfield
Hill, J. Thos. .....Brookfield
Jeffery, H. B. ...Menomonee Falls
Kaul, E. H. .....Waukesha, R. 7
Kuhtz, Harvey H. .....Waukesha
Longley, H. N. .....Dousman
Mitchell, Dean.....Brookfield
Mitwede, Henry.....Waukesha
Montague, C. R. .....No. Prairie
Morris, Leslie D. ..Waukesha, R. 8
Peebles, John.....Oconomowoc
Rosenow Bros. .....Oconomowoc
Rowlands, R. W. .....Waukesha
Ryan, Geo.....Brookfield, R. 12
Schafer, Chas. H...Waukesha, R. 7
Schley, E. G. .....Waukesha
Schroeder, F. C. .....Hartland
Shultis, A. D. .....Waukesha
Sleep, S. S. .....Waukesha, R. 21
Spaulding, C. F. .....Oconomowoc
Stewart, J. H. .....Wales
Swan, L. W. .....Mukwonago
Swoboda, F. G. .....Dousman
Tempero, Roy J...Menomonee Falls
Van Buren, E. W...Waukesha, R. 2
Weir, W. W. .....Mukwonago
Wetzel, Henry.....Brookfield

Waupaca County

Ashuun, C. S. .....Waupaca, R. 2
Bestul, Otto O. .....Scandinavia
Bigford, W. W. .....Manawa
Gorges, H. F. .....New London
Harrington, Myron.....Waupaca
Heinrich, Otto W. ....New London
Klemm, Louis J. .....Welcome
Kneip, William.....Weyauwega
Larson, LeRoy.....Iola
Olson, Nels E. .....Iola
Pirner, Fred.....Sugar Bush
Rosholt, Jacob A..Scandinavia, R. 1
Spencer, Earl H. ...Waupaca, R. 3

Waushara County

Anderson, Thos. E. ....Wild Rose
Bartleson, Harvey..Pine River, R. 1
Bell, L. C. .....Wautoma
Clark, J. J. .....Berlin
Eagan, J. J. .....Wautoma, R. 6
Harris, A. M. .....Plainfield
Jacklin, B. H. .....Redgranite
Knuteson, Ernest L. ....Wautoma
Peterson, James.....Pine River
Selsing, Andrew.....Wautoma
Tice, Ray.....Redgranite
Tice, Roy.....Redgranite
Winge, Wm. .....Wild Rose

Winnebago County

Bussey, W. P. .....Omro, R. 24
Cross, A. J. .....Allenville
Hatch, K. L. .....Winneconne
Hoeft, Chas. A. .....Oshkosh, R. 1
Ihrig, J. J. .....Oshkosh
Jackson, H. H. .....Oshkosh,
104 Main St.
Michels, Math. .....Picketts
Miller, Henry C. .....Allenville
Palfrey, John.....Omro
Rasmussen, Fred....Neenah, R. 11
Schaefer, R. J. .....Appleton
Smith, Seymour L. .....Oshkosh
Tanner, A. V. .....Omro, R. 24
Treleven, Guy T. .....Omro
Waite, Sumner R. ..Oshkosh, R. 7

Wood County

Clark, Chas. F. .....Babcock
Leu, O. J. .....Grand Rapids
Rector, Carroll V. ..Grand Rapids

NON-RESIDENTS

Haas, Geo. H. ....Meriden, Conn.
Bryson, Donald L. ...Elizabeth, Ill
Charles, Fred.....Woodstock, Ill.
Coffin, Russell H.....Rockford,
R. 7, Ill.
Fellows, Samuel H...Rockford, Ill.
George, W. R. .....Sterling, Ill.
Hitchcock, H. R....Pecatonica, Ill.
Hoxsey, Edw. H.....Serena, Ill.
McGeachie, E. P...Winnebago, Ill.
Northrop, H. R.....Chicago, Ill.
667 Winthrop Ave.

Richardson, G. J..Spring Green, Ill.
White, Arthur.....Rockford, Ill.
503 N. Church St.
Anderson, Theo. ..Waterville, Iowa
Berns, Xavier .Guttenberg, R. 1, Ia.
Brooks, Homer H. ..Hopkinton, Ia.
Thompson, Thos., Jr. ..Wadena, Ia.
De Forest, Theo. R. .....
.....Ann Arbor, Mich.
Meyer, A. J. ...Howell, R. 7, Mich.
Meyer, Wm. .....Ellsworth, Minn.
Hayes, Edwin H. .....
.Buffalo, N. Y., 593 W. Ferry St.
Doerschuk, John J. .....
.....Shanesville, Ohio
Ernst, Claude .....Thompson, Ohio
Messerschmidt, Samuel H. .....
.....Flat Rock, Ohio

Growers of Golden Glow Corn (Wisconsin No. 12).

Adams County

Walker, Ray C. .....Plainville

Barron County

Allen, Eugene S. .....Cumberland
Howe, John .....Comstock
Matthys, Walter .....Barron
Poulter, Charley .....Cumberland
Poulter, C. J. .....Cumberland
Rauchenstein, John .....Rice Lake
Sackett, Clyde .....Cumberland

Bayfield County

Daly, Richard E. .....Washburn

Buffalo County

Rosenow, Arthur .....Alma

Calumet County

Christoph, Theo. F. .....Chilton

Chippewa County

Bailey, Alfred B. .....Jim Falls
Christiansen, W. O. .....
.....Chippewa Falls, R. 6
King, Wm. .....Jim Falls
Schroeder, Herman F. ...Jim Falls

Clark County

Nelson, Carl .....Greenwood
Smith, Jesse .....Loyal
Zerbel, Paul .....Humbird

Columbia County

Cannon, E. A. .....Pardeeville

Crawford County

Accola, Lawrence .....Steuben

Dane County

Accola, John, Madison, U. W. Farm
Cobb, Homer A. .....Sun Prairie
Semb, T. A. .....Madison, R. 6
Silver, C. R. .....Belleville
Thorstad, N. H. .....Deerfield

Dodge County

Bohl, Anton .....Beaver Dam
Grebe, F. P. .....Fox Lake
Howitt, Chas. H. .....Randolph
Krueger, H. E. .....Beaver Dam
Lehmann, Mrs. Eva .....Woodland
Owens, H. C. .....Fox Lake
Randall, S. M. .....Waupun
Steiner, W. H. .....Brownsville

Door County

Delcorps, Louis .....Sturgeon Bay
Herrbold. J. W.....Sturgeon Bay
Hocks, Walter .....Sturgeon Bay
Larson, Eli .....Sawyer
Sorenson, Camillo ...Sturgeon Bay

Dunn County

Gerking, F. J. .....Elk Mound
Hanson, Carl H. .....Elk Mound
Knapton, W. E. .....Downing
Snell, Earl D. .....Downing
Stevens, Ernest .....Eau Galle

Eau Claire County

Konz, John, Sr. .....Fairchild
Mayo, John H., Jr. .....Eau Claire
McDermid, J. A. .....Eau Claire

Fond du Lac County

Bonzelet, J. P. .....Eden
Briggs, Lynn W. .....Peebles
Giebel, Karl .....Fond du Lac
Kitchen, J. H. .....Eldorado
Maug, Arthur J.....Ripon
Meekin, H. W. .....Fond du Lac
Michels, Henry .....Malone
Root, Alvin, ...Fond du Lac
Smith, Elmer J. .....Brandon
Smith, Harvey G. .....Brandon
West, R. N. .....Ripon

Grant County

Andrew, Geo., Jr. .....Livingston
Runde, Aloysius .....Cuba City
Stivarius, G. A. .....Fennimore

Iowa County

Graber, Laurence F. Mineral Point

Jackson County

Hecketsweiler, O. J. ..Alma Center

Jefferson County

Brown, A. Abbott .....Waterloo
Linton, Gilbert A. ....Ft. Atkinson
Moore, Henry G. .....Mauston

Kewaunee County

Kocmich, Ed. ....Kewaunee, R. 2

La Crosse County

Hass, Reinhold .....La Crosse

La Fayette County

Bridgeman, C. R. .....Darlington

Langlade County

Kolouner, Edward ....Antigo, R. 5

Manitowoc County

Arnold, Arthur A. .....Kiel
Bauer, Adolph H. .Manitowoc, R. 2
Clusen, Reinhold .....Manitowoc
Eisenman, Ben .....Mishicot
Geraldson, Mervin Manitowoc, R. 4
Gigtsad, Benneth .....Valders
Gunderson, Clifford .....
.....Manitowoc, R. 4
Gustaverson, Chas. ....Manitowoc
Hanson, Warner .....Manitowoc,
Hoefner, Herbert .....Manitowoc
Klann, Adolph .....Hayton, R. 1
Knutson, Ed. A. ..Manitowoc, R. 4
Riederer, Blasius .....Cato
Schulte, Peter J. .....Cleveland
Straka, Edward E. ...Kellnersville
Strowig, Wm. A. ..Cleveland, R. 1
Sullivan, Jas. A. .....Grimms
Wehrwein, Walter Manitowoc, R. 2
Wigen, Andrew .....Quarry
Wilkowske, Hugo .....Mishicot

Marathon County

Aderhold, Herman .....Athens
Brehm, E. A. .....Colby
McAdam, C. .....Scofield

Marquette County

Houslet, Neal .....Packwaukee
Johnson, Sam .....Westfield

Milwaukee County

Mower, H. Poyson ....Wauwatosa

Monroe County

Harris, Ruthven E. .....Warrens

Outagamie County

Koss, Otto W. .....Medina
Letts, E. F. .....Appleton
Mills, Roscoe C. ....Appleton, R. 2
Ryan, Malachi .....So. Kaukauna
Schmidt, A. W. ....Appleton, R. 2
Tubbs, Herbert .....Seymour

Ozaukee County

Blank, George A. .....Grafton
Clausing. Adolph .....Thiensville
Meyer, A. H. .....Grafton

Pierce County

Brown, Wm. .....Spring Valley
Dunbar, Geo. W. .....River Falls
Hanson, Henry O. ..Spring Valley
Martin, Arthur W. ....River Falls
Nelson, Nels J. .....River Falls
Neystrom, Archie ...Maiden Rock
Otis, Frank D. .....Maiden Rock

Polk County

Germanson, Herbert .....Luck
Jerdee, Perry S. .....Deronda
Lindberg, Clinton H. .....
.....Dresser Jct. R. 1
Miller, A. J. .....Milltown
Nelson, Wm. .....Milltown
Uhlin, Albin .....Clayton, R. 1
Uhlin, Frank E. .....Clayton R. 1

Portage County

Haus, Enoch .....Junction City
Siegert, A. .....Junction City

Price County

Hoffmann, Conrad .....Phillips

Richland County

Ghastin, Floyd .....Twin Bluffs
Lord, Karl W. ....Richland Center
Post, H. L. .....Sextonville
Schmitz, Edw. H. .....Lone Rock
Welsh, S. L. .....Tavera

Rock County

Marston, A. .....Beloit, R. 30
Smith, L. E. .....Beloit, R. 30

St. Croix County

Alberts, Will .....New Richmond
Carlson, Nels P. .....Hudson, R. 1
Kruschke, Geo. H. .New Richmond
Utgaard, Peter W.....Cylon

Sauk County

Borck, Sam .....No. Freedom
Ochsner, A. C. .....Plain

Sawyer County

Uhrenholdt, Jens .....Leonard

Shawano County

Norrborn, C. G. .....Eland, R. 1

Sheboygan County

Hoppert, Martin J. .....
.....Sheboygan, R. 4
Wunsch, Hugo E. .....Haven

Trempealeau County

Chrysler, Harvey .....Osseo
McCauley, Rex .....Osseo
Pederson, Peter .....Eleva
Thompson, A. L. .....Blair

Vernon County

Cade, Jos. M. .....Viroqua
Mc Clurg, Walter .....Viroqua

Walworth County

Bromley, Fred G. Whitewater, R. 4
Kruse, Wm. .....Whitewater, R. 4
Thacher, Louis E. .....Zenda

Washington County

Groth, C. A. .....Cedarburg
Klumb, Oscar .....Rockfield
Kressin, Gustav R. .....Cedarburg
Woldt, Hugo .....Jackson
Ziemer, Joseph .....Jackson

Waukesha County

Bartlett, Geo. W. Menomonee Falls
Schley, E. G. .....Waukesha
Swoboda, F. G. .....Dousman

Waupaca County

Howland, Howard H. ....Waupaca

Winnebago County

Boss, S. J. .....Oshkosh, R. 7

Wood County

Howard, A. E. .....Marshfield

NON-RESIDENTS

Smith, Russell ..Crystal Lake, Ill.
Hawkins, A. B. .....Farley, Ia.
Fernald, Paul E. .....
.....West Oldtown, Maine
Eskil, Odin ..Iron Mountain, Mich.
Meyer, A. J. ...Howell, R. 7, Mich.
Coleman, Chas. H. .....
.....Perry Center, N. Y.

Growers of Early Yellow Dent Corn (Wisconsin No. 8).

Ashland County

Johnson, L. M. .....Ashland, R. 2

Brown County

Roeckel, Jos. P. .....Lark

Buffalo County

Spaulding, L. C. .....Mondovi

Chippewa County

Christianson, L. ...Chippewa Falls
Christiansen, W. O. .....
.....Chippewa Falls, R. 6
Finsnes, A. I. .....Chippewa Falls
Kramer, Henry F. .....Bloomer

Clark County

Umfault, Rudolph .....Rochester

Columbia County

Gloeckler, Theo .....Portage
Steuber, L. J. .....Lodi

Dane County

Peck, Henry M. .....Marshall

Dodge County

Howitt, Chas. H. .....Randolph
Jung, J. W. .....Randolph
Owens, H. C. .....Fox Lake

Door County

Boucsein, Gust L. ..Detroit Harbor
Buschman, Hugo .....Forestville
Erickson, Ole C. ...Detroit Harbor
Sullivan, J. J. .....Forestville

Eau Claire County

Allen, C. L. .....Eau Claire
Wright, W. C. ...Eau Claire, R. 4

Fond du Lac County

Carpenter, L. A.....Fond du Lac
Hinz, A. F. .....Ripon
Meekin, H. W. .....Fond du Lac
Stroup, Fred G. .....Fond du Lac

Jackson County

Curran, W. F. .....Taylor
Dettinger, W. F. .....Hixton

Kewaunee County

Smithwick, Jas. .....Kewaunee

La Fayette County

McConnell, F. J. .....Darlington
Rood Bros. .....South Wayne

Manitowoc County

Paulsen, J. E. ....Manitowoc, R. 4
Straka, Edward E. ...Kellnersville
Sullivan, Jas. A. .....Grimms
Wiegand, Otto R. .....Cleveland

Marathon County

Baesemann, Otto .....Edgar

Marinette County

Falarsh, Frank .....Peshtigo
Olson, Otto W. .....Walsh
Sorenson, Hilbert .....Marinette

Milwaukee County

Basse, Wm. H. ...West Allis, R. 5

Monroe County

Andrew, J. S. .....Wilton
Leverich, J. W. .....Sparta

Outagamie County

Merkel, Henry .....Appleton, R. 3
Wussow, Chas. A. .....Seymour

Ozaukee County

Wulff, Fred .....Grafton

Polk County

Hedlund, Adolph .....Clayton
Nelson, Peter C. .....Milltown

Portage County

Hanson, N. P. ..Amherst Jct., R. 2

Rock County

Austin, Alpheus .....Janesville

St. Croix County

Bennett, Wm. I. ...New Richmond
Imholt, B. A. .....Houlton

Sawyer County

Thulin, Edwin .....Hayward

Shawano County

Jahnke, H. F. .....Regina

Sheboygan County

Dennerlein, Arthur J. ...Plymouth
Eastman, F. A. & S. A. .....
.....Sheboygan Falls
Frauenheim, O. R. ..Random Lake
Herdrich, S. F. .....Adell
Illian, W. L. .....Adell, R. 19
Parrish, J. O. .....Plymouth

Walworth County

Coburn, Ora .....Whitewater
Lewis, E. H. .....Whitewater
Warmington, Prentice .....
.....Honey Creek

Waukesha County

Mitwede, Henry .....Waukesha
Shannon, M. J. .....Oconomowoc

Waushara County

Anderson, Thos. E. ....Wild Rose

Winnebago County

Blakely, Albert J. .....Neenah

Wood County

Kronholm, V. E. ....Grand Rapids

Growers of Clark's Yellow Dent Corn (Wisconsin No. 1).

Chippewa County

Finsnes, A. I. .....Chippewa Falls

Columbia County

Dalton, Ernest E. .....Pardeeville
Dalton, Roy E. .....Pardeeville

Dane County

Davidson, Wm. L. .....Verona
Kendell, Geo. W. .....Sun Prairie

Dodge County

Barstow, Jas. E. ...Randolph, R. 1
Howitt, Chas. H. .....Randolph

Green County

Biglow, L. F. .....Brooklyn

Iowa County

Paulson, H. E. .....Hollandale

Racine County

Wilson, Wm. C. .....Burlington

Richland County

Post, H. L. .....Sextonville

Rock County

Austin, A. G. .....Janesville, R. 6

Walworth County

Coburn, Ora .....Whitewater
Dunbar, Harry D. .....Elkhorn

Winnebago County

Blodgett, Gordon R. .....Neenah

Growers of North Star Corn (Wisconsin No. 11).

Chippewa County

Martiny, L. P. ....Chippewa Falls

Dane County

Boyce, Charlotte .....Dane
Palmer, Levi .....Verona
Thorstad, N. H. .....Deerfield

Dodge County

Randall, S. M. .....Waupun

Rock County

Austin, Alpheus .....Janesville

Sauk County

Palmer, H. P. .....Baraboo
Toole, W. A. .....Baraboo

Growers of Medium Red Clover.

Barron County

Chrislaw, A. M. .....Rice Lake

Brown County

Roeckel, Jos. P. .....Lark

Buffalo County

Joos, Frank B. .....Fountain City
Spaulding, L. C. .....Mondovi

Calumet County

Peterson, H. N. .....New Holstein

Columbia County

Dalton, Ernest E. .....Pardeeville
Dalton, Roy E. .....Pardeeville

Dodge County

Barston, James .....Randolph
Howitt, Chas. H. .....Randolph
Joyce, Geo. .....Waterloo
Krueger, H. E. .....Beaver Dam
Miller, A. H. .....Waupun

Eau Claire County

Wright, W. C. ....Eau Claire, R. 4

Fond du Lac County

Adams, A. E. .....Eden
Briggs, L. W. .....Peebles
Briggs, J. W. .....Peebles
Jacky, Gilbert G. ...Malone, R. 39
Jacky, H. L. .....Malone, R. 39
Meekin, H. W. .....Fond du Lac

Jackson County

Dettinger, Wm. F. .....Hixton

Jefferson County

Church, A. P. .....Whitewater
Leonard, Wm. R. ....Ft. Atkinson
Ward, W. Rodell .....Ft. Atkinson

Kewaunee County

Blahnik, Geo. F. .....Algoma

La Crosse County

Harr, Ernest B. .....Bangor

La Fayette County

Akins, Clyde E. .....Warren, Ill.
Bridgman, C. R. .....Darlington
Usher, J. M. .....South Wayne

Manitowoc County

Berge, Otis I. .....Valders
Clusen, Reinhold .....Manitowoc
Garey, James .....Grimms
Heidemann, O. C. .....Kiel, R. 2
Straka, Edward E. ...Kellnersville
Sullivan, Jas. A. .....Grimms

Marinette County

Falarsh, Frank .....Peshtigo

Milwaukee County

Pierner, Fred .....No. Milwaukee

Monroe County

Freeman, G. A. .....Sparta

Ozaukee County

Kieffer, Mike .....Fredonia
Pierner, John W. .....Thiensville

Shawano County

Hildemann, E. S. ....Belle Plaine

Sheboygan County

Dennerlein, Arthur J. ...Plymouth
Frauenheim, O. R. ..Random Lake
Illian, Wm. L. .....Adell, R. 19
Wagner, Arthur L. .....Haven

Walworth County

Harris, Jesse S. .....Delavan
Meurer, Paul G. .....Genoa Jct.

Washington County

Bast, Paul J. .....Rockfield
Puls, John .....Hartford
Schottler, Conrad J. .....
.....So. Germantown

Waukesha County

Bartlett, Geo. W. .....
.....Menomonee Falls
Longley, H. N. .....Dousman
Swan, L. W. .....Mukwonago

Waupaca County

Kneip, Wm. .....Weyauwega
Rosholt, J. A. .....Scandinavia

Waushara County

Clark, J. J. .....Berlin, R. 1

Winnebago County

Miller, Henry C. .....Allenville

NON-RESIDENTS

Thompson, Thos. Jr. ..Wadena, Ia.

Growers of Alsike Clover.

Dodge County

Barston, Jas. .....Randolph, R. 1
Bohl, Anton .....Beaver Dam
Krueger, H. E. .....Beaver Dam

Eau Claire County

Konz, John, Sr. ....Fairchild, R. 2

Fond du Lac County

Briggs, L. W. .....Peebles
Briggs, J. W. .....Peebles
Giebel, Karl A. .Fond du Lac. R. 7
Jacky, Gilbert G. ...Malone, R. 39
Jacky, H. L. .....Malone, R. 39
Meekin, H. W. .....Fond du Lac

Jackson County

Curran, Wm. F. .....Taylor
Hecketsweiler, O. J. ..Alma Center

Jefferson County

Anthes, Henry .....Jefferson

La Crosse County

Harr, Ernest B. .....Bangor

Manitowoc County

Klann, Adolph .....Hayton, R. 1

Ozaukee County

Keiffer, Mike .....Fredonia
Pierner, John W. .....Thiensville

Sauk County

Ochsner, A. C. .....Plain

Shawano County

Hildemann, E. S. .....Belle Plaine

Sheboygan County

Frauenheim, O. R. ..Random Lake
Herdrich, S. F. .....Adell, R. 19

Growers of Mammoth Clover.

Calumet County

Klann, Adolph .....Hayton

Dodge County

Krueger, H. E. .....Beaver Dam

Eau Claire County

Konz, John, Sr. ....Fairchild, R. 2

Sheboygan County

Frauenheim, O. R. ..Random Lake

Walworth County

Harris, Jesse S. .....Delavan

Waukesha County

Longley, H. N. .....Dousman

Growers of Japanese Buckwheat.

Ashland County

Tomkins, A. Pearce .Ashland, R. 2

Dodge County

Bohl, Anton .....Beaver Dam
Krueger, H. E. .....Beaver Dam

Juneau County

Moore, Harry G. .....Mauston

Walworth County

Dunbar, Harry D .....Elkhorn

Waushara County

Carey, Henry .....Redgranite

Growers of Silver Hull Buckwheat.

Dane County

Chatterton, R. W. .....Basco
Palmer, Levi.....Verona

Dodge County

Bohl, Anton, Jr. .....Beaver Dam
Ehrhardt, Daniel.....Knowles
Howitt, C. H. .....Randolph
Krueger, H. E. .....Beaver Dam

Fond du Lac County

Meekin, H. W. .....Fond du Lac

Outagamie County

Schmit, Geo. ....Greenville, R. 16

Racine County

Robers, Wm. J. .....Burlington

Richland County

Post, H. L. .....Sextonville

Sauk County

Lachmund, Robert.....Sauk City

Waukesha County

Bartlett, Geo. W..Menomonee Falls

Growers of Field Beans.

Calumet County

Peik, Arthur.....Chilton

Chippewa County

Martiny, L. P. ....Chippewa Falls
Upton, H. F. .....Jim Falls

Columbia County

Lloyd, Evan B. .....Cambria

Crawford County

Bannen, R. E. .....Boscobel

Dane County

Beck, J. D. .....Madison
Bewick, W. W. .....Madison
Gillette, R. A. .....Verona
Ohman, S. S. .....Deerfield
Semb, T. A. .....Madison, R. 6
Stensly, E. P. .....Cottage Grove
Thieleke, Emil.....Madison, R. 6

Dunn County

Meacham, C. .....Downing

Eau Claire County

Wyman, A. E. .....Eau Claire

Fond du Lac County

Costello, Dan A..Fond du Lac, R. 5

Jefferson County

Guttenberg, Frank, Jr. ..Jefferson
Leonard, Wm. R. .....Jefferson

Juneau County

Smith, R. M. .....Elroy

Kenosha County

Mueller, Math J. .....Bristol
care of P. J. Thom
Myrick, M. O. .....Bristol
Thom, J. A. .....Bristol

La Crosse County

Hass, R. A. .....La Crosse

La Fayette County

Sargent, Roy E. .....Warren, Ill.
Usher, J. M. .....So. Wayne

Manitowoc County

Arnold, Arthur A. .....Kiel
Kielsmeier, R. C. .....Timothy
Wiegand, O. R. .....Cleveland

Marinette County

Falarsh, Frank.....Peshtigo, R. 2
Schneider, Gottlieb .....Walsh

Milwaukee County

Guenther, Nelson W. .....
So. Milwaukee
Miller, Geo. C. .....Milwaukee,
232 Grove St.

Monroe County

Gamerdinger, John.....Kendall

Pierce County

Nelson, Emil.....River Falls
Neystrom, Archie....Maiden Rock

Polk County

Germanson, Herbert.....Luck
Jerdee, Perry S. .....Deronda
Lindberg, Clinton H. .....
Dresser Jct., R. 1
Miller, A. J. .....Milltown
Nelson, Willie.....Milltown

Racine County

Holloway, Ed. M. ....Union Grove
Klein, W. C. .....Racine, R. F. D.

Richland County

Ghastin, Floyd.....Twin Bluffs
Lawton, A. R. .....Viola

Lord, Karl W. ...Richland Center
Post, H. L. .....Sextonville

Rock County

Austin, Alv. J. ...Janesville, R. 6

St. Croix County

Jerdee, Alfred O. .....Deer Park
Paulson, P. A. .....Hudson

Sauk County

Rodewald, Walter C. .....Baraboo

Waukesha County

Hicken, A. B. ....Waukesha, R. 7
Swoboda, F. G. .....Dousman
Zillmer, Wm. C. .....Brookfield

NON-RESIDENTS

Michigan

DeForest, Theo. R. ....Ann Arbor

Growers of Timothy Seed.

Columbia County

Chipman, W. R. ....Morrisonville

Dodge County

Bohl, Anton .....Beaver Dam
Howitt, C. H. .....Randolph
Krueger, H. E. .....Beaver Dam

Fond du Lac County

West, H. P. .....Ripon

Grant County

Graham, P. S. .....Fennimore

Racine County

Wilson, Wm. C. .....Burlington

Rock County

Austin, W. B. .....Janesville

Sauk County

Ochsner, A. C. .....Plain

Shawano County

Hildemann, E. S. ....Belle Plaine

Growers of Alfalfa Seed.

Dodge County

Krueger, H. E. .....Beaver Dam

Douglas County

Lindberg, E. J. .....Itasca

Fond du Lac County

Meekin, H. W. .....Fond du Lac

Waukesha County

Shannon, M. J. .....Oconomowoc

Growers of Spring Wheat.

Columbia County

Lloyd, Evan B. .....Cambria

Dane County

Kaltenberg, Anthony....Waunakee

Dodge County

Krueger, H. E. .....Beaver Dam
Schiller, Claude E. ..Beaver Dam

Fond du Lac County

West, H. P. .....Ripon

Manitowoc County

Klann, Adolph.....Hayton

Growers of Winter Rye.

Clark County.

Zerbel, Paul .....Humbird

Dodge County

Bohl, Anton.....Beaver Dam
Krueger, H. E. .....Beaver Dam
Voigt, Alvin H. .....Oconomowoc

Door County

Sullivan, J. J. .....Forestville

Fond du Lac County

West, H. P. .....Ripon

Jefferson County

Leonard, Wm. .....Ft. Atkinson

Sheboygan County

Frauenheim, O. R. ..Random Lake
Wagner, A. L. .....Haven

Growers of Spring Rye.

Dodge County

Bohl, Anton .....Beaver Dam
Howitt, C. H. .....Randolph
Krueger, H. E. .....Beaver Dam

Growers of Nordheim Sweet Corn.

Ihrig, J. J. .....Oshkosh

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