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Progress with Field Crops



Twenty-second annual report of
The Wisconsin Agricultural
Experiment Association
Madison, Wisconsin.

LETTER OF TRANSMITTAL

WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION

MADISON, WIS., 1924.

To His Excellency, J. G. BLAINE,

Governor of the State of Wisconsin:

Sir:—I have the honor of submitting for publication, as provided by law, the Twenty-second Annual Report of the Wisconsin Agricultural Experiment Association, showing the receipts and disbursements the past year, and giving an account of the Association's activity in promoting progressive agriculture.

Respectfully submitted,

R. A. MOORE,
Secretary.



“Wisconsin’s Much Beloved Farm Woman”

No more signal honor has been accorded a Wisconsin woman than the presentation to the Portrait Gallery of the College of Agriculture of the beautiful oil painting of Mrs. Adda F. Howie, which is reproduced above. Mrs. Howie is an honorary member of the Experiment Association and had charge of our exhibit at the Panama-Pacific International Exposition at San Francisco, California. At our 1924 annual meeting she gave the evening address on “Homemaking,” which, to quote a local paper, was a “plain, simple, soul-inspiring message. For an hour she held an audience that filled the Auditorium, with a simple, pleasing, and appealing discussion of the things which lift our lives from the commonplace and uninspiring to a high plane of affection and happiness.”

The portrait was presented at the Farmers’ and Stockmen’s banquet held during Farmers’ Week on February 7, 1924. Mr. L. E. Scott, pioneer institute worker of Wisconsin, stated during his presentation address: “Nothing could be more fitting than this recognition of the sincerity and loyalty which made possible the unselfish accomplish-

ments of our friend and co-worker of pioneer days, Mrs. Adda F. Howie. Mrs. Howie is truly a pioneer in actual farming and in the advancement of agriculture. In her early life, she built up a worn-out farm to a high state of productivity, and at the same time from a very humble beginning she developed one of the largest and best herds of pure-bred Jersey cattle in Wisconsin. Her farm became one of the most noted in the state. More than 100 prizes at state, national and international shows were awarded to her cattle. So widely appreciated were her achievements that the Japanese government purchased a carload of her splendid cattle for exportation to improve the live stock of this foreign land. Mrs. Howie, however, did not confine all her activities to the profitable development of her farm. For eight years as a member of the Wisconsin Farmers' Institute force she carried out the message of better homes and better agriculture with a missionary zeal that recognized no hardship, hazard or inconvenience of travel. She has been called to address audiences in thirty-four states and some foreign countries, so that her influence has been felt far and wide. She was the first woman to be appointed a member of the Wisconsin State Board of Agriculture, the first to receive honorary recognition by our University, and the first farm woman whose portrait will be hung in the Agricultural College Gallery, along with those of Dean Henry, Dean Russell, Governor Hoard, Professors Moore, King, Craig and others. To the countless beneficiaries of her work and kindly deeds this beautiful oil painting, done by one of America's leading artists, will be a source of inspiration, gratitude and higher ideals."

The occasion of presenting Mrs. Howie's portrait to the College brought forth the following tribute from the pen of J. Q. Emery, State Dairy and Food Commissioner and leader in Wisconsin dairy progress:

"I know of no woman who in the field of dairy husbandry by her deeds has shown herself to be and to have been such a complete embodiment of the American pioneer spirit as Mrs. Howie. In no sense an imitator or copyist, she blazed her own way through a tractless forest and over uncharted seas of the dairy world. Original in thought, independent and self-reliant in judgment, moved by unselfish devotion to and with the utmost good will for progressive dairying, she has with resplendent ability and courage been a great pioneer leader in this and other states. I know of no painting that represents a finer or truer embodiment of the American pioneer spirit."

The 1924 Grain Show and Annual Meeting

Richland Center, January 28-February 2

The 1924 State Grain Show was the third largest in size, and as high in quality as any we have ever held. The Municipal Auditorium at Richland Center, in which the show and meetings were held, furnished a very convenient and attractive setting. The attendance at our meetings was the largest in years. From the standpoint of stirring up interest and action in the production of better crops the 1924 show and meetings will go down in history as one of our most successful efforts.

As the show was held in a dairy community the meetings were arranged to outline a program of crop production for the dairyman. Corn, alfalfa and soybeans were emphasized as being the great dairy feed crops, and the importance of several annual hay crops for emergency purposes was stressed. The importance of the right kinds and varieties of farm crops as the basis of profitable dairying has never been more convincingly presented nor more enthusiastically received than at the four record-breaking meetings held in connection with the 1924 Grain Show.

Wednesday Afternoon, January 30

Address of Welcome.....F. L. Brewer
President of the Kiwanis Club

Response.....T. H. Champion
President of the Experiment Association

Marketing Home-Grown Feeds Through Farm Animals...J. W. Martin
(Gotham)

New Facts in Feeding.....F. B. Morrison
College of Agriculture

Responsibilities of the Farmer.....J. D. Jones
Commissioner of Agriculture

Thursday Forenoon, January 31

Business Meeting—Experiment Association, Alfalfa Order

TWENTY-SECOND ANNUAL REPORT

Thursday Afternoon

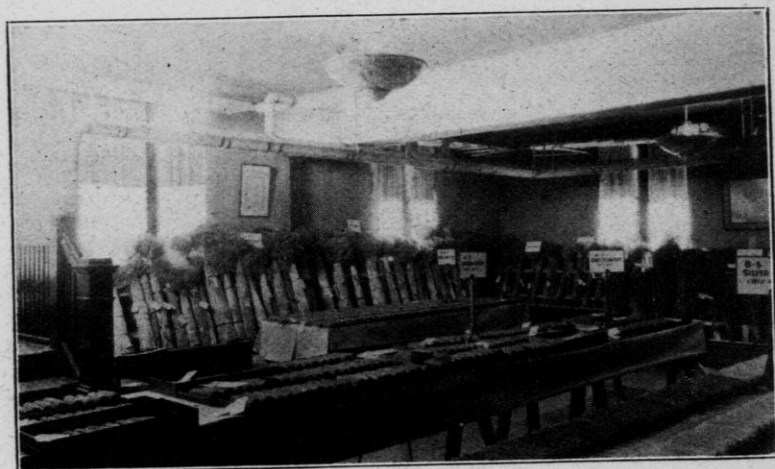
- Corn Facts for the Dairy Farmer.....R. A. Moore
 Secretary of the Experiment Association
- Our Opportunity with Alfalfa, Lantern Slides—Discussion..L. F. Graber
 Secretary of Alfalfa Order

Thursday Evening

- Music.....High School Band
- Address—Homemaking.....Mrs. Adda F. Howie
 (Washington, D. C.)

Friday Afternoon, February 1

- How Soybeans Will Help Next Year's Hay Crop.....Geo. M. Briggs
 College of Agriculture
- Other Ways to Get Good Hay.....Geo. Mortimer
 College of Agriculture
- Keep Cows That Pay.....A. J. Cramer
 Supervisor of Cow-Testing Associations



PART OF THE CORN AND SHEAF DISPLAY AT THE STATE GRAIN SHOW.

President's Address

T. H. Campion

The Wisconsin Agricultural Experiment Association is performing a great service for the people of Wisconsin. Not only is it disseminating better seeds and furnishing information to scores about high-producing farm crops, but it is making it possible for a large number of progressive growers in Wisconsin to develop a profitable business by growing choice marketable seeds of the pedigree varieties. Our market for these seeds is not limited to any one state, nor is it limited to the United States. We may say that Wisconsin pedigreed seeds are sold in all parts of the world.

If our organization is to increase its usefulness it must increase its membership. It should be our aim to have in every county in the state a strong county pure-bred seed growers' association with a large membership. It seems to me that this is possible, but it has been the experience of other organizations that if strong local units are developed a representative system must be put into operation. By that I mean that the local organization must, through delegates, be represented in the state organization. I believe that a delegate system for the county associations would be an incentive for the counties to have strong organizations.

I have no definite plan to advocate here, but it is my feeling that for every county organization that has fifty members, one delegate should be possible, and for every fifty above the first fifty a county should be allowed an additional delegate. If these delegates attend the annual meeting of the state association, each having a voice in the meeting, they will bring to the meeting things that are of interest to the entire state and our state organization will be benefited. I hope that something will be done to further county organizations and to develop a delegate system.

In the last few years a strong system of agricultural education has been developed in the secondary schools. It has been possible to build this through the Smith-Hughes act and these schools are known as the Smith-Hughes schools. Each of these schools employs a teacher who devotes all of his time to the teaching of agriculture and to carrying on agricultural project work. It seems to me that communities having this type of school are ideal communities in which to foster the growing and the demonstrating of our pure-bred grains. Certainly these centers are the logical places for our local grain shows. Everything possible should be done to encourage the teachers of agriculture in the secondary schools to devote considerable time to the development of better farm crops in their communities.

We should continue to enlarge our state show and we should exercise the most careful judgment in locating the show each year. Those points in the state that furnish ample facilities for holding the show and offer opportunity for educational work only should be considered. Holding the show at different points in the state has proven its worth.

I feel that one day of our annual meeting should be given to discussing the affairs and plans of the association. Our business meeting requires more time.

Great care should be exercised in selecting samples exhibited outside the state. Every member should be cautioned about exhibiting samples that are not properly fitted. Much is expected of the show man. He should appreciate the fact that he is one of our main channels of publicity.

We should continue to present facts and figures relative to our pedigreed varieties of seeds. Much can be accomplished along this line through the boys and girls of the state engaged in club work. Whenever possible we should foster this activity.

It is only through service that our organization can expect to grow and develop. With the splendid cooperation of all the members and officers this will continue to be possible. It is the thing that has made our organization worth while. It is the thing that has made it famous. Let us continue the good work.

Secretary's Annual Report for 1923

R. A. Moore

Members of the Wisconsin Experiment Association:

It is very gratifying to me to come before the Wisconsin Experiment Association for the twenty-second time in the history of our organization to present to you the various activities that the association has stressed during the past year.

While all farmers in Wisconsin have had a hard struggle to keep abreast of the times, yet we do find that Wisconsin is coming through the storm even in a more prosperous way than many of our sister states. We feel that the Wisconsin Experiment Association has played a very important part in bringing into the state additional funds to help the farmer through his trials and tribulations. The constant demand for pedigree seeds has been such that other states have purchased extensively during the past year and have been willing to pay prices which have enabled our farmers to grow pedigreed seeds at a profit. While we have suffered a decline in our membership, yet at the same time we are surprised that we have been able to maintain our membership while many other organizations in various states have gone by the board.

Membership

At the present time we might place the allied organizations working with the state organization at approximately the following membership:

Alfalfa Order.....	500
Soybean Order.....	200
Hemp Order.....	75
Sorghum Order.....	50
Fifty County Orders of the Experiment Association.....	2,000

3,125

The State Association has a paid-up membership of approximately one thousand, making a grand total of 4,125.

On account of things looking brighter for the farmer, we expect a much larger membership in the various organizations for 1924, and I know we all look forward with a great deal of pleasure to see the association come back into its former membership of about six thousand.

Amendment to the Constitution

At the annual meeting of the Experiment Association an amendment to the constitution was passed to the effect that any person taking a deep interest in pure-bred grains and live stock and who is also a member of the county association, through the recommendation of the secretary of the county association, is eligible to membership in the state association. It seems that this amendment, which has been duly passed by the organization, will be instrumental in allowing a large number of good substantial farmers who have been active in their own county organization to unite with the mother organization. Upon doing this they will be entitled to the same rights and privileges of the other members and will be helped in getting started in the growing of pure-bred seeds.

Competitive Grain Display

The annual competitive grain display last year was held at Madison. At this show there were 612 entries and a total of \$729.00 paid out as premiums to exhibitors competing with pure-bred seeds. The program carried out was exceedingly strong and the members of the association were highly pleased with the many good things that they heard at the meeting.



AN ATTRACTIVE SETTING FOR THE THRESHED SAMPLES AT RICHLAND CENTER.

Annual Meeting for 1924

It was decided by the executive officers of the association to hold the annual show at Richland Center. The policy now of our organization is to hold in various parts of the state so that farmers as well as the young people can have an opportunity of attending one of the world's greatest pure-bred shows and learn the importance of pedigreed seeds over the common varieties which are still grown in some sections of our state. Richland Center has certainly done herself proud on her plans and preparations and we are now here accepting her hospitality. It is needless to say that we have here today the greatest grain show from a quality standpoint ever put up in America or any other place in the world. This certainly is a wonderful object lesson for the people of our state and will be of lasting benefit to them. Anyone interested in the growing of pedigreed seeds cannot help but get a mental picture of these beautiful samples of corn and small grains that will be a lasting picture which he can recall from time to time when he is growing these beautiful seeds himself. We certainly feel that the work of the Wisconsin Experiment Association in the dissemination of pure-bred seeds has had a wonderful influence upon the coming generation in producing what we term pure-bred boys and girls.

It is well for the members of the association who are present here today and those who later read the report of the Experiment Association to fully realize we are now in the city and county that ran the first young people's pure-bred grain contest in the world. While other states that entered in the work several years after the first corn contest was run in Richland county received publicity, yet it was the active efforts of the young people in Richland county that brought this young people's club work prominently to the front. Well do I remember the day, some eighteen years ago, when I came to Richland Center and put up the packages of corn and addressed the boys—some six hundred in number—that were going to carry on the work. I also had the privilege of judging the corn that particular year and it not only attracted attention throughout Richland Center, but the prize-winning samples were immediately sent to the International Show at Chicago and many of them took prizes at this celebrated show. The work of the boys in Richland county spread rapidly, so that four years after the first competitive club work was carried on in Richland county in connection with the county agricultural association, we had fifty-two contests run in fifty counties in which the Experiment Station furnished all the seed, the county fair associations put up \$18,000 for competitive prizes, and 29,000 boys and girls entered in the competitive work. This was instrumental in spreading the pure-bred corn far and wide over the state of Wisconsin and we feel free in stating that we have not found a single instance where the pure-bred corn was once brought to the farm that it has ever been abandoned.

The work started in Richland county in the way of disseminating widely the pure-bred varieties of corn was instrumental in bringing

Wisconsin to the front ranks in yield of corn per acre and old Wisconsin at the present time stands out as the leading corn state in America as far as general yields per acre are concerned.

Work of 1922

As you have noted, the twenty-first annual report of the association was devoted largely to the subject of alfalfa. An effort was put forth to get as much alfalfa data as we could and present it to the members of our association. I think we succeeded well, as over half of the twenty-first annual report was devoted to this line of effort.

In 1923 again we continued the work started in 1922 to impress upon the farmers of the state the importance of growing their own high-protein feeds. We feel this is a commendable line of effort, as at the present time we are paying altogether too much to the railroad companies for hauling cottonseed meal, oil meal, oil cake and other high-protein feeds from a great distance. There is no reason why we cannot grow these high-protein feeds in the form of alfalfa and soybeans, thus cutting out the high freight rates and the time and expense of hauling those feeds from the railroad stations. We think and feel that we are making great headway and hope to continue this effort until the problem is solved.

Growing Alfalfa for Seed

During the past three years an earnest effort has been put forth by the Experiment Association in the way of growing alfalfa seed in our state. As it was twenty-five years ago with the growing of alfalfa, we find that very few people at the start had any confidence in the fact that we could grow our own seed. However, the members of the Experiment Association do not give up until a problem is thoroughly threshed out.

In 1921, 2,500 bushels of seed were grown by members of the Experiment Association and others interested in the proposition. In 1922 about 1,800 bushels were grown and about the same quantity was grown again in 1923. One member of the association, Mr. Swartz, of Waukesha county, grew 73 bushels of fine Grimm alfalfa seed which gave a yield of over three bushels per acre. The second cutting was saved for seed, thus he had one good cutting of alfalfa for hay previous to taking the cutting for seed.

We fully realize that as soon as we know as much about growing alfalfa for seed as we do about growing alfalfa for hay that we will experience little difficulty in getting good yields of seed quite frequently in Wisconsin. One of the serious troubles in the past has been quite largely from the fact that we are growing our alfalfa too thick for the best production of seed. Also, we now realize that alfalfa, like the clovers, does not always set seed well and often the fertilization is destroyed by a sudden shower or even heavy dews. It is only where we have dry weather and a considerable drouth during the flowering period that seed sets exceptionally well and we are

always able to determine whether or not we have a paying crop of seed before it is too late to take the crop for hay if it has only set seed in a limited way. We are very eager and anxious to solve this great question of growing our own seed and we hope through the active, energetic efforts of the members of this association to solve this great question once and for all time.

Soybeans

Through the active and energetic efforts of our worthy member, George Briggs, a great deal of useful information concerning soybeans has been spread far and near throughout the state. We hope to profit by the broadcasting of this information.

We are going through a period of time when we find it much harder to get crops of clover to carry over the first winter after seeding than we ever experienced before. This is quite largely on account of the tremendous importation of clover seed from southern Europe which usually gets on to the Toledo Board of Trade and from there is sent out to various seedhouses in the United States. These seedhouses have only a faint conception, if any, where the seed originated, so consequently this worthless seed is thrown on the market and farmers are paying their good money for it because it looks good. This seed is sown and, although it starts nicely in the summer and the farmer may think he is going to have an exceedingly good crop of clover for the following year, yet on going to his fields in the early spring, he will find that there is an absence of clover. He then begins to wonder what he is going to feed his dairy cattle as a leguminous hay. Unless he has already provided himself with a good big acreage of alfalfa he is going to be left in a rather helpless condition.

However, the soybean comes in to help him out and he can immediately plow his clover fields and put in the same acreage of soybeans. Good soybean hay is even higher in protein than the clover hay. The yield is about the same as good clover and all farm animals relish soybean hay immensely. Any farmers wishing full information concerning soybeans can secure bulletins by addressing the Experiment Station.

The cutting stage for hay is one thing that every farmer ought to understand. We feel that the time for cutting soybeans for hay should be sufficiently early so that we have good hay-curing weather for the drying out of the hay. If we cut at the time when the blossoms have nearly all fallen and the little pods have appeared on the vines, we will then be able to cut at that time in the season's growth where we will have no difficulty whatever in curing the hay. The year 1924 will undoubtedly find a great increase in the soybean acreage. Those farmers particularly that are on the light sandy soils will find that there is no crop that they can grow that will give them better returns than soybeans.

Two-Acre Corn Contest

The Two-Acre Corn-Growing Contest was again put on in 1923 and active work done to determine the highest possible yield. This contest was won by Mr. John Wandrash, Green Bay, with a yield of 146.2 bushels of shelled corn per acre. We wish to congratulate Mr. Wandrash on his worthy efforts in growing his wonderful yield of pure-bred corn. We feel that everyone in Brown county should be proud of Mr. Wandrash's activity and should encourage him in every possible way on the great work performed in producing such a tremendous yield in a year that was not regarded an extra good corn year. The other winners will be found in another part of the report.

Seed Peddlers and Others

This is the time of year when the seed peddler usually gets in his work. He is usually canvassing for some famous oat, barley, or wheat that regularly yields from 150 to 250 bushels per acre and the straw much better than the finest kind of clover hays, etc. Seed can be secured for three or four dollars a bushel and annually we have a great many of our farmers that are taken in by these silver-tongued orators. It seems strange to one who knows the pure-bred seeds and has worked with the farmers some thirty years to see our people fooled by parties who have nothing to offer for their seed except a high-sounding name and testimonials that could be written up most anywhere and signed by most anyone who was able to write.

It must be that the good work of the Experiment Association on pedigreed seeds is not being extended the way it should. Surely, if farmers know the value of pedigree seeds and the dishonesty that is perpetuated on them through the sale of scrub seeds through agents, they would certainly turn down any of the propositions which come up to them.

Just recently your secretary has heard of a party who is canvassing the farmers with some sort of a patent corn drier, together with sulphur candles which are supposed to treat the corn in such a way that neither gophers, cutworms or animal or insect enemies will prey upon the corn. It seems that farmers are ready to part with their money when merely told by some stranger that something is being sold that will be instrumental in curing all of the ills which are common to their farm crops. Our advice is to steer clear of propositions of this kind. If a thing has merit, it will be only a short time before your Experiment Station will look into the matter and report fully. People having meritorious things will usually desire to come to the station and have their proposition tried out to the fullest extent instead of being exposed from time to time as it seems necessary by the active efforts we have had to put forth in order to prevent the farmers from being over-run by these solicitations. Let us get busy and rid the state of these pests and treat them the same way that we have been obliged to treat the scrub grains and scrub stock.

The seed grain inspection has been carried out to the fullest extent the past season. Several hundred fields were looked over during the growing period and bin inspection has been resorted to in many instances. Through the active cooperative efforts of our county agents who have been ever ready to help and assist in this work, we have been able to do ten times more in this line of work than it would have been possible to have done had we been obliged to rely upon our own personal efforts. We hope to carry on more widespread inspection next year than ever before.

Reports from Seed Growers

If there is any one real weakness in our work, it is getting the members who have seed for sale to report. Your secretary would naturally think that a man having material for sale would be eager to cooperate in getting on the list that is going to be the means of aiding and assisting him in putting his seeds upon the market. If the members of the association fully realized the importance of getting a report in in time to go on to the regular seed growers' list, we would have ten times more reports than we have at the present time. The report is scarcely out before numerous letters will be received that members have on hand so many hundred bushels of oats, barley, corn, etc., after it is too late to go on the list. Now there must be some real reason for them not wanting to go on the list when the blanks are sent them in ample time to report.

It has been stated that in some instances the grains aren't threshed, so consequently the party could not report. The secretary wishes to state that it isn't absolutely necessary that the exact amount be reported. Any member if he had four acres of barley, thinking that it would give probably forty bushels to the acre could report 160 bushels, even though he didn't have more than 100 bushels when threshed, or it might over-run and he would have 200 bushels. No damage would be done if a figure in the report did not compare exactly with that which he would receive after threshing. It is the desire of the association to have every member report his seeds. If he doesn't receive the blank in due time, he should report to the secretary on or before the first day of November. Occasionally letters go astray in the mail and possibly the member would thereby lose his blank, but that would be no excuse for him whatever for not reporting. However, it should be understood by everyone that the regular seed list comes out the first of January each year and everything should be in from one to two months before.

If there are any who have found that they were not on the list this year and will send in immediately the number of bushels of seed grains that they have on hand for sale, it will be kept as a desk copy. We also can run a mimeographed supplementary list which will be enclosed in the regular seed list.

New Members Should All Start Right

We wish at this time to call the attention to new members of the association. Many may wish to start in with more seeds than can be directly furnished them by the state association. In this case it should be borne in mind that the Experiment Station keeps on hand several hundred bushels every year of the highest bred seeds that are handled in the most careful manner to help start right all new members. These seeds can be purchased for a nominal cost and will aid the member in starting with seed direct from the station. Many new members of the association avail themselves of this opportunity. We also have the older members that may get their barley filled with oats, or oats sprinkled with barley to such an extent that it is almost an impossibility to rogue it. In such instances it is the best plan for the member to send in and get a supply of seed direct from the station so that he can start over again and be more careful in the growing of the seed in future years. It is often true that a person knowing pure-bred corn will find that he has reached a stage whereby he will note from time to time crossing. Whenever anything of this kind occurs, he should immediately write to the station and secure a bushel or more to get a new start so that he would have the latest improved corn which is absolutely free from mixture.

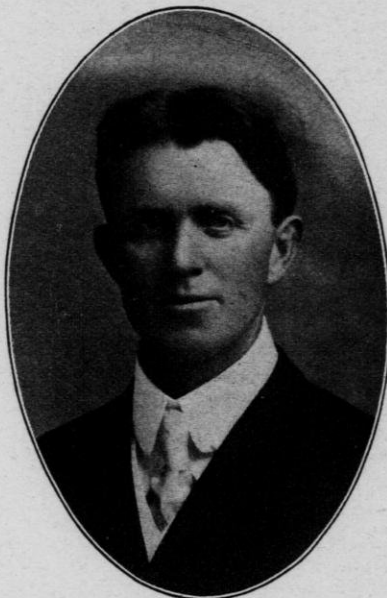
State Fair

Annually, county pure-bred seed organizations exhibit at the state fair. Every effort has been put forth by the management of the state fair to make it attractive for the association exhibitors. They fully realize the importance of having a pure-bred seed show and know that the foundation rock of agriculture lies in its farm crops. The Experiment Association is pleased to take an active part in the state fair work and we wish to call your attention at this time of the utmost importance of this line of effort.

Every county under organization should put up a display and those counties which have no organization should get commercial clubs or clubs of some nature vitally interested in the fairs of their county to help out in this proposition. If conditions are favorable for a county association to be formed, your secretary is more than willing to meet interested parties and form such an organization. However, unless an interest is manifested in this line of effort, we often feel that it is better for a county to remain unorganized than to see an organization put in and then not properly supported.

Two new organizations have just been formed and start out with the finest of prospects of making a success. Buffalo county, with headquarters at Alma, and Kenosha county, with headquarters at Kenosha. Both these county associations are under the direct management of their county agents, who will put forth every effort within their power to cooperate with the state association and make their county organizations the best ever.

While we have 54 counties under organization we can only say that about half of them are doing real active, exceptionally good work. These counties that are doing good work are doing exceptionally good work and will make their organizations instrumental in bringing hundreds of thousands of dollars to their respective counties for pure-bred seeds. They not only do this, but are instrumental in giving the counties an advertising that is way beyond what dollars and cents can buy. We trust that more counties will take an active interest in bringing about the desired results in a larger number of counties.



JOSEPH M WAGNER

We have just learned of the passing away on July 6, 1919, of Mr. Joseph M. Wagner, a former short course student and active member of the Experiment Association. Mr. Wagner was known for the sincerity and high ideals which characterized all his activities. He won distinction for the high quality of his work in the short course, and on his farm made a practice of keeping registered stock and growing pure-bred grains. He was respected and looked to as a leader in his community, and we share a feeling of personal loss with his many other friends and his good family.

Alborea Sweet Clover

E. D. Holden

The first extensive introduction of Alborea sweet clover into Wisconsin was made in the spring of 1922, when approximately 250 five-pound lots of seed were distributed to members of the Experiment Association for trial. This variety of sweet clover has been popular in certain parts of Canada for some years. It differs from our common sweet clover in having finer stems, maturing earlier the second season, and having yellow blossoms.

Of the thirty-six preliminary reports in the fall of 1922, twenty-eight gave an excellent stand, with the height of plants ranging from four inches to two feet. Exceptionally hot and dry weather in some sections during July and August prevented rapid growth, and also accounted for five cases in which the stand killed out badly after the nurse crop was cut.

In one instance where half the seed was inoculated, the part of the plot planted to inoculated seed came through well, while in the other half of the plot the stand was badly injured by the drouth. In two other instances partial failure of stand was attributed by growers to lack of inoculation.

The twenty-eight reports from the second year state that there was no winterkilling, and all stands came through in good shape.

Eight plots were pastured in the fall of the first year for one to two months, and two also were pastured in the early spring. In all cases the cattle or hogs took to the sweet clover readily.

Of the thirteen who cut for hay, nine found the crop fairly easy to cure, and four had difficulty. Weather conditions at curing time seemed to be responsible for this difference. The yield ranged from one and one-half to three and one-half tons per acre, and averaged two and one-half tons.

Nine plots were harvested for seed, mostly cut with a grain binder, shocked, and threshed with a grain separator. The yield of seed per acre ranged from two to fifteen bushels, averaging seven.

Most of the plots were sown with oats or barley as a nurse crop, with a seeder attachment to the drill or broadcaster, or were broadcast by hand or with a hand seeder and harrowed in. A few plots were sown without a nurse crop, and some were broadcast on fall-sown rye. Each of these methods of seeding was successful.

These first tests with Alborea sweet clover seem to indicate that this crop may be quite useful in Wisconsin agriculture. As a fall and early spring pasture it has proved successful and without drawbacks. As a hay crop the yield is good, but curing is somewhat more difficult than is the case with other hay. Seed can be produced without difficulty and the yield is good. We look forward to reports from members who have grown a larger acreage of Alborea and have given it a more thorough trial for pasture or for hay. We shall be very glad indeed to hear from such parties.

La Crosse Wins County Order Cup

After five years of competition La Crosse county finally won permanently the County Order Trophy by winning 156 points on exhibits at the State Grain Show. Brown county, which had also won the cup for two years, was second. Dodge and Richland were third and fourth, respectively. Next year a new cup will be offered, and if it excites as keen competition as the last one we can look forward to some interesting rivalry.

Brown County Leads Corn Yield Contest

With 146.2 bushels per acre John Wandrash, Green Bay, Brown county, took high honors in the corn-yield contest. This is a remarkable yield for such a season as we had last summer. Mr. M. J. Strunk, Fort Atkinson, a former winner, was close behind with 142.6 bushels. The next eight places went to Tom Moore, Green Bay, Brown, 118.5; L. O. Odden, Maiden Rock, Pierce, 100.0; Manley Hendrickson, Holmen, La Crosse, 96.8; Jippa Wielinga, Midway, La Crosse, 96.5; H. J. Rofers, De Pere, Brown, 95.1; Jacobsen Bros., Green Bay, Brown, 90.4; Geo. Wheelock, Green Bay, Brown, 86.4; Albert Vander Heiden, De Pere, Brown, 79.3. The Golden Glow variety took all the honors.

The 100 Bushels Per Acre Corn Club

Last season's contest adds one recruit, Mr. L. O. Odden, Maiden Rock, to our 100-bushel club, and brings the membership up to seventeen. More of our association members should meet the requirements and join the club. It can be done in most sections of the state. Try your hand at it this season. The members, with their highest yields, are:

M. J. Strunk, Ft. Atkinson, Golden Glow.....	171.6
Jippa Wielinga, Midway, Golden Glow.....	138.8
Jacobsen Bros., Green Bay, Golden Glow.....	138
Fred Hubbard, Morrisonville, Golden Glow.....	128.1
Jos. Schneider, New Franken, Golden Glow.....	120
John Bendel, Stoddard, Silver King.....	117.4
Geo. F. Blahnick, Algoma, Golden Glow.....	116
Geo. Wheelock, Green Bay, Golden Glow.....	115.5
Roman Muskavitch, Shawano, Golden Glow.....	111
Tom Moore, Green Bay, Golden Glow.....	110.4
Godfried Huppert, Diamond Bluff, Golden Glow.....	108
Wm. R. Berger, Oconto Falls, Golden Glow.....	107.1
Robert Hall, Lena, Golden Glow.....	103.3
P. V. Becker, Galesville, Golden Glow.....	103
Albert Frei, Markesan, Silver King.....	103
A. O. Popp, Jefferson, Golden Glow.....	102.1
L. O. Odden, Maiden Rock, Golden Glow.....	100.0

Junior Department of the Grain Show

Several new features for the young people, together with the large number attending and taking part, made school day one of great activity and excitement. The morning was spent in looking over the

exhibits, asking questions and taking notes. In the afternoon there was a program for the young folks consisting of a special moving picture story, and talks by R. A. Moore, Mrs. Howie, and W. McNeel. Following this the young people competed in a corn-judging contest, a weed-identification contest, and a grain and forage identification contest. The country schools and city grade schools all closed to allow the pupils to attend and take part, and it was a big day for all concerned.

Essay Contest

To give the young people an incentive to inspect the show carefully and study the exhibits, an essay contest was arranged for grade and rural school pupils, on "My Visit to the State Grain Show." Many interesting and well-written essays were sent in, and they showed that the writers had learned a great deal from their visit to the show and taking part in the activities. The first prize winner follows:

My Visit to the State Grain Show at Richland Center, Wis.

Jeanne Sheafor, Boaz

Thursday evening, January 31st, we visited the grain show and were entertained first by the champion high school band of Wisconsin. We are proud of these boys because they do so well and are from our own county and home town, Richland Center.

Next we listened to Mrs. Adda Howie, of Washington, D. C., who gave a wonderful talk on "Homemaking." I enjoyed it very much and I am going to try to be really wise about and able to do the useful things first and the less useful accomplishments last.

Friday morning we saw the grains. There were all of the different kinds of small grains and seeds raised in Wisconsin—barley, oats, wheat, rye, red clover, alsike clover, alfalfa, timothy, buckwheat, navy beans, kidney beans, soybeans, field peas, sorghum, flax, sudan grass and hemp. Nearly all of these were exhibited in sheaves also.

The different kinds of corn shown were: Silver King, Wisconsin No. 7, Golden Glow, Wisconsin No. 12, Clark's Yellow Dent, Wisconsin No. 8, Murdock, Yellow Flint and White Flint. There were samples of grain from nearly every state in the Union and many foreign countries. I saw at least thirty different kinds of weed seeds.

The flax was the first I had ever seen. It is used for making thread and cloth and linseed oil. The hemp is used mostly for making sail cloth and rope.

I saw the grain grading and the sampler used by grain buyers. This device is a tube about seven or eight feet long and has oblong openings in the sides, that can be closed by slides from the inside. This is put down through the load or bin of grain, filled through the open-

ings in the sides and gives a sample of the grain as it is; dirt, light and heavy grains and weed seeds if there is any. Then by grading it the poor wheat, dirt and weed seeds are removed.

After noon Mrs. Howie talked a few minutes to we boys and girls about being courteous at home and doing things to help father and mother without being asked.

Then Mr. McNeel introduced Professor Moore and sang a little song with the boys and girls, "How Do You Do, Professor Moore." Mr. Moore's talk was on calf and grain clubs and I am sure he is, as Mr. McNeel told us, a friend to boys and girls. He said "eight years are required to develop a pure-bred seed corn" and Wisconsin has developed four different kinds, and that in Wisconsin we have a better average yield per acre of corn, oats and barley than any other state because our seeds are better than any others.

After Mr. Moore's talk we saw a fine movie showing calf club work, and then we took part in some contests, corn judging and identification of weed seeds and forage.

I learned at the grain show how little I know and how much I have still to learn.



GEORGE ALLEN, ERWIN TRELEVEN, R. B. LOCKE (COACH),
WILLIAM HILDEBRAND.

High School Contests

Saturday, February 2, 1924

In addition to the State High School Corn-Judging Contest, two other competitions were held for high school students at the grain show. These were the grain and forage, and weed identification contests. Thirty students from five high schools competed, and all showed the effect of excellent training in identifying our farm crops, weeds and in corn judging.

Omro high school won first place in the corn-judging contest, and the silver trophy, by scoring 272.6 out of a possible 300. Richland Center, with 271.6, and Viroqua, with 269.2, were close contenders. Belleville and Ithaca ranked next with high scores.

The ten high individual contestants are:

1. Earl Jacobus, Viroqua.....	96.0
2. Myron L. Clark, Richland Center.....	95.4
3. Harry Feaster, Richland Center.....	92.4
4. Erwin Treleven, Omro.....	92.4
5. Kenneth Solomon, Richland Center.....	92.2
6. William Hildebrand, Omro.....	91.8
7. Charles Merry, Richland Center.....	88.6
8. Geo. Allen, Omro.....	88.4
9. Don Weeden, Richland Center.....	87.6
10. Alvin Sandwick, Viroqua.....	87.6

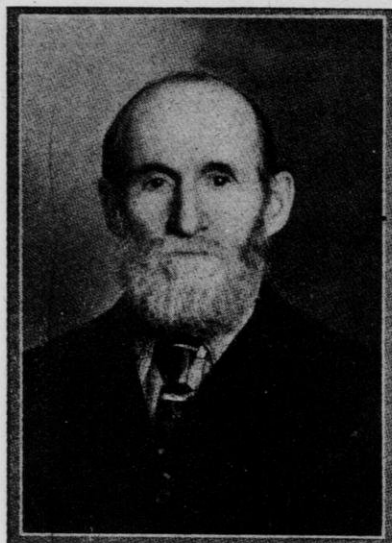
Junior Corn Exhibit Contest

Sixty ten-ear and seven single-ear samples selected and exhibited by the young people in the junior contest made a fine display and showed the results of excellent training in corn selection and judging in the corn clubs and rural schools. Some of the samples had previously won premiums in the junior class at the International, which indicates the high quality of exhibits shown.

The silver trophy given to the corn club having at least five members with exhibits at the grain show and completed record books, was won by the ROCK COUNTY CORN CLUB.

Marion F. Ross

A Pioneer in the Work of the Experiment Association and Recently Elected to Honorary Membership



"When you first brought out the Golden Glow corn you helped me to get my first vision of what could be accomplished with the pure-bred crops. I raised and sold the first year over 300 bushels for seed. Then you sent me the first Silver King, which I raised with equal success. You and the college taught me to grow alfalfa. The pedigree rye you sent me yielded 41 bushels per acre, and the pedigree oats yielded one-third more than the oats I had been growing. Then I began to realize what you, Dean Henry, and others meant by advanced farm husbandry. I am now over seventy-nine years old, yet the old fervor for these accomplishments is not abated. Al-

low me to stop right here to thank you for all the inspiration I received from my success under your guidance."

Marion F. Ross, who was relating the story of his eventful life to Professor Moore, is one of the old settlers of Green and Dane counties. He was already a middle-aged man when Dean Henry and Professor Moore began working to put scientific methods into practice on Wisconsin farms, and he quickly caught the vision that inspired these leaders. He early united with the Experiment Association and has been one of its strongest and most faithful supporters. To go back to his account of his pioneer days:

"I was born in Vermont, and at the age of ten came with my parents to Green county, Wisconsin, arriving in April, 1854. In 1863 my father died, leaving me to go on with the farm and help bring up my four younger sisters and one brother. My eldest brother lost his life in the early part of the Civil War, and another brother, not quite two years older than myself, enlisted in the 5th Wisconsin Light Artillery, and was with Sherman in his famous march to the sea. I speak of this to show you the trials of those troublesome times."

Mr. Ross' efforts to secure an education were typical of those early days in Wisconsin, and show the training in resolution and persistence which they gave. As he recalls: "With no high schools or college, by the light of the tallow candle by night and in spare hours of sunlight I struggled on until I was nearly twenty years old. Then I

applied for a third-grade certificate to teach school, which was finally granted. After teaching in my old school district for two terms, I agreed to teach in Attica, some eight miles from home. This was known as a school where for the previous three terms the teacher had been "thrown out." I was to teach the term through, or no pay. I succeeded, and shortly afterward bought a farm of 120 acres near by and got married. Here I farmed eight or nine months of the year and taught three or four months, for thirteen years.

"I was for many years town clerk of Brooklyn, also supervisor and justice of the peace. These positions gave me familiarity with our laws so I could execute deeds and mortgages, draw up wills and other legal papers. I finally traded my property for 203 acres near Belleville."

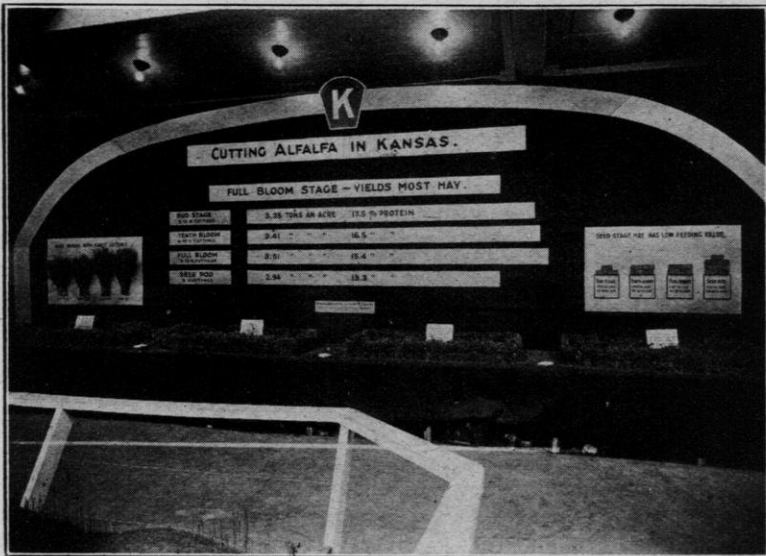
After his early struggles for an education and his experiences as a teacher, Mr. Ross appreciated the value of good schools. He resolved to do all in his power to give the younger generation the best possible educational advantages. In his own words: "I took a personal interest in the Belleville district school. I was elected school clerk for several years, and then became active in getting a high school. We had a struggle to get the first high school started. Only a few years later we built another school, three times as large as the first one, and four years ago we built a still larger high school. Today we have three schoolhouses and hire ten teachers, including an agricultural teacher for the whole year. I am still district clerk."

Looking back over his long life of eventful activity, Mr. Ross takes especial delight in remembering his progress in raising pure-bred grains, cattle and sheep. His success in these lines of work has made him a loyal supporter of the Experiment Association and the agricultural college, and their work of improving farm conditions and opportunities. And in closing he said, "I want to thank the dear friends who have helped me in so many ways during our long acquaintance, and who have made Wisconsin today one of the leading states of the Union in opportunities on the farm."

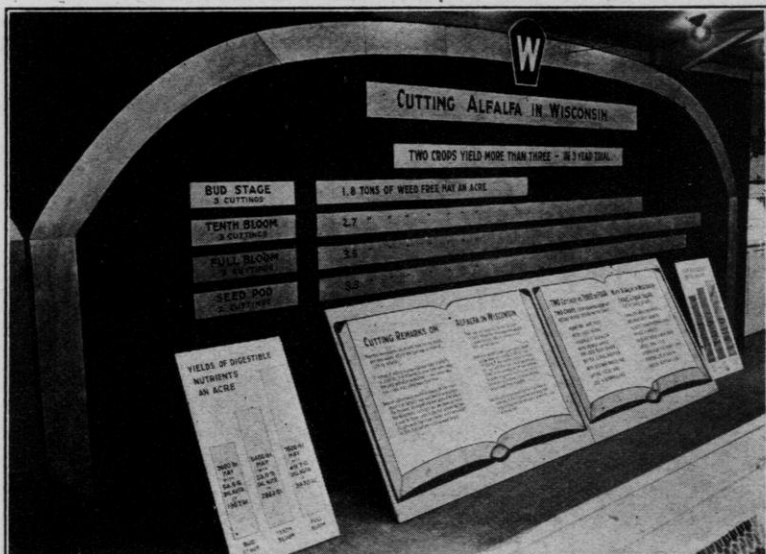
The State Fair

Experiment Association and county order members take an active interest in making the farm crops department of the state fair the large and fine display into which it has developed. The premiums are attractive, and the opportunity for winning recognition and strengthening reputation for high-quality seeds is excellent, for the state fair is visited by many hundreds of farmers who are intensely interested in this subject.

In order to promote our interests at the fair we furnished a booth in the farm crops building and made it our headquarters for welcoming our friends and giving information to visitors. We had on display samples of all our pure-bred varieties of seed, with circulars and seed lists. It is planned to continue this feature in the future, and we hope that our members will not only continue to send a large number of



WHERE KANSAS AND WISCONSIN JOINED HANDS—



AT THE INTERNATIONAL GRAIN AND HAY SHOW.

exhibits to compete for the premiums, but will visit the fair and make the association booth their headquarters.

The Northern Wisconsin Grain Show

With nearly five hundred samples, the fourth Northern Grain Show, held at Rice Lake early in January, was larger than any held previously. This show has grown rapidly in the four years of its existence. That the exhibits were of excellent quality is vouched for by all who attended the show, and is proven by the fact that of over fifty of these samples which were sent directly to the state show many took high premiums, among them being several firsts and seconds.

Fifth Annual Meeting of the International Crop Improvement Association

Chicago, Illinois, December 4, 1923

At the fifth annual meeting of crop improvement associations the committees on certification of seed grains gave reports on proposed uniform requirements for certification of corn and soybeans. The latest discoveries on soybeans were presented by experimenters from several states. The meeting was unanimous in the belief that the government should take steps to prevent foreign-grown clover seed from being sold in this country as native grown.

The following officers were re-elected for the ensuing year:

President—J. W. Nicolson, East Lansing, Michigan.
 First Vice President—L. H. Newman, Ottawa, Canada.
 Second Vice President—A. J. Ogaard, Bozeman, Montana.
 Third Vice President—W. C. Wysor, Blacksburg, Virginia
 Secretary—J. G. Hackleman, Urbana, Illinois.

Average Yields Per Acre of the Pure Bred and Pedigreed Grains

1923

Variety	Average Yield
Pedigree Barley.....	35.8
Oats—Pedigree 1.....	46.8
Pedigree 5.....	42.0
Pedigree 7.....	51.8
Pedigree Rye.....	23.2
Marquis Spring Wheat.....	19.6
No. 7 Corn (Silver King).....	63.8
No. 12 Corn (Golden Glow).....	53.2

ALFALFA ORDER

Wisconsin's Greatest Alfalfa Year

L. F. Graber, Secretary, Alfalfa Order

Never in the history of the state has Wisconsin grown and sown so much alfalfa as she did in 1924. With 155,000 acres cut for hay in 1923 and the new alfalfa seedlings of 1923 and 1924 we bid fair to reach 400,000 acres in 1925. It is gratifying indeed, after thirteen years of work by the Alfalfa Order, to see such splendid progress. All through Wisconsin we have had the active cooperation not only of our members, but public-spirited men in all walks of life—the county agents and extension workers, the farmers' institutes, the agricultural papers and the press in general. Wisconsin, with its 3,000,000 cattle, needs alfalfa. We need it not only for cattle, but for our soils and bank accounts.

Alfalfa Invades Cloverland of America

Even in northern Wisconsin alfalfa is coming rapidly to the front. Where lime or marl is used it withstands drought far more effectively than clover. This is particularly true on sandy soils where there are innumerable examples of new seedings of clover which were killed out while the new seedings of alfalfa with its much deeper roots lived through the ordeal of summer drought. Alfalfa wins when clover fails, may well be a slogan to make our hay crop more dependable.

Kansas and Wisconsin Join Hands in Alfalfa Exhibit at International

The agronomy departments of Wisconsin and Kansas held a joint exhibit on the cutting stages of alfalfa at the International Hay and Grain Show, Chicago, Illinois, December 1st to 8th.

Results of cutting trials on alfalfa at these two widely separated stations have been almost identical, showing that the fundamental basis for the response of the alfalfa plant to various cutting treatments is quite uniform in various sections of this country. At the Kansas Station more hay was obtained from cutting three and four crops at the full-bloom stage than was secured with five or six cuttings at earlier periods of growth. At Wisconsin, a ton more of hay per acre has been obtained from two cuttings in the full-bloom stage than with three cuttings at earlier periods. At both stations a serious thinning of stand and the encroachment of weeds has obtained with early and frequent cutting, while permanence and vigor have attended cuttings at the later stages. The following data were featured:

Stage of cutting	Number of cuts		Yields an acre of weed free hay	
	Kansas	Wisconsin	Kansas	Wisconsin
Bud stage.....	5-6	3	2.8 tons	1.8 tons
Tenth bloom.....	4-5	3	3.2 tons	2.7 tons
Full bloom.....	3-4	2	3.4 tons	3.5 tons
Seed stage.....	3	2	2.9 tons	3.1 tons

First Alfalfa School Held in America

A unique feature of this year's Farmers' Week, held at the agricultural college February 4-8, 1924, was the "Alfalfa School," the first of its kind ever held in America. In spite of a storm which tied up transportation an average of 300 attended the alfalfa sessions. The school was conducted through the cooperation of the departments of soils, bacteriology and agronomy and proved very successful.

The Service of the Soils and Bacteriology Departments

It is hard to appraise the great service rendered by the department of bacteriology in aiding the development of our alfalfa acreage by supplying cheap but effective alfalfa inoculation. Thousands of bottles are sent out every year to treat the seed with fertilizer-manufacturing alfalfa germs before the seeding. The demand for cultures this year has been unprecedented and is a splendid indication of the rapid increase of our acreage.

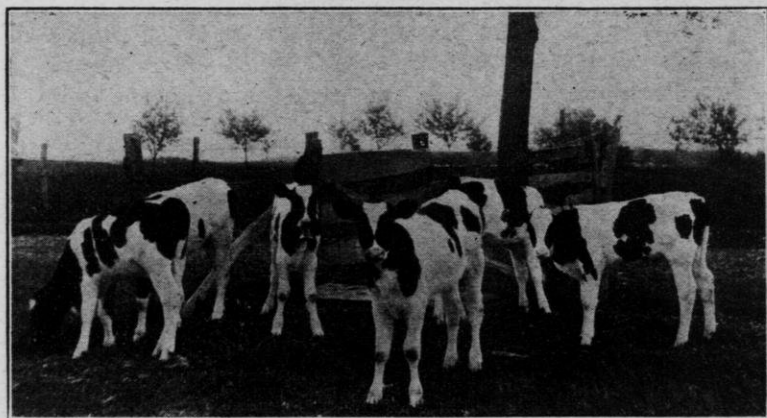
One of the big factors in growing alfalfa has been the determination of the lime needs of our soil without having to get this information by means of that expensive teacher known as experience. The soil test perfected by Professor Truog is a splendid measure of the lime needs of fields for growing alfalfa and the soils department tests free annually thousands of soil samples from all parts of the state, the results of which have prevented many costly failures and at the same time have helped pave the way to successful alfalfa fields. In addition to soil testing the free analysis of lime rock to determine its value for local grinding and similar tests on marl and various forms of waste lime are but a few examples of the numerous aids of this department for more acres of alfalfa in Wisconsin.

Alfalfa Can Be Grown in Upper Wisconsin

Prof. E. J. Delwiche

Good feeding is unquestionably a prime requisite to successful live stock practice everywhere. Good feeding implies liberal amounts of well-balanced rations which include plenty of mineral matter and vitamins with proteins, carbohydrates and fats. Dairying is developing rapidly in the upper section of the state and with it a demand for first-class feeding stuffs, high in digestible protein.

The increased demand for feed is responsible in a large measure for the excessively high prices asked for flour mill by-products such as wheat, bran and middlings. Bran today sells for nearly as much per pound as whole wheat, the price quoted being $1\frac{1}{2}$ cents per pound for wheat and $1\frac{1}{2}$ cents per pound for bran. Apparently the day of cheap bran is gone, not to return until the supply exceeds the demand. The supply of bran can be increased through lessening of consumption by substituting home-grown feeds about equally high in feeding value.



IT'S HARD TO BEAT THE CALVES THAT EAT ALFALFA.

High labor costs require that the highest efficiency be practiced in producing milk or cream. In order to offset this high labor charge it is necessary that higher production per cow be maintained. How can this be accomplished? By growing highly efficient feed crops such as alfalfa and soybeans.

Good alfalfa hay has a feed value very nearly equal to wheat bran. A comparison of digestible nutrients for alfalfa and bran indicates that to be true. Feeding trials have proved it. Recently, at our Sturgeon Bay station, home-grown and homemade alfalfa meal was substituted, pound for pound, for wheat bran. Milk yields actually increased when the change from bran to alfalfa was made.

The dairy farmer to hold his own must cut down feed bills by growing and feeding alfalfa and other protein hays instead of paying \$25.00 to \$30.00 per ton for bran. Fixed charges, such as interest, taxes and maintenance expenses, the farmer cannot reduce materially, and the same is true of labor. Good feed fed to good cows alone can change loss into profit.

Clover still holds high rank on the upper Wisconsin farm. On newly cleared land it may yet be called a weed; it still grows abundantly, but on land which has been farmed for ten years and upwards, for causes not all well understood, red clover does not produce as bountifully as it formerly did. At the Ashland and Spooner stations, alfalfa now produces fully 50 per cent more per acre than clover. Yet, when the land was first cultivated some ten or more years ago, red clover yielded fully as much as alfalfa. Apparently certain diseases, such as anthracnose, are reducing yields. Perhaps some of our land has been clovered too much. Such a statement, until quite recently, I would have considered positively ridiculous.

Alfalfa has feeding value just about fifty per cent greater than red clover as a protein feed. Its ash content is nearly 20 per cent greater.

As a milk producer and as a builder of large rugged animals it is considerably superior to red clover.

Alfalfa can be and is now grown on practically all classes of upper Wisconsin soil. On stiff retentive red clay at Ashland and Superior, or Plainfield sand at Spooner and Ellis Junction, on gray silt loam at Marshfield and Conrath alfalfa grows successfully.

Fifteen years or so ago we were told alfalfa would not thrive on hard impervious soil, such as the Superior red clay, because the roots could not pierce the hard soil. But alfalfa roots are powerful; they make their way through the tiniest cracks and go down deep for plant food and water. The red clay soils rich in lime and potash are very well adapted to alfalfa.

The silt loam soils were also tabooed for alfalfa culture because of their retentive nature with a tendency to form a hard pan, and because of a rather low lime content. Tests made at Marshfield by the Department of Agronomy, begun in 1913, and continued until now, demonstrate that with lime and inoculation alfalfa does fully as well as red clover.

It is a far cry from sticky red clay to loose Plainfield sand. Few soils are so dissimilar in texture and in chemical composition. Yet the experiments at Spooner, at Ellis Junction and comparative tests with farmers in many sections of the north, show plainly that alfalfa thrives on such soils. On blow sand at Ellis where clover could not be anchored successfully, alfalfa grew and produced fair yields. Lime, inoculation and proper packing of the soil at planting time turned the trick.

Experiment first to learn the secrets, then demonstrate, has been the keynote of our work at the northern branch stations. At Spooner, on red Jack pine sand, these questions were asked regarding alfalfa:

- (1) Must the land be manured?
- (2) Must the land be limed?
- (3) Must the seed be inoculated?

To answer these, a test was made in 1911-1912, which gave definite answers to these questions. The results are tabulated below:

ALFALFA EXPERIMENTS, SPOONER BRANCH STATION 1912

	Yields first cutting	
	Inoculated (lbs. per acre)	Not inoculated (lbs. per acre)
No lime and no manure.....	2,600	340
Lime only.....	2,400	1,060
Manure only.....	2,590	710
Manure and lime.....	2,500	1,180
Average.....	2,522	822.5

"It seems that lime is not needed at Spooner," you may say from the results. Better go slow. Ten years later, in 1923, results were different. The limed plots showed much more vigor, were greener in color. The yields per acre in 1923 were two tons for the limed and only one ton per acre for the unlimed portions.

At Ashland, results for lime and inoculation were as follows, as a three-year (1921-1923) average:

	Yield of hay per acre—Tons
Two tons lime per acre.....	4
No lime.....	3.6

Note from these two tables that inoculation did much good. Lime did not greatly increase yields.

Lime and inoculation are needed to succeed with alfalfa at Marshfield. Experiments begun by the department of agronomy under the writer's directions, showed that to be true.

YIELDS ON LIMED AND UNLIMED PLOTS—MARSHFIELD

Average for four years

	Yield of hay per acre—Tons
Two tons lime per acre.....	2.2
No lime.....	.9

The yield of hay was twice as high on limed soil. The quality was fully 100 per cent better.

On Kennan silt loam at Conrath, these were the results:

	Yield of hay per acre—Pounds
Inoculated.....	2,400
Not inoculated.....	2,100
Limed and inoculated.....	2,670
Not limed and inoculated.....	2,100

This was on newly cleared land. Results for one cutting.

Beginning with 1910 experiments conducted at Ellis Junction, Marinette county, on Plainfield sand, the results were:

ON OLD LAND

	Yield of hay per acre—Pounds	
	1912	1913
Limed and inoculated.....	4,220	2,030
No lime, but with inoculation.....	No crop	No crop

ON NEW LAND

	Yield of hay per acre—Pounds	
	1913	1914
Limed and inoculated.....	3,175	4,660
No lime, but with inoculation.....	2,125	3,420
Lime alone.....	600	No crop
No lime, no inoculation.....	100	No crop

Grimm and other strains of variegated alfalfa have proved more hardy than common strains. Where the intention is to leave alfalfa for more than two or three years the hardier kinds should be selected. On the other hand, for short rotations about as good returns are secured from common alfalfa, especially if the seed was grown in a northerly latitude. Below a review of some of the test is tabulated:

TEST OF ALFALFA STRAINS—SPOONER STATION

	Yield of hay per acre—Tons		
	1919	1920	1921
Grimm.....	2.0	4.0	1.4
Cossack.....	1.9		
Common.....	3.1	3.7	1.2
Baltic.....		4.2	1.3
Common Kansas.....		3.8	.8
Common Oklahoma.....		2.9	.75

TESTS AT ASHLAND STATION

	Yield of hay per acre—Tons					
	1919	1920	1921	1922	1923	Average
Grimm.....	5.0	5.8	2.1	4.5	2.9	4.1
Common (Montana).....	4.3	5.5	1.6	4.5	2.9	3.8
Dry land.....	4.8	5.6	1.5	3.0	2.9	3.6

Alfalfa at the Ashland Station produced more value in dollars per acre than any other grain or hay crop. The table below gives values per acre for various crops.

AVERAGE YIELD AND ACRE VALUE OF GRAIN AND HAY CROPS
ASHLAND EXPERIMENT STATION

Crop	Number of years	Average yield per acre	Price	Value per acre
Barley.....	7	35.0 bushels	\$.60	\$21.00
Corn.....	4	46.4 bushels	1.00	46.40
Oats.....	8	56.3 bushels	.45	25.34
Peas.....	10	19.5 bushels	3.00	58.50
Rye.....	6	34.1 bushels	.50	17.05
Spring wheat.....	10	13.7 bushels	1.00	13.70
Winter wheat.....	10	29.7 bushels	1.00	29.70
Alfalfa hay.....	6	4.0 tons	20.00	80.00
Clover hay.....	10	2.4 tons	18.00	43.20
Timothy hay.....	5	1.7 tons	18.00	30.60

Conclusions

1. Dairying to be profitable needs, among other requirements, nutritious feeds.
2. Mill stuffs are too high to be fed with profit.
3. Alfalfa properly cured and handled can take the place of bran.
4. Clover, not so high in feed value, does not yield as well and is not as dependable as alfalfa.
5. Alfalfa can be grown on all classes of soil from the lightest to the heaviest types.
6. On red clay soils inoculation alone is needed for best results, although lime also increases yields.
7. On sandy soil at Spooner, new land does not need lime at first, but after a few years lime becomes necessary. Inoculation is necessary.
8. On Plainfield sand at Crivitz, the same requirements exist as at Spooner, except that lime is much more essential.
9. On silt loam soils at Marshfield and at Conrath inoculation and lime are absolute requisites to success.
10. For fairly long rotation periods the hardy strains, such as Grimm, are best, but for short rotations the common strains yield nearly as well.
11. Alfalfa at Ashland pays more per acre as a cash crop than other hays and the grain crops.

Sand Soils Grow Alfalfa

E. V. Ryall, County Agent, Friendship, Wis.

Sand soils grow alfalfa. The title was well chosen, for sand soils do grow alfalfa better than almost any crop you can name. The crop is adapted to the soil; and, in some ways, the soil is adapted to the crop. In the first place, sand soils have a low supply of nitrogen,

which is the most expensive of the fertilizing elements. The fact that alfalfa is a legume taking its nitrogen from the air is of great importance in the crops' adaptability to the soil, for this makes it necessary for the soil to supply only the cheaper mineral fertilizers. The well-known deep-rooting habits of alfalfa enable it to go several feet into the soil for its moisture, as it must do during the summer droughts. This helps overcome another serious fault of sand soils; for being a permanent, deep-rooted crop, fewer fertilizer elements escape through leaching than from any other crop.

Flat But Well Drained

Sand soils are adapted to alfalfa in that they are open and porous so that even level fields are well drained. This does away with the damage done by wet fields, and it considerably reduces the danger of winterkilling.

In the past in Adams county we have had four chief causes of failure. These were:

1. No lime.
2. Not liming a long enough time before planting the crop.
3. No inoculation.
4. Pasturing the crop during the first summer.

Most Sand Soils Sour

Our Adams county soils are almost without exception sour or acid. Our many demonstrations show conclusively that acid sand will not grow alfalfa successfully. Lime must be applied. On unlimed land, the alfalfa will catch and it has a good chance of living through the first summer, but the following spring it will be gone.

In many cases we have had alfalfa failures with symptoms of a lack of lime when every condition for the successful growing of alfalfa had apparently been fulfilled. This takes place in soils with an acid sub-



LOADING MARL FROM A DRY LAND DEPOSIT IN ADAMS COUNTY.

soil when the lime has been spread the same spring the alfalfa is planted. The lime does not have time to work before the plant needs it and the summer droughts dry up the soil containing it, removing it from action. Some sands have a limestone gravelly, or a red clay subsoil, which contains plenty of lime and alfalfa is usually successful on these soils even though the lime is applied the same spring as the crop is planted. In general, however, it is advisable to allow a year for the limestone to work, or else to apply some more available form of lime, such as marl, hydrated lime, slaked lime, etc.

Inoculate for Vigor

Very few people in Adams county attempt to grow alfalfa without inoculating their seed. Where the inoculation has been omitted, failure has been certain, for sand soils do not contain enough nitrogen to grow alfalfa without inoculation.

It does not pay to pasture alfalfa the first summer it is planted. Such a course furnishes little feed, and it caused practically our only failure last year.

The general procedure of planting the crop of alfalfa has been left largely with the farmer doing the work, for he is, or should be, best acquainted with the proper cultural practices on his particular type of soil. However, we have always made certain recommendations and these have been followed in general by those who have been successful.

In selecting a field to plant to alfalfa, we refer one that has had a cultivated crop on it the year before, for it leaves the soil in better condition. The water table should be at least five feet below the surface, and the field should be well drained; but if the water table is low enough, even level fields of sand soils usually are well drained.

Spring Sowing Best

Alfalfa has been a success when planted at all dates, from early in the spring to the middle of August, but the best results are obtained by planting as early in the spring as the seed bed can be properly prepared. Those favoring the July and August seeding do so because their fields are badly infested with weeds or because of a lack of time in the spring. Their crop the following year, however, is invariably very poor and their stands weak, for the crop is just getting the start it should have had the first year.

The seed must be inoculated, and if the soil is acid lime must be applied. On sand soils you might as well leave your seed in the granary as to omit either the inoculation or the lime. The lime should be spread at least the fall before you plant your seed. If it is spread the same spring the alfalfa is planted, four or five hundred pounds per acre of hydrated lime or slaked lime should be applied in addition to your ground limestone so that your crop will have the benefit of this more available form of lime the first year. The lime should be well mixed with the soil by disking and dragging. It should be in the sur-

face soil and not applied just before plowing and turned under. If your lime is plowed under, your crop will fail, for the surface soil must be sweet. Eight or ten loads of fine manure should be applied per acre to give the crop a start. After the disking and dragging the land should be rolled with a corrugated roller, to make a more firm seed bed. The seed should be planted shallow, but it should be down to firm soil. Put the seed through the shoe, for your seed will be more uniformly planted. The usual depth of planting on sand soils is between an inch and an inch and a half. This is deeper than it is planted on heavier soils. After the seed has been planted, it is advisable to roll the land a second time.



A MARL BOTTOMED LAKE IN CENTRAL WISCONSIN.

Cut Nurse Crop for Hay

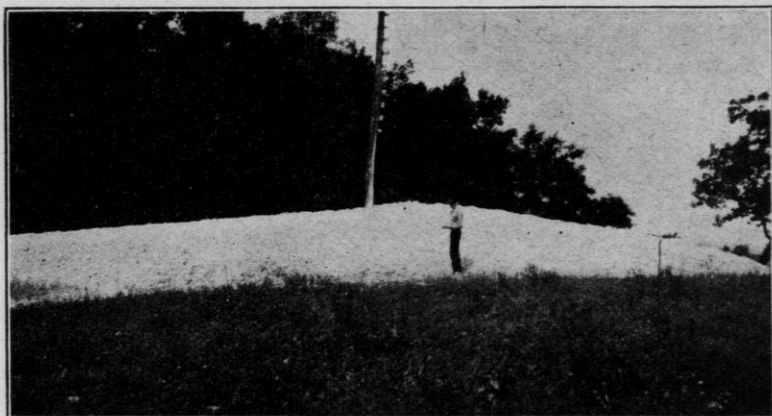
A light seeding of barley or wheat is recommended as the nurse crop. If rye has been planted the year before and is to be used as the nurse crop, it should be double disked. Rye has proved to be one of the poorest of nurse crops for either clover or alfalfa. In all cases, when dry weather comes on, the nurse crop should be cut before maturity and either left on the field or raked up for hay.

Sand soils grow alfalfa, but, whatever your procedure, lime if the soil is acid; lime long enough before you plant your seed to give it time to work; inoculate; and do not pasture the young crop. The other recommendations come from those who have had the best success in growing alfalfa on sand soils. Adams county with all her poor soils has nearly as high a yield of alfalfa as the state average, and some poor fields on farms formerly abandoned have yielded nearly five tons of hay per acre in one year. Better soils should do better. The reason for our good yields is that we have to do things right or the crop won't grow. Do the thing right or don't try to do it at all!

Building Our Alfalfa Acreage On Facts

L. F. Graber

Through over 3,000 cooperative trials carried out by the members of Wisconsin's state alfalfa growers' association, the Alfalfa Order and ten special trial areas, involving over 1,400 alfalfa experimental plots, personally supervised by the writer, we have during the past ten years determined the basic facts which will make alfalfa a success on practically every farm in the state. Facts—not fancies—lead to the high-ways of alfalfa success, and, while space will not permit a detailed discussion, seven main keys to successful alfalfa culture are here-with presented with as much abbreviation as possible.



MARL READY TO BE SPREAD ON THE TOP OF PLOWED SANDY SOIL.

Seven Keys to Good Stands of Alfalfa

No. 1. Choose a field that is sloping or one that at least has good top and underdrainage and one that has grown a well-cultivated crop the previous year. If your soil is not fertile—put on a good dressing of manure—especially with sandy soils. If quack grass infests the field badly kill it out as much as possible by cultivation during the dry weather of the preceding year.

No. 2. Growing alfalfa is often a choice between buying feeds for the soil or buying feeds for live stock. Have your soil tested. Find out if it needs lime and how much. Your county agent can test it for you or you can send a half-pound sample taken from four or five average places in the field to your experiment station. Use lime if your land needs it.

No. 3. There are several ways to sow alfalfa, but one of the surest is to use one bushel of an early grain as a nurse crop and cut this grain for hay just after it has headed out. Many a good stand of alfalfa and of clover is ruined by the summer's drought. Grasshoppers

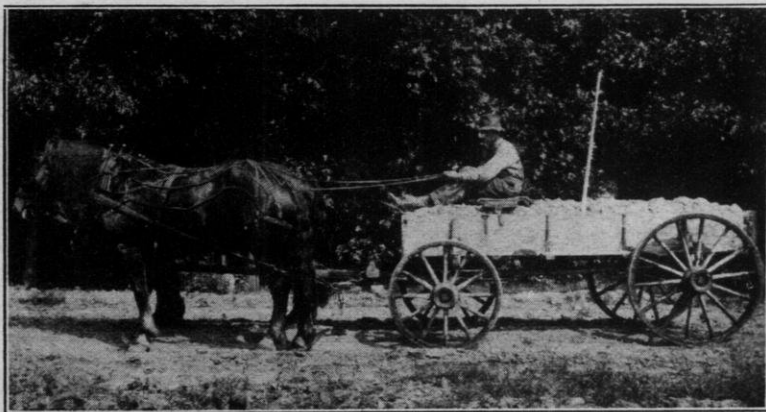
are very serious in some years. There is a way to play reasonably safe on this. Sow your alfalfa with one bushel an acre of Kherson (Wis. No. 7) oats or pedigree barley. Cut this grain for hay just after it is headed out. This saves soil moisture used up by the ripening of grain, and gives the alfalfa a strong growing start and a good deep root growth to prepare itself for summer drought as well as grasshopper injury. Cutting the nurse crop for hay is not always necessary, but is essential when grain lodges, otherwise alfalfa may smother. Canning peas make an excellent nurse crop because they are cut and hauled off the land early. Other methods can be used, but late summer or fall seeding should be avoided in Wisconsin.

No. 4. Alfalfa wants a firm but well-prepared seed bed. Fall plowing is generally best, as it gives the soil time to settle and become firm. Spring plowing should be comparatively shallow. Alfalfa sown on spring-plowed land—especially loose and sandy soil—is greatly benefited by rolling with the corrugated roller once before and once after seeding.

No. 5. Try this mixture at 18 or 20 pounds an acre on heavy soils:
15 lbs. of alfalfa seed,
2 lbs. of alsike,
2 lbs. of timothy.

Where alfalfa is easy to grow a mixture of other seed is often not desired, but for beginners on all but the light soils, a little alsike and timothy mixed with alfalfa is worthy of trial. Inoculate the alfalfa seed just before sowing on land that has not previously grown alfalfa successfully.

No. 6. While such varieties as Grimm often live through hard winters where the average common kills out, there are farms where common seed grown in the Dakotas, Montana and other northern states has given fairly good results. The hardy varieties are high priced and caution may well be used to secure the hardiest strains of carefully and officially certified seed.



HAULING MARL FOR SANDY SOILS AND ALFALFA.

No. 7. Two crops of alfalfa cut in the full-bloom stage have yielded considerably more and have lasted much longer than three crops cut in the early bud or tenth-bloom stage. Of course, the later you cut alfalfa the coarser and poorer the quality of hay, but too early cutting weakens and thins out alfalfa, while later cutting strengthens the plants against winterkilling, weeds, low yields and blue grass. With favorable weather, alfalfa should be cut for hay as near the full-bloom stage as possible without sacrificing too much on the quality of hay. Two cuttings a year is best for permanence and yields.

Lime Opens Road to Better Times

Perhaps no greater service has been rendered to the Wisconsin farmer to help the feed situation and to bring about better times than the development of local sources of agricultural lime. An alfalfa-lime demonstration on the Green County Farm a few years ago resulted in the initiation of a plan of grinding limestone at local quarries in the limestone districts of Wisconsin, which has brought about the production of over 70,000 tons of home-ground limestone at a saving in cost of at least \$140,000 when the elimination of the long haul of "shipped-in" lime and other factors are considered. In the past two years, through the work started in Portage county, several million tons of marl (a form of lime found along the edges and at the bottom of lakes and river beds and in marshes in central, northern and eastern Wisconsin) have been located by county agents.

Alfalfa a Surer Crop Than Clover

The surest, safest and easiest hay crop which can be raised on the average Wisconsin farm is alfalfa, provided we have plenty of lime in the land to sustain this lime-hungry crop. It takes from six to ten times as much lime to produce a good season's yield of alfalfa as it does to produce the average yield of timothy, oats, barley or rye. The years of cropping and the annual leaching of 300 or more pounds of lime out of the surface of every acre, has left many of our fields so deficient in lime that neither alfalfa or clover is readily started. Once a good generous application of lime is applied on top of plowed land and worked in as the seed bed is prepared, alfalfa is a surer crop than clover. Why? Because of its deeper root system which makes it far more resistant to the annual siege of summer's drought that takes such a heavy toll on our shallow-rooted timothy and clovers.

An Overproduction of Timothy

Overproduction may be a "thorn in the flesh" of agricultural progress, but a tremendous feed bill is the price we pay for underproduction of a crop most needed on Wisconsin farms. I refer to alfalfa.

The dairymen's feed account is enormous. In seventeen counties of northern and central Wisconsin it was estimated, through data collected from banks, that \$5,000,000 was spent for hay and other



A PILE OF MARL EXCAVATED FROM THE EDGE OF A PORTAGE COUNTY LAKE.

"shipped-in" feeds to maintain the live stock of these counties during the winter of 1921-22. Wisconsin has made tremendous progress in her dairy industry. We produce three-fourths of the nation's cheese and more butter and condensed milk than any other state. Within our limited boundaries we lead in the number of dairy cows, but in producing the feed necessary to maintain our live stock we have fallen far behind in this procession of dairy progress. Every year our farmers are taking out of their hard-earned profits enormous sums to buy hay and other feeds necessary to profitably feed their cattle.

The two most important feed crops in Wisconsin are corn and hay. The introduction of adapted pure-bred varieties of corn, such as the Golden Glow (Wis. No. 12), Silver King (Wis. No. 7) and others, has brought Wisconsin to the fore as a corn state in yields per acre. The weak link in our chain of dairy progress is our hay crop. Of the 2,800,000 acres of tame hay, 2,000,000 acres are devoted to mixed timothy and clover. Clover was the great hay crop of pioneer days, when it grew like a weed and failures were few and far between. In more recent years this old friend of the Wisconsin farmer has succumbed to the unfriendly soil conditions which have resulted from the cropping strain of forty years or more. The result is that clover failures are far more common than clover successes. To see a good field of clover is becoming a rare sight in the older sections of the state. We sow timothy and clover mixed, but what will the harvest be? Mostly timothy, and timothy is one of the poorest hays we can offer to a good dairy or beef cow. And yet, in addition to this 2,000,000 acres of mostly timothy we produce 500,000 acres of nothing but timothy! When it comes to the feeds we need most—the hays that put the milk in the pail and the dollars in the bank—that build up the soil and would take the place to a large extent of the enormous feed bills—we are only producing a mere handful of some 200,000 acres of clover and 150,000 acres of the greatest hay crop in all the world—alfalfa.



NO LIME NO ALFALFA.

One of the splendid demonstrations in Green Lake County.

Report of the Business Meeting

Thursday, January 31, 1924

Meeting called to order and president's address delivered by President T. H. Champion.

Report of the secretary read by R. A. Moore.

Financial report read by Secretary R. A. Moore and adopted.

Moved and carried that Marion F. Ross, of Belleville, be made honorary member of the Experiment Association.

Address, president of Alfalfa Order, Wm. H. Basse.

Report of secretary and financial report of Alfalfa Order read by L. F. Graber and adopted.

Moved and carried that president appoint a committee of three to draw up suitable resolutions. Henry Michels, Elmer Biddick, E. D. Holden appointed.

By unanimous ballot the same officers were re-elected for the ensuing year:

For the Experiment Association

President—T. H. Champion, Wauwatosa.

Vice President—Elmer Biddick, Livingston.

Secretary—R. A. Moore, Madison.

Treasurer—J. Emmett Brunner, Ridgeway.

For the Alfalfa Order

President—Wm. H. Basse, Milwaukee.

Vice President—Fred Dettwiler, Monroe.

Secretary-Treasurer—L. F. Graber, Madison.

Meeting of Executive Committee

An informal meeting of the executive committee was held in connection with the business meeting, at which the activities of the past year and plans for the future were discussed.

After a discussion of the time and place of holding the next grain show it was voted to hold to approximately the same time as heretofore, and to leave the place to be decided on later by the executive committee.

In connection with the premium list the following were discussed: The desirability of changing the zoning for corn so that the lake shore counties would come in north section, a separate class for White Cross oats, a class for baled hay, and more consideration given to peas and other crops grown in the northern part of the state.

Moved and carried that the chair appoint a committee consisting of E. D. Holden and two others to work out regioning for corn. Henry Michels and Wm. Basse appointed.

Moved and carried that a separate class be provided for White Cross oats.

Moved and carried that the officers draw up the premium list with best judgment possible as to equitable distribution of premiums.

It was decided to continue to support the Northern Wisconsin Grain Show by providing \$200 in premiums.

Continuing the two-acre corn-yield contest was favored, and that annual report should contain account of how the winning yields were obtained.

Our participation in the Wisconsin Products Exposition was left to the discretion of the secretary.

Moved and carried that the Experiment Association adopt the terms Elite, Registered and Certified seed, and that the chair appoint a committee of five to work with the assistant secretary, E. D. Holden, in drawing up standards and regulations governing growing and listing of these grades of seeds. A. L. Stone, Chas. Ristow, Rufus Gillette, J. A. Brunner and Geo. Briggs appointed.

President Campion outlined a plan whereby each county order should send a delegate to the annual business meeting of the Experiment Association to take part in its deliberations and with authority to vote for his organization. The plan met with favor as one toward which we should progress by working with the county orders.

**Special Meeting of Executive Committee, County Exhibits Building,
State Fair, Milwaukee, August 29, 1923**

Meeting called for purpose of selecting place for 1924 grain show.

Professor Moore discussed advantages of taking the show to some other place than Madison again. Richland Center was anxious for the show and prospects were for wide interest. Mr. Miller, of the Kiwanis Club, is acting for Richland Center. All present favored going to Richland Center.

Moved by Campion and carried that 1924 grain show be held at Richland Center. Time for holding meeting was discussed and week previous to Farmers' Course Week in Madison was favored. Moved by Graber and carried that time be left to committee composed of Moore, Campion and Holden.

Meeting adjourned.

Secretary's Financial Report

R. A. Moore, secretary, reported on the use and conditions of state and association funds as follows:

Balance in state treasury, Jan. 20, 1923.....	\$2,839.10
State appropriation, July 1, 1923.....	5,000.00
Receipts, Jan. 20, 1923, to Jan. 1, 1924.....	1,286.17
Total.....	\$9,125.27
Disbursements, Jan. 20, 1923, to Jan. 1, 1924.....	7,296.35
Balance on hand, January 1, 1924.....	\$1,828.92

The following expenditure is not included in the total disbursements of \$7,296.35 due to the fact that it is not as yet entered on the secretary of state's books:

Dec. 20, State Printing Board, printing return address on envelopes.....	10.30
	\$1,818.62

Wisconsin at the International

To win a first premium against the strong competition at this great show is a high honor, and this year R. H. Kleinsmith, Onalaska, broke our record by winning two firsts, on six-row barley and oats in Region 2. After a year away from home the first premiums on alfalfa hay and red clover hay have returned to us. These were won by Chas. H. Howitt, Randolph and Frank J. Lindley, Fox Lake. Our juniors beat their good record of last year by winning the first four out of five places in white corn and third, fourth and fifth in yellow corn, Region 2. There are a large number of other good winnings to our credit, and room for increased efforts next year to win a larger share of the ribbons and money.

Following is a list of awards:

ALFALFA HAY

1. Chas. H. Howitt, Randolph

RED CLOVER HAY

1. Frank Lindley, Fox Lake
11. Chas. Winkler, Fox Lake
13. Chas. H. Howitt, Randolph

TIMOTHY HAY

7. Frank J. Lindley, Fox Lake
8. Chas. H. Howitt, Randolph
9. Frank Minnema, Fox Lake

MIXED TIMOTHY-CLOVER HAY

5. Frank J. Lindley, Fox Lake

OATS—Region 2

1. Richard Kleinsmith, Onalaska
2. Frank Gasper, Rockland
3. L. M. Hanson, Mondovi
5. Otto Wolf, La Crosse
25. Wolf Bros., La Crosse
30. Monro Brown, Bay City
34. H. M. Krause, Reeseville

EARLY OATS

2. R. Kleinsmith, Onalaska
5. Frank Gasper, Rockland
6. J. L. Krause, Reeseville
7. R. W. Ward, Ft. Atkinson
8. C. H. Howitt, Randolph
12. H. M. Krause, Reeseville
13. Elmer Erickson, Pulaska

SIX-ROW BARLEY

1. R. Kleinsmith, Onalaska
13. Otto Wolf, La Crosse

WHEAT

14. J. L. Krause, Reeseville

RYE

23. A. R. Potts, Waupaca
26. Wm. Hermann, Shawano
28. J. L. Krause, Reeseville
29. F. H. Rotermund, Wisconsin Rapids
30. R. W. Ward, Ft. Atkinson

FLAX—Region 1

15. B. L. Tait, Comstock

SOYBEANS—Yellow

3. J. L. Krause, Reeseville
10. Adolph Troemner, Friendship

SOYBEANS—Other Color

2. J. L. Krause, Reeseville
3. H. M. Krause, Reeseville
4. P. W. Jones, Black River Falls
6. Gust Guskalkson, Columbus

7. Frank J. Lindley, Fox Lake

8. Fred Rebensdorf, Fairchild

FIELD BEANS

4. Bertha Krause, Reeseville
5. Karl Setterman, Bennett

FIELD PEAS—Yellow

5. Frank Gasper, Rockland

FIELD PEAS—Other Color

4. A. Logerquist, Baileys Harbor

ALSIKE CLOVER

9. A. Selle, Thiensville

TIMOTHY

13. P. E. Shepler, Rockland

ALFALFA

14. A. Selle, Thiensville

CORN, JUNIOR CLASS—Region 2**10 Ears White**

1. Horace Fowler, Bristol
2. Geo. Boyd, Nelson
3. Helen Herman, La Crosse
4. Henry Wozinak, Princeton

10 Ears Yellow

3. Elmer Hampf, Janesville
4. Jennie Hoffma, Midway
5. Alois Sauerbreit, Princeton

FLINT CORN—Region 2

7. Linus Spangler, Jefferson
11. Chas. H. Howitt, Randolph
12. Frank Lindley, Fox Lake
13. Chas. Winkler, Fox Lake
15. Frank Minnema, Fox Lake

CORN—Region 1**10 Ears White**

9. A. R. Potts, Waupaca

CORN—Region 2**10 Ears Yellow**

18. Leo Brueckner, Jefferson
21. J. E. Bruner, Ridgeway
22. J. A. Bruner, Ridgeway

10 Ears White

7. John Bendel, Stoddard
22. Wolf Bros., La Crosse
23. J. A. Bruner, Ridgeway
24. W. E. Colladay, McFarland

CORN—Single Ears

6. W. E. Colladay, McFarland
17. Linus Spangler, Jefferson

**Premium Awards Wisconsin State Grain Show,
Richland Center****Ten Ears Early Yellow Dent (Wis. No. 8) (North Section)**

Baumgartner Bros., Wrightstown
Bauman Bros., Marathon
Herman Peters, Athens
Ben Riehle, care W. J. Rogan, Wausau

Ten Ears Golden Glow (Wis. No. 12) (North Section)

J. D. Hunter, Clam Falls
Jacobsen Bros., Green Bay
Aug. Dahlberg, Frederic
Hanson Bros., Grantsburg
E. V. Smith, Waupaca
Baumgartner Bros., Wrightstown

Ten Ears Wis. No. 25 (North Section)

Adolph Rissman, Webster
Lewis Clark, Webster
Delwiche Bros., Green Bay
Francis Delwiche, Green Bay
W. Hagen, Hayward
O. A. Ashland, Hayward

Fifty Ears Golden Glow (No. 12) (North Section)

Jacobsen Bros., Green Bay
Tom Moore, Green Bay

Fifty Ears Wis. No. 8 or Wis. No. 25 (North Section)

Lot Mast, Spooner
W. Hagen, Hayward
Delwiche Bros., Green Bay
Wilhelm Hermann, Shawano
Rudie Kreuger, Cecil

Ten Ears Silver King (Wis. No. 7) (South Section)

Linus Spangler, Jefferson
Archie Peters, La Crosse
John Hoffman, Midway
Albert Spangler, Jefferson
Roy Brennand, Oshkosh
Gust Guskalkson, Columbus

Ten Ears Golden Glow (Wis. No. 12) (South Section)

Katterhenry Bros., Beloit
C. J. Lunenschloss, Richland Center
John Hoffman, Midway
P. E. Sheppler, Rockland
W. E. Bishop, Arcadia
Carl Lee, Onalaska

Ten Ears Murdock (South Section)

Leo Brueckner, Jefferson
Walter J. Steinhoff, Platteville
Grank Marsch, Jefferson
Gust Guskalkson, Columbus

Ten Ears Clark's Yellow Dent (South Section)

Don Weed, Richland Center
T. W. Freier, Lone Rock
Herman M. Gotham, Gotham

- Fifty Ears Silver King (Wis. No. 7) (South Section)
John Bendel, Jr., Stoddard
Joseph A. Brunker, Ridgeway
Otto Wolf, La Crosse
Archie Peters, La Crosse
Gust Guskalkson, Columbus
- Fifty Ears Golden Glow (Wis. No. 12) (South Section)
C. J. Lunenschloss, Richland Center
John Bendel, Jr., Stoddard
J. Emmett Brunker, Ridgeway
R. H. Lang, Jefferson
P. E. Sheppler, Rockland
Jippa Wielinga, Midway
- Fifty Ears Murdock (South Section)
Leo Brueckner, Jefferson
Gust Guskalkson, Columbus
Frank Marsch, Jefferson
- Fifty Ears Clark's Yellow Dent (South Section)
H. T. Draheim, Gotham
Elmer G. Biddick, Livingston
- Ten Ears Eight-Row Yellow or Smut. Nose Flint (Either Section)
Linus Spangler, Jefferson
Loetta Draheim, Gotham
Albert Spangler, Jefferson
Chas. Vojack, Iron River
- Ten Ears Eight-Row White Flint (Either Section)
Linus Spangler, Jefferson
Frank J. Lindley, Fox Lake
Virginia Sheppler, care P. E. Sheppler, Rockland
- Single Ear Yellow Dent (Either Section)
Louis Pralle, La Crosse
Leo Brueckner, Jefferson
John Hoffman, Midway
C. J. Lunenschloss, Richland Center
Frank Marsch, Jefferson
- Single Ear White Dent (Either Section)
Albert Spangler, Jefferson
Linus Spangler, Jefferson
J. Emmett Brunker, Ridgeway
Joseph A. Brunker, Ridgeway
- Peck Six-Row Barley
Herman Roffers, De Pere
Archie Peters, La Crosse
Louis Schmidt, Rothschild
Otto Wolf, La Crosse
Ed L. Whitmore, Wausau
Wm. Schmidt, Rothschild
Mr. Schliss, Rice Lake
- Peck Wis. Ped. 1 Silvermine Type Oats
Rudie Kreuger, Cecil
Munro Brown, Bay City
Delwiche Bros., Green Bay
Wm. H. Basse, R. 3, Sta. D, Milwaukee
Chris Odden, Barronnett

Peck Wis. Ped. 5, Swedish Select Type Oats

P. W. Jones, Black River Falls
Archie Peters, La Crosse
Louis Schmidt, Rothschild
Wilhelm Herrmann, Shawano
Ferdinand Brey, Sawyer

Peck Wis. Ped. 7, Kherson Type Oats—

Richard Kleinsmith, Onalaska
H. M. Krause, Reeseville
Chas. H. Howitt, Randolph
Leslie Powell, Randall
G. A. Krause, Reeseville

Peck Any Other Variety Oats

J. L. Krause, Reeseville
Claude J. Gourdoux, Holcombe
H. R. Berndt, West De Pere

Peck Winter Wheat

Emil G. Kindt, Wilton
Alfred Waller, Port Wing
Wilhelm Hermann, Shawano
P. E. Sheppler, Rockland
Lyle Cumberland, Ashland

Peck Spring Wheat

A. Selle, Thiensville
T. M. Thorsen, Superior
Ed L. Whitmore, Wausau
Art L. Weber, Forestville
Otto Schmidt, Foxboro

Peck Winter Rye

Tom Moore, Green Bay
Otto Wolf, La Crosse
Chas. Barnhardt, Hales Corners
Fred Rebensdorf, Fairchild
Munro Brown, Bay City

One-half Peck Medium Red or Mammoth

Fred Rebensdorf, Fairchild
Walter Bankert, Cecil
Mrs. Emil Grieger, Athens
A. Selle, Thiensville

One-half Peck Alsike

A. Selle, Thiensville
Victor Thompson, Foxboro
Otto Wolf, La Crosse
Fred Rebensdorf, Fairchild

One-half Peck Alfalfa Seed

Hanson Bros., Grantsburg
A. Selle, Thiensville
Gust Guskalkson, Columbus
Edgar Fink, So. Milwaukee

One-half Peck Timothy

Ed L. Whitmore, Wausau
P. E. Sheppler, Rockland
Fred Rebensdorf, Fairchild
P. Dahlie, Phillips

- Peck Black Soybeans
H. M. Krause, Reeseville
J. L. Krause, Reeseville
Arthur N. Grimstad, Wittenberg
Walter Bankert, Cecil
Harry Tiffany, Webster
- Peck Ito San or Manchu Soybeans
P. E. Sheppler, Rockland
P. W. Jones, Black River Falls
J. L. Krause, Reeseville
John Hauser, La Crosse
Jacobsen Bros., Green Bay
G. A. Krause, Reeseville
Viola Lake Farm, Webster
- Peck Any Other Variety Soybeans
Delwiche Bros., Green Bay
P. W. Jones, Black River Falls
- Peck Scotch or Green Peas
Elliott Blomquist, Ashland
Art L. Weber, Forestville
Arnold M. Logerquist, Baileys Harbor
Abe Anderson, Ashland
Sam Severson, Patzau
Wm. Stocks, Ashland
- Peck Any Other Variety Field Peas
Carl Becker, Saxon
Wm. Stocks, Ashland
Fred Larson, Port Wing
- Sheaf Six-Rowed Barley
Jacobsen Bros., Green Bay
Tom Moore, Green Bay
Otto Wolf, La Crosse
Baumgartner Bros., Wrightstown
Archie Peters, La Crosse
- Sheaf Early Oats
Louis Dahms, Shawano
Roman Muskavitch, Shawano
R. H. Lang, Jefferson
J. L. Krause, Reeseville
G. A. Krause, Reeseville
- Sheaf Late Oats—
Jacobsen Bros., Green Bay
Baumgartner Bros., Wrightstown
Otto Wolf, La Crosse
Richard Kleinsmith, Onalaska
Louis Dahms, Shawano
- Sheaf Winter Wheat
R. H. Lang, Jefferson
J. L. Krause, Reeseville
E. H. Hommell, West Allis
- Sheaf Spring Wheat
Archie Peters, La Crosse
Baumgartner Bros., Wrightstown
G. A. Krause, Reeseville

Sheaf Rye

Otto Wolf, La Crosse
Louis Schmidt, Rothschild
Archie Peters, La Crosse
J. L. Krause, Reeseville

Ten Heads Amber Sorghum or Feterita

La Crosse County School of Agriculture, Onalaska
Gust Gulkalkson, Columbus
Oliver Meyer, Hales Corners

Bundle Alfalfa

Jacobsen Bros., Green Bay
H. R. Berndt, West De Pere
E. H. Hommell, West Allis
Roman Muskavitch, Shawano
LaVerne Johnson, Pulaski
Joe Muskavitch, Shawano

Bundle Medium Red or Mammoth Clover

H. T. Draheim, Gotham
Loetta Draheim, Gotham
Archie Peters, La Crosse
Harold Kleinsmith, La Crosse
J. L. Krause, Reeseville
G. A. Krause, Reeseville

Bundle Alsike Clover

H. T. Draheim, Gotham
Louis Dahms, Shawano
Ed L. Whitmore, Wausau
H. R. Berndt, West De Pere

Bundle Timothy

Vollmer Bros., Hales Corners
H. T. Draheim, Gotham
Otto Wolf, La Crosse
Richard Kleinsmith, Onalaska

Bundle Sudan Grass

Walter J. Steinhoff, Platteville
Jippa Wielinga, Midway
J. L. Krause, Reeseville

Bundle Any Other Hay

Otto Wolf, La Crosse
H. T. Draheim, Gotham
G. A. Krause, Reeseville

Bundle Soybean Hay

Jacobsen Bros., Green Bay
G. A. Krause, Reeseville
H. T. Draheim, Gotham
Bernard Andrews, Shawano
Archie Peters, La Crosse
Vollmer Bros., Hales Corners

Bundle Mature Soybeans

Jippa Wielinga, Midway
Jacobsen Bros., Green Bay
H. M. Krause, Reeseville
J. L. Krause, Reeseville
P. W. Jones, Black River Falls
H. T. Draheim, Gotham

Bundle Field Pea Hay
 J. L. Krause, Reeseville
 Archie Peters, La Crosse
 Otto Wolf, La Crosse
 Frank J. Lindley, Fox Lake

Bundle Mature Field Peas
 J. L. Krause, Reeseville
 P. E. Sheppler, Rockland
 Ed L. Whitmore, Wausau
 A Selle, Thiensville

Bundle Hemp
 Ed L. Whitmore, Wausau
 Frank J. Lindley, Fox Lake

Sheaf Flax
 LaVerne Johnson, Pulaski
 Wm. H. Basse, Milwaukee
 Gust Galkalkson, Columbus

HONORARY CLASSES

Ten Ears Clark's Yellow Dent
 H. T. Draheim, Gotham
 Elmer G. Biddick, Livingston

Ten Ears Silver King (Wis. No. 7)
 Jos. A. Brunner, Ridgeway
 Otto Wolf, La Crosse
 John Bendel, Jr., Stoddard

Ten Ears Early Yellow Dent (Wis. No. 8)
 R. H. Lang, Jefferson

Ten Ears Golden Glow (Wis. No. 12)
 Jos. A. Brunner, Ridgeway
 Jippa Wielinga, Midway
 R. R. Lang, Jefferson

Ten Ears Any Variety Eight-Row Flint
 H. T. Draheim, Gotham
 Frank J. Lindley, Fox Lake
 Chas. H. Howitt, Randolph

Peck Wis. Ped. Barley
 Richard Kleinsmith, Onalaska
 H. J. Roffers, De Pere

Peck Wis. Ped. No. 10 Oats
 Leo Roffers, De Pere
 H. J. Roffers, De Pere
 H. T. Draheim, Gotham

Peck Wis. Ped. No. 5 or Swedish Select Oats
 H. T. Draheim, Gotham
 Peck Winter Wheat—J. L. Krause, Reeseville

Peck Spring Wheat
 H. T. Draheim, Gotham
 Wm. Schmidt, Rothschild

Bundle of Alfalfa
 Wm. H. Basse, Milwaukee
 Otto Wolf, La Crosse

SWEEPSTAKES AND TROPHY AWARDS

Ten Ears Silver King	Joseph Brunker, Ridgeway
Ped. 1 Oats	Leo Roffers, De Pere
Spring Wheat	H. T. Draheim, Gotham
Winter Rye	Tom Moore, Green Bay
Bundle Ped. Barley	Jacobsen Bros., Green Bay.
Ten Ears Yellow Dent Corn	Katterhenry Bros., Beloit
Fifty Ears Dent Corn	H. T. Draheim, Gotham
Ped. 5 Oats	H. T. Draheim, Gotham
Six-Row Barley	Herman Roffers, De Pere
Ten Ears Any Variety Corn	Katterhenry Bros., Beloit

Officers and Committees—1924

OFFICERS

President.....	T. H. Champion, Wauwatosa
Vice President.....	Elmer Biddick, Livingston
Secretary.....	R. A. Moore, Madison
Assistant Secretary.....	E. D. Holden, Madison
Treasurer.....	J. E. Brunker, Ridgeway
Clerk and Stenographer.....	Lillian Sherven, Madison

COMMITTEES

Executive

Chas. Ristow.....	Black River Falls
F. E. Bell.....	Columbus
A. L. Stone.....	Madison
Henry Michels.....	Fond du Lac
Geo. M. Briggs.....	Madison
E. J. Delwiche.....	Green Bay
J. N. Kavanaugh.....	Green Bay

Resolutions

W. L. Ames.....	Oregon
Howard C. King.....	Madison
Rufus Gillett.....	Verona

Finance

E. D. Holden.....	Madison
F. N. Longley.....	Dousman
H. E. Krueger.....	Beaver Dam

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.

2nd. 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 investigation 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.

Any county order member who has been actively engaged in county order work for two or more years, and who is recommended by the secretary of his county order and the secretary of the state association, is eligible to membership in the association.

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

Article IV—Dues

A fee of one dollar 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 successors 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.

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

Section III. It shall be the duty of the secretary to keep all records of the association; to report the results of all coöperative 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.

Section 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 regulations 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 Roberts' 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.

County Pure Bred Seed Growers Associations and Secretaries

Brown County.....	J. N. Kavanaugh, Green Bay
Buffalo County.....	S. P. Murat, Alma
Door County.....	E. G. Bailey, Sturgeon Bay
Grant County.....	J. C. Brockert, Platteville
Jackson County.....	A. P. Jones, Black River Falls
Jefferson County.....	Geo. Leonard, Ft. Atkinson
Kenosha County.....	J. S. Williams, Kenosha
La Crosse County.....	L. C. Hatch, Onalaska
Manitowoc County.....	R. R. Smith, Manitowoc
Milwaukee County.....	T. H. Campion, Wauwatosa
Outagamie County.....	Robt. Amundson, Appleton
Ozaukee County.....	R. F. Beger, Fredonia
Racine County.....	E. A. Polley, Rochester
Rock County.....	R. T. Glassco, Janesville
St. Croix County.....	R. W. Brunner, Hudson
Shawano County.....	A. C. Murphy, Shawano
Waukesha County.....	J. F. Thomas, Waukesha

Constitution and By-Laws of the County Order of the Wisconsin Agricultural Experiment Association

Article I.—Name. The organization shall be known as the.....
.....County Pure Bred Seed Growers Association—an Order of
the Wisconsin Experiment Association.

Article II.—Object. The object of this organization shall be to promote the agricultural interests of the county and state in general.

1st. By coöperating with the Experiment Association in growing and disseminating pure-bred seed grains.

2nd. By having associations' exhibits at agricultural fairs.

3rd. By having annual meetings in order to report and discuss topics beneficial to the members of the order.

Article III.—Membership. Any person may become a member of this order who has taken a course in the college of agriculture at Madison or at any place in the state under the jurisdiction of the college.

2. Anyone who is interested in pure-bred grains and live stock or in progressive farming in general may become a member of this order.

3. Honorary membership may be conferred upon anyone interested in progressive agriculture by a majority vote at any annual or special meeting.

Article IV.—Dues. A fee of fifty cents shall be collected from each member annually.

Article V.—Officers. The officers of this order shall consist of a president, vice president and secretary-treasurer, whose terms of office shall be one year, or until their successors are elected.

Article VI.—Duties of Officers. 1. It shall be the duty of the president to preside at all meetings of the order and to enforce the observ-

ance 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 order.

2. In the absence of the president, the vice president shall preside and perform the duties of the president.

3. The secretary-treasurer shall keep the records of all meetings and proceedings of the order, also the names of all members and their addresses. He shall also keep the funds of the order, collect all fees, pay all debts, and shall submit a written statement of all moneys received and paid out by him and shall balance his books not later than one month before the annual meeting.

Article VII.—Disbursements. The funds of the order shall be used to defray expenses or by vote of the order for such purposes as will advance the agricultural interests of the order and shall be paid out only upon an order signed by the president and countersigned by the secretary.

Article VIII.—Amendments. This constitution may be amended at any meeting by a two-thirds vote of the members of the order present.

BY-LAWS

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

Article II.—This order shall be governed by Roberts' Rules of Order.

Article III.—All members joining at the organization of this order shall be known as charter members.

Article IV.—The time and place of holding the annual meeting shall be determined by the officers.

Adopted....., 19.....

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