Wisconsin State Cranberry Growers' Association. Fiftieth annual meeting, Wisconsin Rapids, Wisconsin, December 16, 1936. Fiftieth summer meeting, Wisconsin Rapids, Wisconsin, August 18, 1936. Fifty-fi...

Wisconsin State Cranberry Growers Association
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WISCONSIN STATE CRANBERRY GROWERS' ASSOCIATION

FIFTIETH ANNUAL MEETING
WISCONSIN RAPIDS, WISCONSIN
December 16, 1936

FIFTIETH SUMMER MEETING
WISCONSIN RAPIDS, WISCONSIN
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FIFTY-FIRST ANNUAL MEETING
WISCONSIN RAPIDS, WISCONSIN
January 20, 1938

FIFTY-FIRST SUMMER MEETING
WISCONSIN RAPIDS, WISCONSIN
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LETTER OF TRANSMITTAL

To the Honorable Philip La Follette,
Governor of Wisconsin.

Dear Sir: I have the honor to submit to you herewith the Fiftieth and Fifty-first Annual Reports of the Wisconsin State Cranberry Growers' Association, in requirement of law.

Very respectfully yours,

Clare S. Smith,
Secretary.

Wisconsin Rapids, Wis., January 21, 1937.

MINUTES OF THE FIFTIETH SUMMER CONVENTION

Meeting called to order by President Herman Gebhardt at two P.M., in the Rose Room, Witter Hotel, Wisconsin Rapids, Tuesday, August 18, 1936.

Speakers on the program were: President Gebhardt, E. L. Chambers, state entomologist, W. Grimmer, Game Superintendent of the State Conservation Department, Jens Jensen of Ellison Bay, noted landscape architect and guest of President Gebhardt, C. M. Chaney of American Cranberry Exchange, H. F. Bain, federal cranberry specialist and L. M. Rogers, state cranberry specialist.

Motion was made and passed to draw up a resolution favoring the building of dams to provide nesting areas for wild life in such a way as would also serve the cranberry interests. Moved that a copy be sent to the Conservation Commission.

Attorney Calway and C. R. Treat were appointed and drew up the resolution.

Motion made and seconded that a committee be appointed to present resolution setting forth the need of a cranberry specialist and the retention of and continuance of Mr. Bains' work.

Three members were appointed to present a resolution and delegate one or more to go to Washington, if necessary, to present said resolution.

Herman Gebhardt, Guy Potter and Guy Nash were appointed on this legislative committee.

Moved and seconded that a similar action be taken as to the state situation in regard to a specialist.

Moved and seconded that the chair appoint a committee to confer with all relief and resettlement directors of Wood, Juneau, Jackson and Monroe counties in regard to releasing help for the harvest season, September 1 to November 1. The committee appointed were: A. E. Bennett, F. R. Barber and Guy N. Potter.

An airplane dusting demonstration was given at the local airport at 5:15 P.M.

Moved and seconded that the reading of the minutes be dispensed with.

Moved and seconded that we continue the subscriptions to Horticulture for all paid up members.

Moved and seconded that we express our appreciation to Station WLBL for the Minnesota weather broadcast.

Moved and seconded that a vote of thanks be given Mr. Daniels for the candy and cigars.

Motion made to adjourn.

CLARE SMITH,
Secretary.

August 19, 1936

To the Conservation Department,
State of Wisconsin,
Madison, Wisconsin

The Wisconsin Cranberry Growers' Association duly assembled in special session at Wisconsin Rapids August 18, 1936, being interested in the restoration of water levels in the State of Wisconsin and being informed that a more comprehensive program of dam building with W.P.A. labor is contemplated,

It is hereby resolved that this Association favors the building of additional dams for the purpose of providing nesting areas for aquatic wild life in such locations and in such manner as will also and incidentally serve the interests of the Cranberry Industry of the State.

Committee: F. D. CALWAY,
C. R. TREAT.

ADDRESS

HERMAN J. GEBHARDT

Members of The Association and Visitors: As I greet you today I feel that we are indeed fortunate in our vocation as cranberry growers that we can cope, to a marked degree, with the distressing climatological conditions that have disturbed those who till the soil. While there is ample evidence to sustain the belief that droughts and insect pests have pestered man through the ages, yet many of our aggravations of today can be attributed to man's thoughtlessness, wastefulness and destructiveness. In Genesis 31:40 we read, "For in the day the drought consumed me and the frost by night, and my sleep departed from mine eyes". And in the book of Joel, "For that which the palmer-worm hath left, hath the locust eaten; and that which the locust hath left hath the canker-worm eaten; and that which the canker-worm hath left hath the caterpillar eaten".

From the Monroe county line northward to Lake Superior there was once an almost unbroken forest of white pine. It took nature many years to bring forth this crop and the Indian policy was to preserve and not destroy, for in these forests was their food supply. In a thoughtless careless manner man harvested this crop leaving in its stead the slashings and broken saplings. The cranberry crop of 1885 was considered an excellent one and growers felt jubilant over their success. The next year was a rather droughty one and the month of August found the setting perfect for a forest conflagration. Wisconsin growers were wiped out to such an extent that it was difficult to get vines with which to reset. Nature exacted her price. As a little chap I well remember the clouds of smoke as the fire, fanned by a southwest wind, rushed up the Lemonweir valley. The pine slashing is no more having been superseded by the cigarette stub. Your program committee continues to hope that Clark Treat will favor us with a paper of his early day observations of that period. The severity of the penalty did much to bring the growers more closely together and the following August 1887 brought a small group of growers together in the Mather district and thus the first convention of the Wisconsin State Cranberry Growers was held. I mention this in passing to remind you that next August is the Fiftieth anniversary and I am sure the growers will want to celebrate the event in some simple manner, perhaps a big picnic dinner gathering.

Today a large portion of our nation is in the midst of its most destructive drought and insect visitation and the masses are coming to realize that man's plight can be attributed to a marked degree to

his own acts. In Biblical times in years of plenty they provided larger and better warehouses, knowing that there would likely follow lean years. Perhaps we as cranberry growers should give thought to better and larger warehouses to care for our crops and facilitate the handling of a future million barrel crop.

The difficulty in canning cranberries for market in the past has been the tendency to lose both color and flavor. In recent years this has been corrected to a marked degree and "Cranberry Canners, Inc." of Massachusetts played an active part in stabilizing the fresh fruit prices by using hail damaged and weak berries. A number of cars of hail damaged berries were sent from Wisconsin to Massachusetts to be canned and I understand the canners purchased approximately 90,000 barrels during the 1935 season. Cranberry Canners, Inc. is a company composed of cranberry growers whose aim is to hold up and not depress prices. Sooner or later Wisconsin will find it advisable to consider either canning the weak and surplus berries here or sending them to Massachusetts. How many barrels could Wisconsin send each year to the canners? Could we average 10,000 barrels? Would Cranberry Canners establish a plant in Wisconsin to take care of us? Would they be willing to do so for the amount we could annually turn over to them? Would it be advisable for Wisconsin to have their own plant? Could we get competent parties to operate same for us? The stabilizing influence of taking off the market the weak berries and surplus stock is a matter worthwhile considering.

The public is dependent more and more upon canned products. There is nothing that goes with meat or fowl as cranberry sauce. A Frenchman was trying to express this when he said "Cramberrie, when you stew him like apple sauce, he tastes more like prune than rhubarb do."

During the year several new cranberry marshes have been started. These will be modern and are constructed with care. Growers continue to remove undesirable beds and the tendency is to have fewer varieties, each grower confining his plantings with respect to earliness or lateness as meets with his bog conditions. Spraying and dusting is underway in Wisconsin. The Wisconsin 1936 crop is considerable under that of last year. Our secretary has prepared a program and these subjects will be ably handled by those called. Remember this is your meeting and much depends on the active part each plays therein.

VARIATION IN KEEPING QUALITY IN WISCONSIN CRANBERRIES

HENRY F. BAIN, *Senior Pathologist*
Division of Fruit and Vegetable Crops and Diseases

In connection with experiments in the control of spoilage brought about by harvesting cranberries from water ("water-raking"), a six-year consecutive record of keeping quality and size of fruit has been obtained on two Wisconsin cranberry marshes, and a partial record on a third. It is believed that these figures, representing the variation which has occurred in the crops from individual marshes from year to year, are of sufficient importance to justify publication.

The method of the experiment each year was briefly as follows: One ¼-barrel box of berries was raked dry immediately before the section was harvested, and a sample of berries water-raked adjacent to the

same area was taken as the section was being harvested. The berries were boxed as soon as they dried, and were carried to Washington, D. C. early in October, where they were held in common storage until the middle of December. At that time the spoilage was determined by sorting a seven-cup sample from each box. Size of berry is recorded as the number of berries per standard cranberry counting cup, the figures generally representing the average count in 49 cups.

Table I

KEEPING QUALITY (REPRESENTED AS PER CENT OF SPOILED BERRIES) AND SIZE (REPRESENTED AS NUMBER OF BERRIES PER STANDARD CRANBERRY CUP) OF CRANBERRIES FROM THREE WISCONSIN MARSHES FROM 1930 TO 1935. SEARLS VARIETY.

Marsh	Year	Av. Cup count	% Rot in ¼-bbl. chaff samples in ordinary storage at Washington, D. C. on Dec. 15.	
			Water-raked	Dry-raked
Beaver Brook, Wis.	1930	110	42	14
	1932	—	32	13
	1935	100	42	18
Phillips, Wis.	1930	84	16	6
	1931	124	33	11
	1932	—	30	13
	1933	106	18	11
	1934	89	51	24
	1935	78	51	27
Biron, Wis.	1930	87	33	13
	1931	97	26	11
	1932	—	21	8
	1933	77	39	20
	1934	87	23	14
	1935	84	26	10

Three features stand out as of general importance. First, water-raking approximately doubled the amount of spoilage in practically all lots every year. Second, the keeping quality, whether measured by condition of dry-raked or water-raked samples, varied greatly from year to year on each marsh, but not in unison with the other marshes. (No two of the three marshes considered are closer together than 75 miles.) Finally, while there was a tendency toward correlation between inferior keeping quality and large size of berry, some crops of abnormally large berries had excellent keeping quality.

THE RELATION OF RESEARCH TO INSECT CONTROL

E. L. CHAMBERS, *State Entomologist*

We always like to preface any discussion on cranberry pests before cranberry growers with the statement that we do not claim to be an expert on the subject ourselves, but because we are very much interested in your problems we do try to provide a man who does know the subject and give him such assistance as we can. In justification to our field men we want to point out that they have the benefit of very little scientific investigation to guide them as compared with practically any other field, as compared for instance with investigational work on such insects as our common apple worm, the codling moth, the Oriental fruit worm and most of our other insect pests of fruit which are subjects studied by practically every experiment station in the country. The habits and control measures of many of our cranberry insects are practically unstudied.

We marvel at the improvement made in the productiveness of many of our crops through research and wonder what might be accomplished with like effort expended toward the cranberry industry. We need first of all a vine—resistant to false blossom, but it takes more than just a vine. We must have a vine that is productive of a good quality berry suitable for shipping and a good keeper. It may take several generations of investigators to accomplish this end but it is worth going after. There are lots of complications in developing new strains, for instance, varieties of wheat have been developed with a marked immunity to Black stem rust only to find that they are less resistant than other grains to other fungous diseases so that they are not practical for growing extensively. It would be nice if we could develop a frost-resistant vine and berry but that would be expecting a little too much, I fear.

True, we have had some good investigators working in Massachusetts and New Jersey and also some splendid work has been done right here in Wisconsin, but probably not more than half a dozen men are working on cranberry insect investigations, while hundreds are and have been working on the pests of each of our other important crops. The reason for this, of course, is because of the fact that the number of people connected with the cranberry industry is about in the same proportion. With this in mind it is obvious that we are expecting quite a lot of our field men when we depend upon them to detect early outbreaks of pests and recommend immediate treatment before damage results. Usually the call for help comes too late even for the application of a commonly recognized effective control measure for the pest. In our desire to find better methods of control or variations of a control measure worked out in the East that would be more suited for use in Wisconsin, we must not forget that this requires research. Research is of no value unless accurate measures are used and recorded with check plots and the tests carried on under different conditions of weather, soil and moisture over a period of years. To accomplish this means that a man must have elaborate equipment at his disposal and be able to give his undivided attention to the problem. One problem is all that even the best research man can be expected to handle at one time. It requires patience and accuracy in recording all of the factors that might influence the results from humidity and temperature to the PH of the soil and the age and variety of the cranberry vines themselves.

Too often we expect our field men to carry on experiments of one

kind or another and while he may direct them, the results should not be accepted as being conclusive without weighing all of the influencing factors and running the test repeatedly over a period of years. The point I am trying to make in these brief remarks this afternoon is that we must have more research right here in Wisconsin before our field men can provide you with the kind of information you need to guarantee your crop protection against insect pests and plant diseases. The field men are too busy visiting bogs, pointing out incipient outbreaks, inspecting cranberry vines for false blossom, directing general control measures, etc., to attempt research. Where a man attempts to combine research with control activities we have never known our observation to fail that just at the critical moment when the man should be recording hatching dates of an insect or observe an important stage in the development of an insect or disease he is called away to answer a very urgent emergency call in the field, and as a result, an entire summer's work on a research problem is lost.

This is the reason we are so anxious to continue the co-operative work we have been carrying on so satisfactorily with the United States Department of Agriculture. Through the services of Mr. Bain we are beginning to get at the bottom of some of our problems and get information that will enable our growers to more intelligently solve some of their problems. Mr. Rogers, with his years of experience as a grower, is able to extend to you valuable suggestions and call your attention to pitfalls and direct you around these much better than a man with a limited amount of experience from the growing standpoint. Naturally a man cannot be expected to have both years of experience as a scientific investigator and a life time experience as a grower, so we believe we have a very happy combination in these two men.

In carrying on research we wish to further point out the absolute necessity of long periods of study and to emphasize the necessity for an experimental bog to be devoted to such study. An experience we had in conducting some potato dusting and spraying demonstrations in co-operation with the United States Department of Agriculture will, I believe, illustrate what happens when such tests are not carried on in an experimental bog available over a considerable period of years. We felt that the potato leaf hopper, which was responsible for cutting down the potato yield almost 50%, should be controlled by the farmers when Bordeaux mixture was discovered as a complete control. The farmers were using arsenate of lead to some extent for potato bug control but very few accepted the recommendation for using Bordeaux so we decided upon a series of demonstration plots spread over the state at points to be visited in the fall by the State Potato Tour. We used Bordeaux on several acres in each locality and sprayed or dusted the check rows with calcium arsenate only to show the difference between the rows receiving the Bordeaux and those that did not. The spray and dust tests were to be run under an unwritten contract for four years. We got along nicely the first two years but when we attempted to make arrangements for the third year the growers refused to allow us to use any check rows because with a difference of yield ranging from 50 to 100 bushels per acre, they said they could not afford to sacrifice several acres for check plots. There is no question in my mind that if we hadn't used these particular fields for the tests that they would not have been using the Bordeaux at the time but when they discovered the advantage of the Bordeaux they suddenly realized they couldn't afford even the loss on the two or three acres used as a check. The result of this change of mind ruined the value of the two years' work already done.

The same situation might easily occur on a cranberry bog and consequently it would not be wise to go ahead on any extended research

problems without a lease on an experimental bog large enough to meet the need for a period of ten years or more.

With the purchase of a dusting aeroplane by some of the growers here we need more information on the value and proper mixtures of pyrethrum and nicotine dust for the control of leaf-hoppers, fruit worms, etc.

I understand we are to see this plane demonstrate the ease of applying insecticides at the close of this meeting out at the Air Port and you will agree with me, I am sure, that it looks like it had a lot of promise toward solving some of your problems. The results this summer looked very promising and the pilot has demonstrated he can put the powder on the way we want it if we can find the proper mixture to do the trick.

I do not want to take up any more time this afternoon since Mr. Bain is here and has some very interesting findings to report in connection with his research studies and I know you will all be eager to learn about his work.

DATA AND OBSERVATIONS

L. M. ROGERS, 1936,
Wisconsin State Field Man

Wisconsin Cranberry Growers have planted this season 70½ acres of vines, of which 51½ acres were new planting and 19 were remade.

Of the new, 36 acres were planted to Searls', 7¾ were planted to McFarlin's, 5 were planted to Native and 2¾ were planted to Howes.

The remodeled was planted—From Native to McFarlin 3½ acres, from McFarlin to McFarlin 4½ acres, from Bennett's to McFarlin 2 acres, from Gebhardt Beauty to McFarlin 1 acre, making 11 acres McFarlins. From Native to Searls' 5 acres, from Seymour to Searls' 1 acre, making 6 acres Searls'. From Bennett's to Native 2 acres. In addition there has been considerable replanting of small spots of dead vines.

Three hundred and fifty acres were sanded this past winter. Considering the deep snows this shows a very progressive spirit. The extreme heat of this summer gave added evidence that sanded area needs more moisture during drought periods.

Some rolling has been done with a noticeable thinning of wire-grass and blue-joint. The best known method and time of doing the work is to go over the area with a heavy roll in late October or in November when the ground is dry, and especially to give a second rolling in the opposite direction from the first.

An unusually large amount of weeding, ditch cleaning, dam raising, and other general needed work has been done during the past year.

Considerable oil has been used for weed control this spring and summer. There is some doubt as to the amounts which can be used, in safety to future crops. It has been claimed that where oil has been used in sufficient quantity to kill a solid stand of grass the vines suffer from lack of moisture in the soil the following year. The only data I have to submit at the present time is from the trials made by Clarence Searls at the home marsh. On an area of one and three quarters of newly planted vines an almost solid stand of bunch grass and wide-leaf came in the first year.

The second year kerosene was applied with some success on the bunch grass. The third year 350 gallons of fuel oil was used in early

spring and 50 gallons more during the summer. This past spring which is the fourth season 200 gallons of fuel oil was used. The bunch grass disappeared long ago but there are a few spots of wide-leaf yet remaining which Mr. Searls is planning to kill this summer. The vines over the whole area look healthy and are bearing a fair crop which does not appear to have suffered more from the heat and drought than other representative areas.

Water curing was done this spring at several marshes. On Metallic Bell at Guy Potter's, and Howes at the A. U. Chaney marsh some killing of vines resulted; at the O. O. Potter marsh several acres of Howes were treated and came through in fine shape with prospects of a good budding. How much damage was done to the false blossom is uncertain. No doubt there was some. A small area of Mammoth vines was treated at Millston, with a very noticeable killing of false blossom plants. In no instance was the water held later than July 7 and in all cases blue-joint and knot-grass were killed.

The fight on the black-head fireworm is going on. We have much more to learn relating to the time to hold the flood under various conditions such as advancement of foliage, size of worms, temperature and color of water and especially oxygen content of water. Growers are very well established in the belief that flooding should not be done more than necessary in warm cloudy days or at night.

Control of leaf-miners should begin when vines show a spindling growth and crop reduction is evident. This condition will develop after most of the leaves have been eaten and killed several years in succession.

It seems that the blunt nose leaf hopper eggs hatched early this season, as areas given a heavy fire-worm flooding in June have had very few hoppers this summer. With the winter killing of three years ago, spraying, June flooding and dusting, the false blossom hoppers are already very much reduced in numbers, and with more growers each year preparing to fight them the danger to varieties considered susceptible seems very much lessened.

Howes vines seem not to have suffered from this season's extreme heat and drought as much as other varieties. Nearly all fields having Howes of bearing age have a good crop this year. Some years they do not attain full size in the northern part of the State and possibly not anywhere in Wisconsin.

Searls do well in northern and central counties under various cultural conditions. Perhaps they do not do quite as well in the extreme south.

McFarlins seem to do well in any part of the state under any methods practiced but should not be planted unless ample water seems assured for fall protection, as this variety harvested in September makes a very undesirable pack.

Once more I wish to urge the growers to hold off the winter flood on bearing vines as long as possible consistent with safety from vine killing, and to flood new plantings before freezing of the ground occurs.

It has been my ambition to see Wisconsin lead the other cranberry states in acre production. Our annual production figures as compiled by the American Cranberry Exchange show that the past 5 year average has been 27 barrels per acre. Ten years ago the comparable 5 year average was less than 20 barrels.

With some 300 acres of new and remade marsh coming into bearing within the next year or two, and with the Mather district rapidly recovering from its severe winter killing of three years ago we can confidently hope to increase this average in the future.

MINUTES OF THE FIFTIETH ANNUAL MEETING

Meeting called to order at 1:45 P.M. in the Rose Room, December 16, 1936 by President Herman Gebhardt.

The nominating committee appointed were: C. L. Lewis, A. E. Bennett and O. O. Potter.

Mr. A. U. Chaney introduced Professor Asher Hobson who spoke on the Place of Co-operation in Our Economic System.

E. L. Chambers talked on bug and plant disease and also showed a splendid movie of cranberry growing.

Minutes of the last meeting were read and approved.

Financial report read. Guy Nash and Phil Bennett, appointed auditors, reported the same correct.

Moved and seconded that we subscribe to Wisconsin Horticulture for the ensuing year for all paid members.

The committee appointed to attend to any matters necessary to retain or obtain our federal and state field men reported a decision not to interfere at this time.

A muskrat resolution was drafted, then amended and moved and seconded to be accepted as amended.

A. E. Bennett and C. L. Lewis were appointed to draft resolutions of regret on the passing of Mrs. M. O. Potter.

Meeting adjourned.

One hundred forty-six growers and their friends enjoyed the annual 6:30 P. M. banquet at Hotel Witter, with co-agent H. R. Lathrope as toastmaster. Solos were rendered by Mrs. Eileen Ecklund Nickerson, the courtesy of Mr. Babcock of the Wood County Bank. Through the courtesy of Mr. Daniels we also enjoyed solos by Ralph Corey, xylophone numbers by Ed and Pete, professional entertainers and the Red Fox orchestra furnished the music for the dance following the banquet.

A vote of thanks was given Mr. Babcock and Mr. Daniels.

CLARE S. SMITH,
Secretary.

IN MEMORIAM

We record with deep sorrow the death on September 30 of Mrs. M. O. Potter, who together with her husband, who preceded her in death, were among the first of Wood County citizens to enter the cranberry business, giving freely of their time and money to aid in the development of the industry.

Mrs. Potter was a great church worker and gave generously of her time and money in aid of the poor and support of the church. In her death the community as well as the cranberry industry has lost a real worker.

Resolved, by this Association, that there be spread upon its minutes this resolution which expresses our appreciation of her services and our own loss at her passing, also that the relatives be furnished with a copy.

A. E. Bennett,
C. L. Lewis.

WHEREAS, The cranberry interests of the State of Wisconsin, gross income amounting to over one million dollars annually, are being seriously interfered with by the protection of muskrats under the state law, said animals making their houses and digging holes in the dams and roadways, leaving the water off the vines so that the vines winterkill and produce no berries. Said damage is estimated by the cranberry growers at from ten to fifty thousand dollars annually and if permitted to continue would also very seriously interfere with the expansion of the cranberry business in the State of Wisconsin.

Therefore, We the members of the Wisconsin Cranberry Growers Association this day assembled, do hereby respectfully petition you for an open season on muskrats from September 15 to April 15, each year, on cranberry marshes of the State of Wisconsin and that cranberry growers may destroy muskrats doing damage on their property at any time of year without restraint.

And we wish a copy of this petition to be presented to the Honorable Philip La Follette, Governor of the State of Wisconsin, also to each member of the senate and assembly to convene in 1937 and to the chairman of the Conservation Commission of the State of Wisconsin, Mr. McKenzie.

F. D. CALWAY,
C. R. TREAT.

December 1, 1936.

ADDRESS

HERMAN J. GEBHARDT, *President*

Members of the Association and Visitors: During 1936 the Wisconsin cranberry growers had many adverse growing conditions with which to contend. The excessive heat during the bloom period when a temperature of 114 degrees in the shade and 140 degrees in the field was reached, together with a scarcity of water and probability of frosts made the production of cranberries a very uncertain undertaking. Wisconsin produced approximately 59,000 barrels, a slightly above normal crop. I believe much credit is due the growers in that they applied their knowledge, ability and experience under the guiding hand of our field man to meet, to the best of their ability, the conditions that confronted them.

We now know that a spell of continuous excessive heat during the bloom period can almost annihilate a crop. We must look for possible corrective measures when this condition confronts us. Although this is a condition seemingly beyond our control, yet we may be able to counteract it through the use of water as a cooling process. Personally, I feel quite confident of this, and would choose another such growing season in preference to the extremely cold summer, which I believe was 1907, when the Wisconsin crop was very much pie berries. Normal weather conditions will return and decidedly larger crops are in store for us. The keeping quality of Wisconsin berries was again very good and the prevailing high prices made 1936 a banner year with many growers. Wisconsin can rightly be proud of this growing industry in which we bring forth from her soil this much desired fruit rich in many vitamins.

Although the world is in a turmoil and man's inhumanity to man seems to predominate, nevertheless we are in an age of progress. In our vocation as cranberry growers 1936 has brought airplane dusting

for insect eradication, friendly contests to determine the world's champion cranberry raker, and cranberry day as sponsored by the Junior Chamber of Commerce of Wisconsin Rapids and the growers alert to consider new cultural methods and apply same. We cannot wait for nature alone to bring forth corrective measures; we must step in and assist her. Growers are eagerly looking forward to the bringing forth of a new early variety through cross pollinating of desirable varieties which will be quite immune to the false blossom.

The program that is to follow will bring up many interesting points and I hope all will feel free to take part in the discussions. To the new members and guests we extend a hearty welcome.

IT TAKES PATIENCE TO BE SUCCESSFUL

E. L. CHAMBERS, *State Entomologist*

While the insects may be quiet this time of the year, the bug-ologists are never quiet. The insects confine their attention to the growing season but the entomologist has to work every month of the year to keep up with the battle. At this meeting I intend to make my remarks brief and use the time allotted me largely for showing you the results of the moving picture we have been building up during the past few years of your cranberry industry.

Our chairman has referred to my casual mention in previous talks to the 50 million years that insects have been on this earth and thoroughly mastered it long before man began his attempt just recently, so to speak, although it was some 500,000 years ago. I might further emphasize the power of these enemies by reminding you that we have more species of insects described in Latin than we have words in our English language. We cannot very well, you can see, expect to step right in and eliminate the enemy as it were overnight. It will require persistence and patience. While we hope it won't take another 50 million years to accomplish the goal of eliminating the more serious pests, we are most concerned right now in protecting our own food and shelter from insect attack.

With more new pests coming to our shores from other countries as a result of our speeding up of transportation facilities and native insects changing their food habits and suddenly becoming serious pests, we cannot expect to overcome or solve this problem of insect control overnight or even within the period of a year or two. We must study their habits and the weak point is their life cycle where an attack would be practical and effective and most of all we must have patience. Of all the factors that contribute to success in business or in investment of any kind, patience is foremost. Without patience, failure is inevitable. Study the history of any successful business, invariably the owner has been willing to wait for his much sought reward. Dividends have been of less interest to them than earnings. Earnings have been of less interest than soundness of their investment and growth. They, like you cranberry growers, have been willing to wait five to ten or even twenty years for realization of their desire. Many of you cranberry growers are now reaping the harvest of their patience at a time when your crop has a good demand and your advertising and sales management has clicked and is bringing you a good price. The turkey breeders who furnish the main dish for the holidays which creates a demand for cranberry sauce and who have been enjoying a fair profit, find themselves in a rather tough spot in contrast to you growers. The cost of feed is high and

going steadily higher and the price is lower than for almost any kind of meat, being less than 12 cents per pound to the turkey raiser. This condition is liable to occur in any industry and requires patience if one is to stay in the game. Insect and disease control requires the same patience. Adequate investigational work must be done on each pest before a dependable control measure can be worked out. The problem may for a time seem solved and then along comes a season or a series of seasons of drought, high temperatures, etc., that change the entire picture and we are helpless to prevent heavy losses from these same pests we thought we had licked. Again some minor pests we have ignored as of little consequence, and consequently have no control program, may surprise us and do more damage than the most notorious ones.

Practically all of our knowledge of pest control is of comparatively recent origin,—within the last 50 years at most. In fact, our most common arsenicals, arsenate of lead and calcium arsenate, used most extensively today were unknown 40 years ago. As a means of giving employment, the government has made unusual strides toward pest control during the past few years. It is generally conceded that insects alone in this country nullify the work of a million men so what better investment could be made than to expend some of the WPA energies toward reducing insect losses. Such projects are now in progress to conquer the gypsy and brown-tail moths in New England, the European corn borer, the Pink bollworm, Japanese beetle and many other insect pests from the mosquitoes to grasshoppers. Likewise, the control of plant diseases is being speeded up by ten to twenty years in the long-time campaigns launched against the Black stem rust of small grain, White Pine Blister Rust, Dutch elm disease, Citrus canker, Peach mosaic and similar troubles.

Maybe one reason the cranberry demand has increased in the face of decreased demand for other fruit may be the loss of millions of the European common barberry, currant and gooseberry bushes removed in the interest of controlling the Black stem rust of grains and White Pine Blister Rust. The common barberry fruit makes excellent jelly and wine and was used extensively for this purpose by our early settlers, and of course we all know the fine kind of jelly, pies and wine that the currants and gooseberries make. In Wisconsin alone more than 30,000,000 currant and gooseberry bushes were removed this summer and more than 5 million barberry bushes were removed since the campaign for their eradication was started during the last war.

The first instance of a species of insect once established ever being completely eradicated was the eradication of the Mediterranean Fruit Fly a few years ago. This feat demonstrated that such a task was possible and maybe in time with more knowledge of the pests and better methods for their control we will be able to wipe out some of these species which take heavy annual tolls from certain of our crops.

The various states and the federal government is doing all it can to prevent the introduction of new species and delaying the spread insofar as possible those we already have that are not yet widely distributed. To this end the federal government inspected 1,151,960 packages of parcel post and express during the past year at 22 points where these shipments are handled at terminals and found 2,269 violations of state and federal quarantines.

While the Japanese beetle has been spreading by natural flight and on railroad cars, etc., it has not as yet been found in Wisconsin, with the exception of two beetles found and destroyed in a car of potatoes received this summer from New Jersey.

The United States Department of Agriculture has explorers out studying these foreign insects in their native homes to determine the

parasites effective in their control and other factors limiting their damage abroad. At the present time representatives are collecting parasites in Africa, Asia and South America. The aeroplane has complicated the plant quarantine problems. During the past year 1,168 violations were intercepted on 722 planes and no one can say what damage a single violation might cause but we know that only a single consignment of Japanese cherries brought in the Oriental fruit worm and another single shipment of Iris from Japan, the Japanese beetle. It takes a long time for an insect to become established in a new locality to such an extent as to attract sufficient damage to the public's attention and then it is usually too late to do anything about it. In such cases the public has too much patience and the entomologist loses what little patience he has after witnessing the expenditures made "to lock the door after the horse has been stolen."

So much on the subject of patience. Now, if you will be patient, I will show you a movie of your industry taken on various bogs here in Wisconsin from the winter flood to the loaded car.

ADDRESS

A. U. CHANEY

I am very happy and proud to be with you but especially happy that I have the honor to introduce my dear friend, Professor Hobson, who is a product of your state, a graduate of the University of Wisconsin and now a national character.

My son went to college under his tutorship. While there he had to write a long thesis on cooperative marketing; it wasn't easy for him. He came down to my office, made studies, and with what knowledge he already had, wrote it and submitted the thesis to Professor Hobson. Professor Hobson thought it good enough to submit to the Agricultural Department at Washington and asked that privilege. The Agricultural Department accepted it and induced Professor Hobson to double check it and after doing so they printed it as Government Bulletin No. 1109, it being the first publication of its kind issued by our government on cooperative marketing. The supply of that Bulletin has become exhausted, much to my disappointment.

Later the United States Department of Agriculture sent Professor Hobson to represent it in the World Agricultural Conference abroad and he thereby became nationally known as an authority on agricultural economics. He now heads the economic department of agriculture at the University in Madison where he is an honor to the institute as well as all agricultural institutes of Wisconsin. This all makes me proud to introduce him and I frankly state that I regard him as the best authority on agricultural economics the country has today.

PLACE OF COOPERATIVE MARKETING IN OUR ECONOMIC SYSTEM

PROFESSOR ASHUR HOBSON

I may, in part, live up to the statements of Mr. Chaney, but I am certain to fall short in some respects. As he has indicated to you, we first met about fifteen years ago while working on the marketing of cranberries. It is a pleasure to recall those associations. Because of my relationship with his son, and his generous supply of information on the operation of the cranberry growers in the marketing of their product, I gave considerable time to a study of the cooperative marketing of cranberries. The study was published as a bulletin by the United States Department of Agriculture. At that time I posed as an authority upon the subject. But that was 15 years ago. Since that time cranberries have not been an intimate part of my life, except in my role of an ordinary garden variety of consumer.

So when Mr. Goldsworthy asked me to speak, we discussed a suitable topic. My very definite reaction was that I not be asked to talk on cranberries. Experience serves to emphasize the very considerable difficulties involved in speaking upon a subject about which the audience knows more than does the speaker. Hence, I am going to talk about a new phase of an old subject. That old subject is cooperation. The new phase of that old subject is the place of cooperative marketing in our economic system. Most of you are old cooperators. The success of the Wisconsin Cranberry Sales Company is an indication that most of you practice cooperation.

This afternoon, let us attempt to look ahead and determine, if we may, the place the cooperatives will occupy, and the responsibilities they will assume in our present day economic system.

Cooperation is an elusive term. As Sir Horace Plunkett, the great Irish agricultural leader once said: "Cooperation includes everything from matrimony up." Perhaps that is why there is so much confused thinking on the subject.

At the present there is much being said about consumers' cooperation in this country. Many of the claims of this group give cause for some concern on my part. If you have followed the literature on consumer cooperation, you have certainly come across such statements as; cooperation is,

1. The conqueror of capitalism
2. A new civilization
3. A basis for a new form of government
4. A guide to a cooperative commonwealth
5. A new way of life.

These slogans take cooperation out of its economic setting and endow it with very real social functions.

My concern is whether cooperation is prepared to bear such burdens of social responsibilities. Should we look upon cooperation as a means of redirecting society. Has it a common social pattern? If not, why burden it with responsibilities and obligations it is not able to assume. As a matter of fact, I am unable to detect in the movement any consistent pattern from a social point of view.

In some countries, for instance, the movement is very definitely associated with organized labor. In Belgium, a large national cooperative is under the tutelage of the Catholic Church. In some countries the large cooperatives are allied to Protestant denominations. In Italy, before the advent of Fascism, the large cooperatives were connected with political parties. Now they are a tool of fascism.

In Germany it is a Nazi organ. In Russia they conform to the communistic ideals. In England it is largely an urban laboring class movement. In Sweden, Denmark, and the United States it is predominantly an agricultural movement.

In practice, cooperation is not a means for the promotion of any specialized type of government or for the support of any social system. It may be used to serve conflicting purposes. The greatest conflict of purpose, in this country at least, is found in the philosophy of urban consumer cooperatives and the practices of agricultural marketing cooperatives. The ideal of the organized farmer is to control the distribution of his product from the farm gate to the consumer's back door. In many lines he has made significant progress. We have a few organizations which extend their operations to the retail merchant. In quite a number of lines, the farm cooperatives are able to identify their product to the consumer. Your own sales company is one of these.

The consumer cooperative, on the other hand, has visions of controlling not only the machinery of distribution, but also the processes of production. The aims of the twenty-eight Rochdale Weavers was to own and control the factories in which they worked. Their control was merely a first step. It was only by accident that they hit upon a successful technique of cooperative buying. The grower endeavors to extend his control from the farm to the consumer. The consumer endeavors to extend his control all the way back to and including the land. He maintains as the end of all economic activity is consumption, hence the consumer should be supreme. He suggests that the farmer's interest in cooperation should be that of a consumer, not that of a producer.

In these two philosophies there is an irreconcilable difference. Most of the literature on consumer cooperation does not seem to recognize the extensive cooperative activities of farmers. It speaks of cooperation as a new movement in the United States. One writer says that until recently the United States has been a cooperative desert. As a matter of fact the United States is one of the outstanding countries of the world in cooperation—but it is agricultural producers cooperation.

Let us look for a moment at the extent of this movement among farmers. During the past marketing year—1935-36—there were around 11,000 farmers cooperatives in this country. They had an estimated membership of 3,660,000. They did a business of approximately one and three-fourths billions of dollars. Wisconsin had approximately 1,100 associations with more than 200,000 members and a volume of business totaling $73,000,000. Of the total volume of business done by farmers cooperatives, approximately one-sixth was for purchases and five-sixths was represented by sales. Something like one-fifth of the farm products marketed in the United States were handled cooperatively during one or more stages of their marketing journey. In Wisconsin the proportion was one-fourth.

When one speaks of consumer cooperation it is well to note that fully four-fifths of all cooperative buying in this country is done by farmers. In the light of this fact, it is a little startling to hear so much of urban consumer purchasing and so little of rural cooperative buying. I attribute this to the probability that growers are strong on action and short on philosophy, while the organized city cooperatives are long on philosophy.

My own studies lead me to two conclusions: (1) Cooperation does not furnish a basis for a new form of society or a new social program. It is a form of doing business. (2) In the United States, cooperation has had its greatest development in the field of marketing farm products. With these observations, I return to my original

question, "What is the place of cooperation in our economic system?" In attempting to define that place I shall confine myself to agricultural marketing organizations, since they constitute the great bulk of cooperative activity.

Their place in the business set-up of this country is determined by those functions which they are better able to perform than other types of business organizations. What are those functions? I shall briefly summarize the most important.

I. Adjust Production to Market Demands. This means supplying the consumers with what they want. The farmers' success in marketing depends in large measure upon their ability to produce the things the consumers want—the kind, type, and quality. In order to do this he—the farmer—must know the nature of consumer demands. These demands must serve as a guide to his production program. As an individual producer, the farmer's contact with the market is too limited to furnish him with a reliable guide for a production program. His marketing association must perform this function for him. A few examples will suffice to make clear this point.

In the early days, in the commercial apple district of Washington, it was not unusual for a single district to have over 100 varieties of apples. It was not unusual to find 20 to 30 varieties on a single farm. But when the apple growers formed selling associations and marketed their apples cooperatively they soon found that the market did not want 20 or 30 or 100 varieties. They found that seven or eight standard varieties satisfied the demands of the consumers. If the other varieties were to be marketed, it was necessary that more energy be expended upon them or that they be sold at a lower price. The results were the same—less returns to the producer. As a consequence the marketing associations limited the pack to a few varieties, and the farmer members quit growing the others.

The Danes used to raise fat hogs. They were sold in Germany. In the eighties the Germans shut off this market by means of a tariff. The Danes attempted to market fat hogs in England. The English preferred lean meat. In order to satisfy the English preference, the farmers of Denmark imported English boars, crossed them with native sows and produced a bacon type of hog that satisfied the English palate. The inference is clear. The Danes had two courses before them. They could attempt to change established English tastes or change their product to satisfy those tastes. They did the latter through their cooperatives. They adapted their product to existing preferences.

I hope by the above examples to make clear what is meant by adapting production to consumer demands. This is a field in which the cooperative excels. Increased returns through cooperation resulting from supply the consumer with the kind and quality he likes best are likely to be as great or greater than the association can make in the reduction of marketing costs. Farmers learn what the market wants through contact with the market. The association furnishes this contact.

II. Uniformity in Quality, Grade, and Pack—Standardization. The development and wide adoption of standards of farm products is the most important single step in the improvement of marketing methods, in their application to agricultural commodities. Standards have made it possible to place farm products on a basis of sale by contract rather than by inspection. The buyer insists upon seeing an ungraded or unstandardized product before purchasing. Price is undetermined until quality is established. This means that the sale is not concluded until the buyer has determined for himself the quality of the product offered for sale. Under this system, farmers are limited largely to local buyers in the distribution of their goods.

The cooperative has been the greatest single force in the establishment of dependable standards. In illustrating this point I can do no better than refer to the activities of your own sales organization in maintaining grades and qualities as represented by established brands.

Some years ago a western state passed a law prohibiting the shipping of wormy apples out of the state. Apple growers supported this legislation. They had learned through their sales organization that poor apples ruin the reputation of good apples. Had they not learned this lesson through their marketing associations, it would have been difficult, indeed, to have placed such legislation upon the statute books and more difficult to enforce it. Farmers by maintaining a high reputation for their products have greatly extended their bargaining power and enlarged their sphere of influence in the marketing field.

III. Feeding the Market—Orderly Marketing. One of the functions of marketing is to carry products from the time of harvest until they are needed by the consumer. Individual growers are seldom in position to do this. For instance, the early activities of the cherry growers in Door county dealt with the sale of fresh cherries. They soon found, however, that they had more fresh cherries than the market could absorb at an acceptable price. Consequently, they went into the canning business in order to be able to market cherries throughout the year. Canning cherries became the major activity. Many fluid milk organizations find it necessary to process the milk not needed for daily consumption in order to keep it from depressing the local price of fluid milk. The manufactured product can be held and marketed over a long period. The California fruit growers divert many of their lemons into by-products. One reason for doing this is that a manufactured product may be held and distributed throughout the year, and in forms which do not compete with the fresh fruit.

One may well doubt if cooperative organizations will ever be able to control production, but they can become a vital influence in regulating the flow to market. What, may I ask, would you as an individual cranberry grower know about the day to day demand for your cranberries, unless you employed through your association someone who could give his entire attention to the state of the market and the supplies of competing products?

Feeding the market implies the avoidance of glut on some markets and scarcity on others. It is only through united action that this can be done by growers.

IV. Extending the Market. This is a field in which your own sales organization has excelled. You have found new markets, new uses, and extended consumption over long periods. This required promotional effort. Promotional efforts required the generous use of publicity. Publicity costs money. In order to defray these costs in a painless manner, it is necessary to have a large volume with a small assessment per unit of volume. Here you have a case for cooperation. In no other manner can the farmer nationally advertise his product. It is through your sales organization, and your sales organization alone, that cranberries have become more than a holiday dish.

V. Cooperation Improves Bargaining Power. I could give you many examples but I need cite only one. The study of the marketing of cranberries, to which I referred, showed that the producer received 54 per cent of the consumer's dollar. This is an exceedingly high proportion for a semi-perishable luxury. I do not know its equal. It is not conceivable that you could have done that well in the absence of united action through a marketing association.

I could continue to name functions which marketing cooperatives are especially fitted to perform, but these five, in my estimation, are the most important. These are some of the things which marketing

cooperatives are best fitted to undertake. Why not confine our undertakings to those functions which cooperation is especially fitted to perform. Cooperation is continually struggling against handicaps incurred through the promised miracles of its most enthusiastic supporters. Many tasks are assigned to it which it cannot hope to fulfill. Its success depends, in no small measure, upon an appreciation of what it cannot, as well as, what it can do. If we confine its undertakings to those functions in which it excels, its place in our economic system will be an ever growing one.

ADDRESS

VERNON GOLDSWORTHY

Miss Smith has asked me to give you what information I have on the Social Security Act and its concern with the cranberry people.

I talked with Oscar Ferritz and he stated that the only way we came under the act was in the matter of packing and sorting the cranberries, and the nailing of the boxes. I impressed on him the fact that that phase took in only a short time—five or six weeks or less—and that we could not possibly come under the Act if that were the case.

Already notices have been sent to the growers asking them to figure their reports. I told him that the growers may not be able to get them as their records were not complete. He stated that we would be compelled to file a report, or an affidavit, for 1932, 1934, and 1935 to take care of the matter of unemployment compensation for the state, and that it would probably be required for 1936 to indicate some state report showing commissions for labor employment for the eighteen weeks we would come under the Social Security Act.

FINANCIAL STATEMENT OF THE WISCONSIN STATE CRANBERRY GROWERS' ASSOCIATION

Calendar year 1936

			Receipts	*Disbursements*
Jan. 1		Balance on hand	$ 78.11	
Apr. 2		Dues	2.00	
Aug. 8	Check No. 155	C. S. Smith, rem. 35 and part 36 salary		$60.00
		Check account expense to July 31		2.02
Aug. 19		Dues	6.00	
Aug. 19	Check No. 156	H. J. Rahmlow, 41 subs. to Horticulture		16.40
Oct. 7		Dues	2.00	
Dec. 2	Check No. 157	A. C. Rockwood, 100 double post cards		2.00
Dec. 14		Dues	6.00	
Dec. 17		Dues	88.50	
		Bank check charges $1.56 and $.48		2.04
		Total receipts and disbursements	$182.61	$82.46
			82.46	
Jan. 1, 1937		Balance on hand	$100.15	
		Owing—balance of secretary salary for 1936		$50.00

Officers for 1937

President—Herman J. Gebhardt, Black River Falls
Vice-president—George Bennett, Warrens
Treasurer and Secretary—Clare S. Smith, Wisconsin Rapids
Executive Committee—Mrs. A. C. Otto, Wisconsin Rapids, F. R. Barber, Warrens.

MINUTES OF THE FIFTY-FIRST SUMMER MEETING

Meeting called to order at 1:45 P.M., Rose Room, Witter Hotel, Wisconsin Rapids, on Monday, August 9, 1937.

The president's address was followed by Crop Reports by A. U. and C. M. Chaney; Soil Conservation Program as affecting the Cranberry Grower by Co-Agent H. R. Lathrope and talks on insect problems by State Entomologist E. L. Chambers and Dr. Neil Stevens of the University of Illinois.

Discussion followed on results of airplane dusting for leafhopper control, also spraying and flood control methods.

Minutes were read and approved.

Financial report was read.

Letters were read from Congressman Boileau stating he was unable to attend the meeting, and from Geo. Frechette in regard to the Cranberry Harvest Festival. A. E. Bennett, Roy Potter and Guy Nash were appointed to confer with Mr. Frechette.

Moved and seconded that a vote of sympathy be extended to Mrs. Pauline Smith who was unable to attend the meeting.

Guy Nash, A. E. Bennett and C. L. Lewis were appointed to draft resolutions of regret on the passing of Mrs. A. U. Chaney. Phil Bennett and Phil Gebhardt were to draft resolutions on the passing of Mrs. Fred Barber.

Guy Potter of the legislative committee reported contacting Dr. Auchter Robin Hood and Senator R. La Follette in regard to obtaining Henry Bain again for field work in Wisconsin.

Moved and seconded that a committee be appointed to request a $10,000 appropriation for cranberry research work in Wisconsin.

Resolution was drafted in regard to fur farm operations. Read, moved and seconded that it be adopted as read. Carried.

Date and place of next meeting be left to the president and secretary.

A vote of thanks was extended to Mr. Daniels for the use of the Rose Room.

Motion made, seconded and carried to adjourn.

CLARE S. SMITH,
Secretary.

IN MEMORIAM

Be It Resolved, That this Association extend our sympathy to Mr. Fred R. Barber and family in the loss of their most charming and talented wife and mother.

PHIL GEBHARDT,
PHIL BENNETT.

IN MEMORIAM

A Divine Providence has set upon the pathway which sooner or later all of us must tread, the feet of Mrs. Carolyn Burton Chaney, beloved wife of Arthur U. Chaney, head of the cranberry sales organization of Wisconsin and the east since its inception a third of a century ago, long a member of the Wisconsin Growers' Association and himself a grower in Wisconsin and New Jersey.

Mrs. Chaney was a fine character, a great helpmeet, a loving and competent mother, a friend to all who knew her, helpful, inspiring, instinct with youthfulness, a natural chooser of the finer things of life and the better courses of action. She was loved and will be missed, not alone by those near and dear to her, but by all of those who knew her and who were helped along life's way by her cheerful and spirited personality.

Be It Therefore Resolved, That the Wisconsin Cranberry Growers' Association extends its sympathy to A. U. Chaney and his family, and that this resolution be spread upon its minutes and a copy sent to Mr. Chaney.

GUY NASH,
C. L. LEWIS,
A. E. BENNETT.

ADDRESS

By PRESIDENT GEBHARDT

Many of you cranberry growers have come long distances today that you could be here at this meeting not only to meet and greet your friends, but to give and receive ideas pertaining to cranberry culture and note progress made in solving the many problems with which we contend in the bringing forth of a crop. I have heard it said that "a course in the school of experience is so long that its graduates are usually too old to go to work." Our past fieldman, Mr. Rogers, stated, on several occasions, that we must gain much of our knowledge from the experiences of others for it is thus that we learn. Year by year we work out systematic methods with which to attack our problems and as we acquire and apply positive, definite knowledge, we carry with us the encouraging assurance of positive results.

Twenty-five years ago false blossom, a then comparative new problem, was believed by many to be some strange vine that had entered our fields; and time and money was expended to pull such from our cranberry sections. Wisconsin growers were urged to follow the sanding, pruning, and clean culture methods of Massachusetts and following such our false blossom would evaporate. And didn't it look plausible to us in those days, for Massachusetts had no such problem of this nature. Many of us believed the cranberry vine needed more food.

1937 finds the situation quite different. The false blossom has played havoc with both Massachusetts and New Jersey, seemingly having been brought there through shipments of diseased vines from Wisconsin. It appears to be definitely established that the blunt-nose leaf hopper is the sole carrier and the healthy vines become diseased in consequence of this insect. Through the use of pyrethrum as a spray or as a dust and the recent dusting from airplanes, the destruction of the leaf hoppers has been very successful and the control of the false blossom now seemingly rests with the individual grower. This year finds growers experimenting with submerging the crop with water to eradicate the hoppers—care being exercised to note when and how long such submergence can successfully be carried on without injury to the crop. Miss Huyck carried on some successful experiments a number of years ago by submerging the crop for several hours and very successfully destroyed an infestation of fruit worm with practically no fruit injury. Others have reported great injury. We need further experimenting along this line. My purpose in bringing this to you is to call attention to the steady progress made to simplify our problems.

Our droughty summers are still with us and have been very severe in my section. The regularity with which these come to us makes it imperative that each grower prepare, if possible, better storage of water. The average annual precipitation is about 32 inches. The summer seasons have been hot and the prevailing winds very dry—resulting in a water shortage. A shortage of precipitation, excessive evaporation, and a rapid run-off results in a water shortage. With the first, precipitation, we can do nothing. Excessive evaporation, however, can be reduced through the efforts of the nation, state, corporations, and individuals. It is believed that two-thirds of the total rainfall passes directly from the land back into the atmosphere. Forest growths on our adjacent lands keeps the ground from being unduly heated and, it has been my observation, on hot days, that a cool draft of air flows from such timber areas. Showers falling on warm soil is soon lost through rapid evaporation. With modern machinery equip-

ment, growers are developing their reservoirs to catch and retain more of the rapid run-off and I wonder if we are concentrating sufficiently on forest building.

It seems to be a scientific fact that human beings, plants, and animals require periods in which to rest and recuperate from their labors and the best authority, in my opinion, is the Bible wherein we read: "Six years thou shalt sow thy field, and six years thou shalt prune thy vineyard and gather in the fruit thereof; but the seventh year shall be a Sabbath of rest unto the land, a Sabbath of Jehovah; thou shalt neither sow thy field, nor prune thy vineyard. And if ye shall say, 'What shall we eat the seventh year? behold, we shall not sow, nor gather in our increase;' then I will command my blessing upon you in the sixth year and it shall bring forth fruit for three years."

How can we apply this in our vocation? We can mow in the spring thus preventing a crop and giving the vines a rest. With our flooding facilities we can keep our cranberry areas or a portion thereof submerged in water to a period late in June or early in July and thus reduce or eradicate insect life, much of the foul growths, and the vines invariably come through this treatment in good condition and the way is paved for better future crops.

I am not mentioning, today, the crop prospects nor the condition of the Wisconsin marshes. We have our Messrs. Chaney with us who can tell of our crop prospects and our state fieldman to tell us his observations and bog conditions. On behalf of the members of the association, I extend a hearty welcome to all.

CRANBERRY PLANT DISEASE AND INSECT CONTROL WORK

E. L. CHAMBERS, *State Entomologist*

Mr. Chairman and Members of the Wisconsin Cranberry Growers' Association:

Because our fieldmen, who actually are in immediate touch with your problems and are in a position therefore to really contribute some firsthand information to you, are never available at the winter meetings, we believe we should take advantage of their presence during the summer meetings when we can. So today my remarks will be brief and I will yield my time largely to a nationally-known authority on cranberry problems, whose services we have been fortunate enough to secure to fill the vacancy left by Mr. Rogers. Mr. Rogers as you know found it necessary to do less strenuous work than he has had to do as our field representative.

Before introducing this new fieldman of ours and yours, I want to discuss with you some of the complications encountered in doing cranberry plant disease and insect control work. Compared to wheat growing and the growing of most all of our other crops, let us remind you that the growing of cranberries is a comparatively recent undertaking with limited areas suitable for the development of the industry and consequently relatively few people engaged in the work. While it is an important crop in Wisconsin, sometimes reaching the million dollar class, and while it is an even more important crop in Massachusetts and New Jersey, most folks in this country have never seen cranberries growing and have little idea of how they are grown. Consequently, where we have state experimental stations and federal lab-

oratories scattered all over the forty-eight states working on everything from pea aphis on peas to scale insects on date palm trees, there is very little study of any kind being given to cranberry pests. Even such old problems as the Coddling moth of the apple has not been solved despite the fact that the life cycle of this insect and its habits have attracted the study of scores of research men in dozens of state experimental stations and the Federal Bureau of Entomology and Plant Quarantine for nearly fifty years, and this problem is still a long way from being solved. Scarcely had a complicated spray schedule, including four to six applications of arsenate of lead, been successfully worked out to enable the apple growers to produce sound fruit when the "apple cart," so to speak, was upset with the necessity of keeping the amount of spray residue within the tolerance permitted by the U. S. Department of Agriculture. Now these research men have had to start all over again turning their attention to new insecticides which could be depended upon to control these insects without leaving the undesirable residue. You can count on the fingers of one hand the men who devote their entire time to the study of cranberry growing problems and they have so many problems that they cannot concentrate long enough on any one of them to give it the study it needs. So you can see why we have to answer in the negative when we are asked whether there is a spray schedule worked out for cranberry pests as we have for most other crops.

Before control measures can be worked out we must know the life history and habits of the pest in question and then having found the weakest link in its chain of life, we have to experiment until just the right mode of attack can be discovered. This takes years and where only a few men are devoting time to its study, it takes a proportionately longer time. We are so busy on the firing line trying desperately to save the cranberry crop from its enemies that we do not have time to check the ammunition and must depend largely upon general information available on other crop pests to try against these little-known cranberry enemies. A fieldman can do only that. Research and field inspection do not combine and cannot be worked together unless we have two or more men. One man would be wasting his time trying to do research along with field work because just about the time critical observations were due in the laboratory, he would be expected to respond to an urgent call in the field to diagnose some emergency problem and direct control measures. With more than 100 bogs in the state, it is not physically possible to visit all of these in a season, even though only an occasional inspection were to be made. The committee appointed by your association to work with the fieldman has for its duty the decision of what problems seem most vital, thus relieving the inspector of the embarrassment of deciding where he should spend the most of his time. The inspector, having his problems laid out, must follow a definite schedule to accomplish this end and while he would like to visit with each one of you when he is in your neighborhood, he just cannot take the time. If you have a problem that needs his attention, you will find him more than glad to come to your assistance, but as much as he would like to visit you and look over your bog and see that promising crop you have, he just cannot make his schedule if he stops everywhere he would like to. If you have had any insect pest or plant disease control problem on your marsh that you believe would interest the other members of the association here, we know that Dr. Stevens, who we notice is scheduled to follow us on the program, will be glad to have you relate it and will also be glad to answer any questions you may have regarding the life history and control of these various pests.

CRANBERRY INVESTIGATIONS—1930 and 1937

DR. NEIL E. STEVENS

When in 1930 I quit cranberries, as I then thought for good, I wrote out for my own amusement, as if for some imaginary audience, a sort of summary of the past fifteen years. The manuscript has been in my files ever since, and now with your permission, sees the light of day for the first time. Its title is,

FIFTEEN YEARS OF COOPERATION IN CRANBERRY WORK

In looking over the report of the Wisconsin State Cranberry work for the years 1927 and 1928, I came across the following paragraph which seems to me well worth repeating here:

"Cranberry production in the United States is localized in comparatively few sections, chief among which are Massachusetts, New Jersey, Wisconsin and the coast regions of Washington and Oregon near the mouth of the Columbia River. Except for Wisconsin, each of these sections maintains a Cranberry Experiment Station, actively engaged in investigating current practices of culture and in improving methods of overcoming the various adverse factors encountered. The federal government also has an active group of workers engaged in the study of cranberry diseases. While many important differences exist between the four cranberry districts, the general problems are, broadly speaking, the same in each, and, consequently, there is exceptional opportunity for constructive cooperation between the agencies interested in this crop. The whole plan of work has therefore been built around the idea that the Wisconsin cranberry industry is an integral part of the industry as a whole. We have attempted to bring into the State the promising methods developed elsewhere, while at the same time we have cooperated in the solution of problems which could best be undertaken in Wisconsin."

This is, I think, a very clear and accurate statement of the situation and after reading it I spent some time in reviewing our work for the last fifteen years to see just how general our cooperation has been. It seems possible that the results of this "historical review" may interest you. My introduction to cranberry work was on Cape Cod. Cooperative work has already been initiated there by Dr. Shear and Dr. Franklin and we merely continued their general policy. The first problem attacked was a study of the means of reducing the rots in storage and transit. In this we have had the active cooperation of Dr. Franklin and the American Cranberry Exchange and its constituent sales companies.

Next came our attempts at forecasting keeping quality, in which we depended on the reports of the New England Cranberry Sales Company for the records as to keeping quality and on Dr. Franklin for weather data. Our incubator tests were started as a result of attempts in the same direction by Dr. Franklin and Mr. H. S. Griffith, for many years chairman of the Board of Inspectors of the New England Cranberry Sales Company. For the studies of storage rots in which Mr. Bain and I are engaged, Dr. Franklin furnishes the berries from Massachusetts and the American Cranberry Exchange, the storage space in Chicago.

Dr. Bergman's outstanding work on injury due to flooding water is now being prosecuted in a laboratory furnished him by the Massachusetts Agricultural Experiment Station. While working on cranberries in Oregon, Mr. Bain even drew on the State Experiment Sta-

tion there for the culture media he used. In New Jersey Mr. Wilcox is glad to make use of the State Experiment Station Laboratory there, just as Mr. Bain uses your laboratory here in the summer. False blossom, now that its importance is generally recognized, is being studied by state workers in Massachusetts, New Jersey, and Wisconsin, as well as by members of the Bureau of Plant Industry; also, investigations by the workers at the Boyce Thompson Institute have been very valuable.

I do not wish to be understood as claiming any credit for this long and successful cooperation. It was well underway when I had the good fortune to start work in 1916. I suspect a very large part of the credit should go to the cranberry growers themselves. Their keen appreciation of the investigations and their own readiness to help in any way possible has set an example which it would have been hard not to follow.

Your close contact with sales agents and market conditions has made you fully aware that some problems cannot be worked out within State lines. The Wisconsin cranberry crop is grown right here and the problems relating to growing must be worked out here, but the final battle — the one which determines how great shall be the profit — is fought in the markets of Chicago, Kansas City and points still more distant. In the same way while the closest work on any field problem and the solution of any difficulty must be on the ground and in the immediate locality, there are frequently broader phases which must be studied on a national basis. These national problems on the other hand, can be studied most effectively with the cooperation of the various local units, just as your frost predictions would be much more difficult without the general information furnished by the Weather Bureau. You have, however, all learned not to depend absolutely on the forecasts by the Weather Bureau but, in addition, to make your own forecasts and conversely, the Weather Bureau depends on some of you as cooperative observers to furnish the weather data on which its studies are based.

The Present Situation

Soon after I reached Wisconsin Rapids last May, I dug out the foregoing and reread it. It did not seem to need much revision, nor did the need for cooperation seem any less in 1937 than it did from 1916 to 1930. On the contrary, both the need for, and the difficulty of maintaining close contacts with eastern workers is decidedly increased by the withdrawal—temporary we hope—of the Federal Department of Agriculture from Wisconsin. There are now five men engaged full time in the study of cranberry problems in Massachusetts and New Jersey. Their excellent publications give only such of their results as they feel safe in trusting to print, not their lines of investigation or the numerous hunches on which they are working. In order that we in Wisconsin may keep in touch with the progress of this group, I hope so long as I have the good fortune to continue work here to visit the east each season for several days of conferences and observation.

As most of you know, I have been trying this summer, with much good help from Mr. Goldsworthy, to pick up as well as I could the lines of interest of both Bain and Rogers. I cherish no illusions as to my ability to do the sort of work so successfully done by Lawrence Rogers for the past nine years. His long and successful practical experience as a cranberry grower coupled with his great natural powers of observation, made him uniquely able to comprehend and deal with all sorts of problems in a big way. My own fifteen years of experience in cranberries has been in the investigation of special problems and

there are many phases of cranberry culture about which I know very little.

The story is told regarding Thomas Jefferson on his arrival in Paris to assume the post of the American Ambassador. Some one asked, "You replace Dr. Franklin?" Jefferson replied, "I succeed him, no one could replace him."

Of Bain I shall say no more than that I hope he will be back next year.

It will be twenty years next month since I did my first work in Wisconsin. There have been many changes, most of them for the better in the cranberry industry during that time. The most easily noticed of course, is that the state now produces almost twice as many cranberries. A five year moving average—to eliminate annual fluctuations—shows an almost steady rise. The average crop for the five years 1918 to 1922 is 36,400. The average for the last five years was 62,000 barrels.

Two months of continuous observation this summer leaves the conviction that the problem most likely to be serious for the growers as a whole, is the adequate control of false blossom. In reaching that conclusion, I have in mind the undoubted prevalence of the leaf hoppers we now know carry the disease and the fact that false blossom is now widely scattered on Wisconsin's, which is of course the world's, most prolific variety, even on some of those northern marshes where 10 years ago it was so hard to find, that its discovery seemed of more theoretical than practical interest. I have also vividly in mind what has occurred in New Jersey during the last 10 years. We simply can not afford either as individual growers or as a group of citizens in a state, to let that happen here.

ADDRESS

C. M. CHANEY

You have probably all heard and read — it even came out over the radio about two weeks ago — that we would have a bumper crop of cranberries. This is true in Cape Cod particularly where we have as large a crop as has ever been produced. They will have approximately 550,000 barrels. When I was in Cape Cod week before last they had cut their estimate of 550,000 barrels (which was a guess) to 425,000 barrels, which was quite a reduction. New Jersey estimates a production of 150,000 barrels. I received a wire from the East dated Aug. 4th from the manager of the Massachusetts Association who said they had had no rain since I was there (about six weeks ago) and the estimated crop at that time would be 400,000 barrels. I received a wire this morning from Cape Cod stating that they had "had no effective rain since I was there and had placed the crop at about 400,000 barrels; if no rain soon, it would be materially less." Every day of dry hot weather, crops would be reduced.

Dr. Franklin stated that he doesn't blame it all on hot weather and dry weather—he blames it on the weather of last year. The bogs were badly burned. Dr. Franklin, Cape Cod, Massachusetts, previously stated that 440,000 barrels was his approximate estimate. It looked like he knew what he was talking about. He told me at that time, week before last, that it apparently would have to be reduced. It looks like, at the present time, with favorable weather conditions from now on, the Cape will have about 400,000 barrels—possibly not more

than that; New Jersey about 100,000 and Wisconsin, from information gathered here, between 75 and 85,000 barrels. So that would make a total crop of around 580,000 barrels or about 100,000 barrels more than last year—total production of the three states.

I had a wire this morning from the Northwest — Washington and Oregon — stating they would have 260,500 bushels. If there were any further reductions, they said they would advise us.

When I say 100,000 barrels more than last year, I refer to the three principal producing states—New Jersey, Massachusetts, and Wisconsin. If Wisconsin has 85,000 barrels, it will be one of the largest crops it has ever produced. The largest crop it has produced was in 1926 with 85,000 barrels; the next largest was 77,000 barrels in 1935; and the next largest was 75,000 in 1932.

Wisconsin is going to produce a maximum crop; up to the present time the Cape has had a maximum production but it looks like Wisconsin's year. Conditions are more favorable and in other ways it looks favorable.

I want to say also that the apple crop, according to government estimates as of July 1st, shows a 65 to 70% increase over last year. Peaches are estimated at 10 million bushels more than last year. We have the largest crop of cherries and, from that standpoint, it doesn't look so favorable. However, the buying power would possibly make up for that, although we don't know the conditions until this fall. We can make no definite predictions.

I was talking to a certain Wisconsin grower who was being sorry for the Eastern growers. Don't smile too much. Cape Cod has been seriously damaged by the hot weather. It is neither good nor bad for them or it remains to be seen. It is apparent, however, that the total production will be about 100,000 barrels more than last year.

A. U. Chaney

American Cranberry Exchange, New York City

I appreciate what my brother said.

I wish to emphasize what I have said in previous years, and particularly this year, you should forget last year existed. It is altogether a different year. Last year was ideal from our standpoint, but I want you to take my advice and forget it. We may have reversed conditions this year. It isn't what you want for a good crop, but we must be content and not miss sales. I assure you, we will ask all we think we can get and make sales. That's the job of the Exchange, but we do try to avoid asking too much or too little and sell the crop.

Remember, it isn't the cost of any farm product that makes the price. The cost of the product doesn't enter into the selling value at all. If a manufacturer sells his product before it is manufactured, he can figure the price according to cost and then manufacture only what he has sold at a profit. After harvest you may know what your cost is, but whether it cost you $1 a barrel or $10 doesn't determine sales price. You must take what you can get and sell. The sales price depends on the demand then existing and the supply that is to go on the market. We cannot avoid the law of supply and demand, but the demand is more important than the supply when you make a price. A stabilized price helps to assure a good market. Starting the price requires courage as there's always the question of what the consumer can and will pay. The jobber and the salesman can't do it all. If the consumer doesn't respond and take the product, we have failed.

I repeat—the price must be based entirely on the law of supply and demand.

Last year we had an abnormal turkey production. The turkey growers hardly made a profit above the cost of production. Consequently, this year we probably won't have the large turkey production of last year. Also, last year there was a short crop of cranberries and there was very little home-canned fruit. We learned from the distributors that there was very little sale for fruit jars for home canning purposes.

This year there is an enormous crop of fruits. The other day at Milwaukee there were several cars of peaches on the tracks waiting for a bid. The peaches, or any other fruit, might have cost 75c a bushel to raise but receivers must take what they can get. It wouldn't pay them to leave them on the tracks to rot.

This condition is not because of the high prices of last year. There is an over-production of fruit this year. Don't be discouraged. You are going to get a fair price, if we are careful not to overdo it. You may be discouraged at the starting price, but don't hold on to the crop until it is too late. We are going to get all we can for you, I assure you. The Sales Company is responsible to start the price and we will do the best in our judgment to sell the crop. We realize our responsibility. We try to start the price that will sell berries and we feel that we are doing our part to further consumption.

Some states are advertising their farm products. Idaho has a state tax on potatoes, onions, prunes and apples, and everyone who grows them pays this tax to take care of the cost of advertising their state products.

We will have a good advertising campaign this year, which should help the market.

However, don't cash in on your berries before you sell them, because you don't know what it will be.

H. R. Lathrope

County Agent, Wood County

Mr. Chairman; Members of the Cranberry Association; Gentlemen:

My remarks will be very, very brief. All I have to say is a few words regarding the Agricultural Conservation Program as it will effect cranberry growers this year.

The 1936 Program, as set-up did not include cranberries as it came through from Congress or from the Department at Washington. We tried to get it through—knew that it was time something was done. It was not possible to get cranberries through on the set-up last year. This year a new "docket" or the regulations of the program was prepared and cranberries were not included again. This set-up is handled by 8 or 10 different regions—the Eastern, Southern, Mid-west, North Central, West and South. The regions are under the direction of one man—in this section, Claude R. Wickard, an Indiana farmer, is head of the North Central Region.

Cranberries were not included in any crops as either soil depleting, soil conserving, or neutral.

We tried very strenuously to get cranberries included in the program. It was difficult because most of the fellows didn't know anything about them.

One of the so-called "big shots" wanted to see a bog so I took him out and showed him and, like all other people, he began to look

around and finally said, "Where is the bog?" He didn't know much about cranberries, nor did the rest.

There has been much correspondence, as Miss Jossi, chief clerk of the Agricultural Conservation Association, who has written these letters, will bear me out, to Mr. Richard, Mr. Wells, Chairman of the State Department, and the section man, Mr. De Hong. Finally we have cranberries included in the docket this year. The docket, issued June 22nd, has cranberires in on that—although you may wonder about it because it will be found only in one small paragraph. They couldn't make a classification of cranberries as grain, and so they shoved it in under the heading of commercial orchards—which, I suppose, is as good as any other place. It is in under commercial orchards—and then in parenthesis.

Besides this classification there is a special docket—notices by wire and letters—that say you can collect payment for sanding. If you read further, you will find that the docket says you may earn by the "Application of not less than the following quantities of sand, free from stones and loam, on fruiting cranberry bogs to prevent soil deterioration and decline in productive capacity of the land—(1) one-half inch of sand, evenly distributed, $7.50 per acre; (2) three-quarters inch of sand, evenly distributed, $11.25 per acre, and (3) one inch of sand, evenly distributed, $15.00 per acre." We all know that sanding is a soil building program no matter what you call it.

Relative to the payment to be made: "If such person is an owner, operator, or sharecropper with respect to only one farm in such county, which farm is a nondiversion farm, the soil building allowance for such person in such county shall be such person's percentage of the sum of the amounts obtained for such farm under items (1)) to (5), inclusive, of this subsection (c), unless such sum is less than $20.00, in which event the soil building allowance for such person in such county shall be such person's percentage of $20.00.

(1) $ .90 for each acre of cropland on such farm.

(2) $1.00 for each acre in commercial orchards on such farm.

The amount you can earn is limited by the soil building allowance on every farm in the county, one is allowed $1.90 per acre of cranberries. In the East it is $2.00—probably that's because the sand is cheaper here. One is allowed $1.90 per acre of cranberries and can earn that by sanding at the rate of $7.50; $11.25; and $15.00 depending on the thickness of the sand.

I don't know how many bogs were mapped last year. If you didn't have it mapped last year, you should have it mapped this year so as to figure in on the payment.

I believe this is the way—make a request for inspection or mapping to your county agent in your respective counties, and the Agricultural Conservation Association will then send out a mapper or farm reporter. He will measure it with a wheel or tape to get the area and he will get from you, as the operator, the amount of sanding and when it was put on. You can simplify matters if you will ask for or secure a supply of record of performance forms and fill them out—stating how many acres were sanded, when you did it, and have a committeeman sign it so that when the second check-up is made, it will be complete. That is about the only requirement because you probably couldn't see where the sanding was done. Undoubtedly your neighbors will know when you did it.

The map will be prepared and this record of performance will go along to the county office and they will compute and figure the area.

If you have 20 acres in bogs, you are allowed $1.90 per acre for that acreage and you can earn up to that amount by sanding.

They will then be checked by a second committeeman and you will sign the map on the second trip of the committeeman. First, the

map must be made out and all preliminary information and certificates and records of performance, and then you will have all of the data down so that the committeeman, in the fall, can go ahead and authorize the practices of sanding—the only practice for which payments can be made this year.

If you haven't made your request for inspection, send it in soon. We are starting mapping in Wood County today and will be through in two or three weeks.

This county has obtained the services of a good cranberry grower who knows the practices, to do the mapping. Bernard Brazeau is farm reporter for the cranberry area in the county. I know he is competent and am positive he will have a very, very fine set-up and as good a set of maps on cranberries as any of the others. He can make the maps from the blue prints he has and you state the practices you did and get the committeeman's signature.

Question: "Whom can we contact in Monroe County?"

Mr. Lathrope: I would call your county agent.

Cards requesting inspection have been sent out to be returned. We do not want to solicit mapping but will take the requests.

Thank you very much; I am very glad to have met you people again.

AIRPLANE DUSTING

BERNARD BRAZEAU

I am no authority on airplane dusting and I think Mr. Goldsworthy is better able to tell you about it. I know you have confidence in him.

Apparently we are going to succeed in culling our leaf hoppers. On our marsh there was about a 100% "kill" covering dusting of 36 acres. On four sections there was about 85% "kill" but on two sections the vines were particularly heavy. I am certain that we can kill with airplane dusting or power sprayer.

This spring we did experimental work on fireworms without much success. Either we used the wrong dust or it was done at the wrong time of the year. It seems to be all right for leaf hoppers and we are continuing on that line.

I might say that our leaf hoppers ran from about 40 to 200 sweeps before the dusting; after dusting, with exhibit of every vine, ran zero. Dusting was done at 50 lbs. to the acre. Some of us dusted 14 acres and Bennett dusted 15-18 acres with nicotine on which the kill ran about 50%.

MINUTES OF THE FIFTY-FIRST ANNUAL MEETING

Meeting called to order at two P.M., Thursday, January 20, 1938, Rose Room, Witter Hotel, Wisconsin Rapids.

In the absence of President Herman Gebhardt it was moved and seconded that C. L. Lewis act as chairman of the meeting.

Moved that Chairman Lewis appoint a nominating committee for officers for the ensuing year. Guy Potter, Joe Bissig and Phil Gebhardt were appointed.

Minutes of the last August meeting read. Moved and seconded that they be accepted as read. Carried.

The financial report was read. Oscar Potter and C. R. Treat were appointed as auditors, to report at the end of the meeting.

Letters were read from Dean Christensen and New York Horticulture Society.

Motion made and seconded to continue subscriptions to Wisconsin Horticulture for all paid up members.

A. E. Bennett and J. H Bean were appointed to draw up resolutions in regard to the death of E. P. Arpin.

Motion made and seconded to extend sympathy to Mrs. G. Nash and to send flowers to G. Nash who was recovering from a very serious operation at the Marshfield Hospital.

The secretary read a message and address from President Gebhardt who with his wife is enroute to the southwest.

E. L. Chambers read a paper by Dr. Neil Stevens on "False Blossom on Cranberries." Mr. Chambers followed with a very interesting talk on Disease and Insect Control urging growers not to let up on control methods for even one season.

Motion made and seconded to accept the report of the nominating committee for officers as follows: Ermon E. Bennett, president; J. H. Bean, vice-president; Clare S. Smith, secretary and treasurer and to place Mrs. C. A. Jasperson on the executive committee to fill the vacancy made by the death of her father, S. N. Whittlesey.

Moved and seconded that a vote of thanks be given the Weather Bureau Office for the weather and frost reports, and a copy to be sent to the Stevens Point Office.

The auditing committee found the financial report correct. Moved, seconded and carried that their report be accepted.

Motion made and seconded that WLBL be requested to broadcast a 4 P.M. weather report.

Motion made and seconded that the Association extend sympathy to Mrs. Ruth Rezin Krohn and daughter in the death of their husband and father. Carried.

Moved and seconded that a legislative committee be re-appointed.

Milo Swanton, Executive Secretary of the Council of Agriculture, spoke on the purpose of the Council.

L. J. Kuenning of the Department of Markets addressed the meeting briefly.

A motion picture film of flowers sent by Mr. Rahmlow of the Wisconsin Horticulture was very much enjoyed. A vote of thanks was given him.

A vote of thanks was given Mr. Daniels for the use of the Rose Room.

Motion was made to adjourn.

One hundred two growers and their friends gathered in the Crystal Dining room of Witter Hotel for the annual 6:30 banquet and dance following. G. O. Babcock acted as master of ceremonies. The music for the banquet and dance was furnished by Mr. Daniels.

CLARE S. SMITH,
Secretary.

IN MEMORIAM

WHEREAS, The Wisconsin Cranberry Growers' Association and the community at large has lost a very valuable member in the death of Ermon P. Arpin, who was one of the organizers of this Association, also of the Cranberry Sales Company and has been a valuable worker in all county and city affairs of the community,

Therefore be it Resolved, by this Association that his passing be spread at length on the minutes of the Association and that a copy be sent to the bereaved relatives.

J. H. BEAN,
A. E. BENNETT.

HERMAN J. GEBHARDT

Members of the Association & Visitors:

I am sure it would be a pleasure to be with you cranberry growers today and listen to and take part in the discussions pertaining to our vocation, the growing of cranberries. I know the program as arranged will be interesting and instructive.

Among cranberry growers, 1937 will long be remembered as "the big cranberry crop of 1937." Each of the three producing states had large crops. No doubt many factors contributed to bring forth the heavy yield. Massachusetts and New Jersey had several light crops and the vines were in excellent condition to bring forth a good yield. In Wisconsin, although the weather was not ideal due to heat and drought, the yield was the largest on record. Although we may have been favored with respect to a minimum of damage from spring frosts, yet I feel our large yield was due, to a great extent, to our cultural methods. With our grass clippers we enable the vines to enjoy the sunlight, keeping the grass on a near level with the vines, the struggle for sunlight becomes negligible and the opportunity is there for better fruition. This action on our part tends to bring earlier and more uniform color.

Removing undesirable vines, insect control, sanding and other modern cultural methods, paved the way for this large crop. The increased acreage and better culture will bring forth even larger crops necessitating careful marketing and increased consumption, both of which have been greatly aided by the canners taking off the fresh fruit market more berries than that of the usual Wisconsin yield. We must not permit a large crop to cause us to become lax in our cultural methods and the problems encountered in 1938 must be met and dealt with as we encounter them. Will it be the fruit worm this time? We have been comparatively free from this for some time but a repetition can come quickly and unexpectedly. The fruit worm damage takes a far greater toll than is usually apparent and operates in that respect much like an indirect tax, quite painless because of invisibility. However, an examination of the chaff around a cranberry mill reveals the severity of the damage as shown by the quantity of small, shriveled skeleton remains of what might have developed into marketable berries.

We are leaving for the south and extend greetings and best wishes to all.

CONTROL—QUARANTINE—ERADICATION WORK

E. L. CHAMBERS

Mr. Chairman and Members of the Wisconsin Cranberry Growers' Association:

While I always enjoy attending your meetings and discussing with you and hear discussed your problems and plans for the future of your industry, I never feel that I can contribute very much to your program and should perhaps be "seen and not heard." I have just been counting up the meetings I have attended and at which I have appeared on the program and this, I believe, is my twenty-second time. I think you should all have a pretty good idea by now just about all that I know on this subject. I have, however, heard it said that if one can tell what he doesn't know in a learned way, he sometimes

can make quite an impression and at least a confession of what one doesn't know is sometimes good for the soul.

Every year the fear that an insect or disease outbreak will rob you of your hard-earned crop just when the prospects look good for that bumper crop you have been waiting and hoping for keeps you awake nights and then when it looks like the battle was won, along comes a hail storm or frost when you are short of water. This past season your insect and disease problems were minor troubles and you had a good crop of quality berries. Some of you are so used to gambling on a crop that you get into the habit of gambling and having taken a chance on getting by without spraying or flooding for leaf hoppers and fireworms this year may think you can do it again. Don't try it,—you can't always get by. In Door county when the cherry crop was light, they became discouraged and in their attempt to economize they cut out two or three of their regular sprays on their schedule. As a result, the shot-hole fungous got the upper hand, killing off many trees and when a crop prospect did return last year, the insects and diseases had the best of their crop. While it may seem a waste of money and effort to apply control measures on an off-crop year at the time, the folly of the practice is brought home the following year or years when a bumper crop might have been saved, had the pests been kept under control. So let me caution you against letting up on the battle and urge that now while you apparently have your enemies on the run that you equip yourselves with armament in the way of dusters and sprayers as well as reserve water supply, to keep the enemy from again getting a foothold.

The first line of defense against the insect and disease enemies of our crops is made up of regulatory and plant quarantine men. As I have pointed out in previous talks, more than 50% of our more serious pests were accidentally introduced from foreign shores before adequate safeguards in the way of quarantine and restricted plant movement could be set up. The first successful effort in this direction was the plant quarantine act of 1912. Fortunately, you are not bringing in and have never brought in cranberry vines from abroad and you have very few pests in Massachusetts and New Jersey and the West Coast that you do not already have in your bogs here in Wisconsin. Aside from false blossom which you have pretty well distributed to some degree all over the bog area, there are few pests that might be carried on new vines. We have the quarantine on false blossom infested vines included in our regulation at the request of this Association which makes it illegal to move vines showing more than 2% infection. Because once your bogs are established, they are more or less permanent so long as they are properly cared for, it is no more than natural that you would not want plant movement near your bog that might bring in a pest that might require in time that you replace the vines.

As Secretary and Treasurer of the National Plant Board, I am kept in close contact with state and federal quarantines and with the problem of getting adequate funds to carry on control, quarantine and eradication work. We have seen the Mediterranean Fruit Fly eradicated and the Citrus Canker controlled when it threatened the citrus industry. We are now facing the problem of having our elms wiped out or eradicating the Dutch Elm disease which has already practically wiped out the elm over large areas in England and Holland just as the Chestnut blight wiped out all of our chestnut trees, and there were millions of them only a few years ago.

We have plenty of shipments coming into the state that might bring us new pests over night. Only a few days ago we were called to Racine to inspect a large shipment of Benedictine originating in France with rye straw jackets over each bottle. We found the jack-

ets contained Vetch which might bring in the much-feared Vetch weevil. A carload of Early potatoes was unloaded in Milwaukee last summer in which a Japanese beetle was found. To make sure we did not have any Japanese beetles already in this area, the government furnished us with 500 special traps baited with Geranol, an essence of geranium, and these were set in Racine, Kenosha and Milwaukee counties. We are glad to report finding no beetles in any of these traps. In St. Louis, Chicago, and Detroit, where a few of these beetles were found during each of the last few years, these cities in cooperation with the state and federal government, have spent large sums of money in checking this pest by treating the soil with 1,000 pounds of arsenate of lead per acre. When the Dutch elm disease was discovered in Cincinnati and Cleveland a few years ago and the infestation traced to shipments of elm veneer logs originating in England where the trees had died from the Dutch elm disease, we inspected all elm trees within half a mile of Wisconsin veneer plants where foreign logs were handled to make sure that no incipient outbreak was getting started. We did not find any trace of it and do not have this disease anywhere in Wisconsin.

Believing that every year that the European corn borer can be delayed in getting a foothold in this state represents a big saving to our farmers, we have been scouting the corn fields each summer in the counties bordering on Lake Michigan since its first discovery here in 1931, and arranging for a complete clean-up of all fields showing even a single borer the following fall and spring. The farmers are paid $2.00 an acre for the additional labor in picking up and burning any piece of stalk large enough to contain a borer. These farmers have learned that with deep, clean plowing in the fall and careful working of the soil in the spring, very little extra work is required to clean up the fields.

Next to quarantine and clean-up, our next line of defense comes control, the artillery supporting the first line. The major pest of the year in Wisconsin was without a doubt the grasshopper and we have been working on the results of the findings of our scouts sent out last fall in search of grasshopper eggs to find out how strong the enemy is entrenched in this state, as indicated by the number of overwintering eggs in the soil. You will see by this map I have before me that we have a pretty good picture of their whereabouts and numbers. The red areas show where there are enough eggs to give a severe outbreak of young hoppers next June. The green areas are seriously threatening, while the yellow ones indicate plenty of eggs, but not in such great numbers as in the other areas. With these figures we can, and have figured out just about how much poison it will take to control the hoppers next spring and how much money the state, county and federal government will need to use to carry on the control work next summer. Some of you may wonder why I mention grasshoppers to a group of cranberry growers. You can see by the map that there are quite a number of bogs in the heavily infested or red areas. Grasshoppers do serious injury to cranberries some years and it was very important to locate these areas around your bogs and see to it that the farmers are cooperating with your county agent and putting out poison bait to destroy them before they have an opportunity to attain their wings and start moving into your bogs. In dry years especially grasshoppers can do a lot of damage to a cranberry bog. They bite chunks out of the berries and bite the berries off from the stem and cause serious losses in this way. Besides injuring the fruit they, likewise, destroy the foliage. In addition to the half million dollars carried over from last year, the Federal Bureau of Entomology and Plant Quarantine is asking for an additional $2,000,000 appropriation to carry on the control work in the

twenty-four states infested with this pest. Last year because of the availability of this $2,000,000 emergency insect outbreak appropriation, it was possible to take immediate action against the White Fringed beetle which was first discovered last summer in Alabama, Florida and Louisiana. This is another example of an insect that was imported from a foreign shore which is believed to have been brought in with soil on a shipment of bones from South America consigned to this country for the manufacture of fertilizer.

You will recall that Dr. Stevens, in the paper I just read, mentioned the advisability of roguing for false blossom. That this is a desirable practice in connection with other crops, and we wish to cite our experience with the control of mosaic in red raspberries. While practically no red raspberry stock in Wisconsin is without a trace of mosaic, we have several hundred acres now that have been almost freed of this virus disease due to drastic regulations and careful roguing over the past ten or twelve years. The procedure in roguing raspberries is to make the first inspection in June and a second inspection in July or August. Where there is more than 1% of mosaic on the first inspection, the planting is rejected. Where the infection is less than 1%, the infected plants are rogued or marked for the owner to rogue and the planting is reinspected in thirty days and again rogued. There are a number of things that have developed of late that doubtless would be of interest to you in connection with recent legislation. We note that Mr. Milo Swanton is on the program and he will no doubt outline some of the advantages of being represented on the Council of Agriculture. We happen to know of two bills before the Legislature that directly interest the cranberry growers that this organization made a definite effort to have passed and can be given credit for passing. One of these was the increased funds for apiary inspection to make it possible to control American foul brood, the chief limiting factor in the success of the beekeeping industry. An appropriation of $31,000 was secured, making it possible to carry on area clean-up inspection in many of the counties throughout the state and this indirectly is of interest to the cranberry growers, since it has been demonstrated time and again that a good crop of cranberries depends upon plenty of bees to pollinate the vines. While probably most of the pollination is dependent upon wild bees, it stands to reason that in years when the period of pollination is short because of unfavorable weather, it is important that as many bees be available on the marsh as possible. With plenty of bee yards in the vicinity of a cranberry marsh this would be possible so that it is important that anything that reduces the number of bees be given serious consideration and every encouragement possible given to guarantee a sufficient number of bees to take care of their pollination needs of the cranberry crop. The other matter that the Council of Agriculture has been working on and can continue to be of benefit to the cranberry growers is the protection of the dealers handling insecticides and fungicides. There has been an attempt made by the State Board of Pharmacists to pass legislation that would require that all insecticides be handled by a licensed pharmacist, and there is always some danger that where insecticides have to be handled through drug stores that the price might be considerably higher than where they can be bought from their local seed or feed dealers. Since the cranberry growers are using large quantities of insecticides, it naturally is of interest to them to be able to secure an ample supply of these materials at a reasonable price and from a convenient source. Recently you probably have noticed that the arsenate of lead that you have been buying has been dyed pink. This is an attempt to reduce the number of accidental poisoning cases by getting the poison mixed up with flour and other foods which have a similar appearance.

Paris green is quite distinctive in that it is green and because this particular arsenical is much more expensive than arsenate of lead, it does not seem advisable to have all arsenicals dyed green because of the danger of substituting the cheaper arsenicals for Paris green. Consequently, the pink color was adopted and is now being given a trial. While it may not look as powerful as the white arsenate of lead that you have been used to using, it has been demonstrated by the chemists and entomologists to be just as effective as heretofore.

SUGGESTIONS REGARDING FALSE BLOSSOM

DR. NEIL E. STEVENS, *University of Illinois*

Why Bring It Up Now?

False blossom was reported on Wisconsin cranberries more than twenty-five years ago. Wisconsin has, however, been increasing her cranberry output during this same twenty-five year period, and the 1937 crop was the largest on record. Why then discuss false blossom at all?

In spite of much precedent to the contrary I have a very definite conviction that a good time to lock the stable door is before all the horses are stolen. Also, that the time to fight a serious plant disease is before it gets too far ahead of you and while you have the funds. For after all, the first consideration in the control of diseases of crop plants is the financial one. As you all know, the cranberry season is so short that what is done during the growing season must be planned in advance. This then seems to me the very best time to discuss what we can do about false blossom.

What False Blossom May Be Expected to Do

There is nothing dramatic about false blossom. Under some conditions its progress is so slow as to be noticeable only by careful observation. Under good cultural conditions in Wisconsin it is perfectly possible for a section with considerable false blossom present to produce 100 barrels of cranberries to the acre. On the other hand, once established on a section of marsh this disease usually makes persistent progress and finally renders that particular section obviously unprofitable. Phil Gebhardt tells me that within his memory, half the sections in his marsh have been rebuilt on account of this disease. We all know that it costs real money to rebuild a marsh.

Do Not Plant False Blossom Vines

Obviously in rebuilding a marsh or planting new areas, great care should be taken to make sure that the vines planted are as nearly free from false blossom as possible. Wisconsin is fortunate in that as far back as 1920, when we knew much less about false blossom than we do now, Dr. Fracker took the stand that false blossom should be considered in certifying plants for sale. This policy has been steadily adhered to. Curiously enough, however, some growers tend to be careless or at least much less careful, in planting their own vines. Apparently growers repeatedly plant vines cut from their own marshes which they know to have more false blossom than should be passed in an inspection. Moreover, both Mr. Rogers and

Mr. Bain assure me that during the period of their work in Wisconsin it became increasingly difficult to secure satisfactorily clean vines for planting. I hope before many years, a plan will be devised for growing really clean vines for planting, but this does not seem to be the place to discuss it.

Getting Rid of False Blossom Vines

False blossom would be a very much less serious disease if it killed the plants more frequently. Actually under conditions of good culture, false blossom vines will survive for a very long time. There is considerable evidence to indicate that under severe conditions false blossom vines are more quickly killed than healthy ones. There seems to be general agreement among competent observers that the severe drought and winter killing in the Mather region in 1933 and 1934 materially reduced the percentage of false blossom vines. One New Jersey grower left his bog out of water two winters in succession, and believes that the consequent winter killing reduced the proportion of false blossom vines materially. I should very much like to discover some treatment which would injure the false blossom vines without doing too much damage to the healthy ones, but it is not in sight yet.

Is it Worthwhile to Rogue False Blossom Vines?

The question is frequently asked whether it is worthwhile to try to pull out the diseased vines. It certainly seems as if it should be worthwhile if carefully done and if the diseased vines are still confined to small areas on the marsh. Such rogueing should, however, be done only after a thorough treatment for insects. I am convinced that the type of rogueing we used to do was probably worse than useless, as in pulling out the diseased vines we drove the insect carriers off on to healthy ones, thus speeding up the spread of the disease. That brings us naturally to the control of the leaf hoppers.

Control of Leaf Hoppers

The greatest single contribution to our knowledge of false blossom was the proof by Irene Dobroscky, whose name is now Van de Water, that the disease is carried from plant to plant by the blunt-nosed leaf hopper. Subsequent work has abundantly confirmed this initial discovery and has so far failed to find any other carrier. If we could exterminate this insect, false blossom would become little more than a curiosity. This is exactly the condition which exists on the Pacific Coast, where so far, the blunt-nosed leaf hopper has never been found.

We have four possible methods for the control of the hopper. Ground machine dusting, airplane dusting, spraying and flooding. Dr. Franklin now advocates the use of ground machine dusting in preference to any of the other methods, but I am not convinced that here in Wisconsin we are ready for so definite a decision. Cranberries are grown under much more diverse conditions in Wisconsin than in New Jersey or in Cape Cod. I suspect indeed that the range of conditions as of distance may be as great as on Cape Cod and New Jersey taken together. Whatever may be our conclusions after several years of study, I hope that all four may be given a thorough trial next summer.

On at least two marshes we are planning to flood under carefully controlled conditions to see what can be done by this method to reduce the hoppers spreading disease. I hope those growers who

have spray outfits and crews skilled in their use will use them so that we may again check on their effectiveness. There should be two or three ground dusting machines in use also.

As a means of applying insecticides or fungicides to cranberries, the airplane presents peculiar attractions and peculiar difficulties. Any known method of applying spray or dust except by airplane involves traveling over the vines with some consequent injury. On the other hand, cranberry culture necessitates the use of water for frost and insect control. This means dikes above which the plane must fly, thus keeping at a somewhat higher level than can be used with some crops.

Mr. Beckwith assures me that thoroughness and timeliness of application of the pyrethrum are more important than the means of getting it on. Timeliness means, in the opinion of the workers in both Massachusetts and New Jersey, **while the plants are in bloom.** It seems entirely possible, and I certainly hope, that after more investigation, we may find that we can secure adequate hopper control in Wisconsin by treatment **before** the blossoms are open. At least, I am assured that there is little question that in the case of the fruit worm, eggs hatch earlier in relation to plant development in Wisconsin than they do in Massachusetts. On the basis of our present information, however, the wisest course would seem to be to follow the eastern practice. I believe this will go hard with many Wisconsin growers. There was much apprehension last year lest dusting during bloom might reduce the insects which affect pollination. Dr. Franklin assures me, however, that no injury has been noted on the Cape. At least once in the course of experimental work, he dusted three times during bloom, each time using 100 pounds to the acre of pyrethrum, yet harvested a good crop. This brings me to my final point.

Insect Nets

Every grower should have an insect net. I can, of course, cover much more ground next year than last. Mr. Goldsworthy, freed of the necessity of guiding me about, will also be of more service to the growers. But no two men can be on all the marshes which need sweeping for hoppers at any one time.

An insect net should be considered a cranberry tool by every grower interested in the welfare of his marsh. Its regular use should be an assigned task of some good observer on each marsh. I know of no other way for the growers to keep constantly informed of the conditions of his property.

ADDRESS

By L. G. KUENNING, *Marketing Specialist*

Mr. chairman and friends: I want to say, in the beginning, that I had a very unique invitation that was received by radio. I want you to know that Mr. Chambers and I are from the same department. Due to the fact that Mr. Chambers is here today with the heavy work, I come as an official greeter and bring you greetings from the department. Last time I appeared, I appeared as county agent. Now, I am with the Department of Agriculture and Markets.

It has always been a pleasure to meet with this group. You are good cooperators. My work is with cooperators and cooperative activities. The fact that you are such good cooperators and that it is a pleasure to work with you, is illustrated by a story:

A newly wedded couple, who, after a month or so of having lived together, had a quarrel. The husband, being a traveling man, left home Monday morning in a huff. So, during the week, when the bride had time to think things over, she felt terribly bad about it. So, she decided that the only thing she could do was to give him a good meal when he came home and prepare a splendid supper. She did this and at six o'clock she had everything he liked ready for the big meal. But when six o'clock came, John was not there. He wasn't there at seven or eight o'clock. She got worried. She didn't know of anything else to do, so she sent a telegram to ten of his Masonic friends—lodge brothers. She no more than sent the telegram when John blew in covered with mud. He got stuck in the mud and couldn't get out. He was all wet. He came in feeling a lot different after getting out on the road. They made up and had supper and everything was fine until about ten o'clock when the doorbell rang. A telegraph boy came in with ten telegrams. The ten men had wired back and all their telegrams read, "Don't worry, John is spending the night with me!"

ADDRESS

By MILO K. SWANTON, *Executive Secretary*
Wisconsin Council of Agriculture

Mr. Chairman, Members of the Cranberry Growers' Association: I know something about cranberries but only from the consumer's end. Much of what I hear here today about cranberry production is new to me. I never visited a cranberry bog. As Mr. Kuenning has told you, you are doing a very outstanding job from the standpoint of cooperation. I, too, am very much interested in cooperatives. I, too, am a farmer just as you are, in the southern part of the state, producing milk, eggs, raising tobacco, etc. We have cooperatives there also. Wherever we are, we have our own particular set of interests and problems. The swing is from individualism toward working together. Nothing else is a better evidence of change than that. I will give you a story to illustrate:

It has to do with a period about one hundred and fifty years ago when each farmer with several children had a certain place in life for each and every member of his family. One boy was bound out as a cobbler, one was a minister, and one stayed on the home farm. Usually, if there were enough boys, one was a sailor. The scene opens with the captain standing on the bridge of a vessel. Down the gang plank came a slip of a lad. Seeing the boy, the captain turned to the first mate and said: "As usual, I suppose they have sent the fool of the family to be the sailor." Hearing this, the kid spoke up and said, "Oh, no, captain, times have changed since you were a boy."

Last summer I had the opportunity of meeting Secretary Wallace who spoke on the subject of farm solidarity. In talking with him after his appearance, I said: "You will probably be interested to know that in Wisconsin we have gone farther in building inter-cooperative relationships than any other state in the Union. We have thirty-four cooperatives grouped together working in one federated unit."

He was very much surprised to know that our cooperative groups were working so extensively together.

Such is the Wisconsin Council of Agriculture. It was organized in 1928. At that time, some far-sighted farm leaders conceived the

idea that there were many fundamental issues in which we are all interested. This far-sighted group, in 1928, incorporated this federation of farm organizations to bring together the various farm organizations in order to promote the interests of the farmers of the state. There is a director representing each of the various thirty-four groups. It is inspiring to see these men, representing several groups and farm interests throughout the state, coming together, pulling together, and working together. We have, as ex officio members, representatives from the Vocational Agricultural Instructors' Association, the Wisconsin County Agents' Association, the Department of Agriculture and Markets, the College of Agriculture, and the Agricultural School of River Falls State Teachers College.

We have our office at Madison and in 1937 we have been much interested in a legislative program. In our office, we read each one of the bills introduced in the state legislature and report on proposed legislation affecting agriculture. We analyze all bills and resolutions and if any are of interest to agriculture in any way, we report them through a news letter to each of the various member organizations. It would be impossible to contact each and every farmer. We do send out 615 letters to just that many local cooperatives. This gives the member groups an opportunity to report what their viewpoint might be on certain bills before the legislature. The Wisconsin Council of Agriculture has a representative at assembly and senate hearings that are of vital interest to farmers.

The Wisconsin Council of Agriculture is not a partisan group. It is a federation of farm groups bound together for mutual economic benefit without political affiliations.

We have had a long program this last year. I cannot read at this time the 1404 bills introduced at the last regular session of the legislature or we would be here for days. I will just mention a few of them. We worked with the Department of Agriculture and Markets in passing the bill for the standardization of commercial feeds in Wisconsin to protect the interests of dairymen and stockmen. We were able to get a bill through appropriating $31,000 for improvement work in bee keeping. We succeeded in modifying the ton mile tax law by the exemption of some agricultural products from the ton mile tax bill, not only from the farm to the primary market, but from the primary to the secondary market in the case of livestock and raw cheese. We also assisted in getting a bill passed to increase state high school aid. In the past, the state paid only $175,000 annually to high schools in Wisconsin. We supported a bill, making it possible for each high school to receive $800 state high school aid. In addition to this, the balance of the appropriation for state aid to high schools will be divided on an average daily attendance basis and the amount due per pupil on this basis will be paid to the high school district in which the pupil resides or, in the case of pupils residing outside of a high school district, the aid allotted on this basis will be credited to the tuition bill of the township or unit responsible for the tuition. If the tuition has already been paid, the aid is refunded to the township which made the payment. It is estimated that this aid for 1937-1938 will be about $7.00 per pupil.

We also supported a bill, which failed, to establish a state radio intelligence and criminal identification bureau such as are functioning in Iowa and Illinois. Wisconsin has become a haven for criminals. Many of them come into Wisconsin from nearby states. We believe Wisconsin should be equipped to meet the methods of modernized crime.

We also supported a bill which would outlaw sit down strikes on farms. We fought two different attempts to rescind the present tax on oleomargarine. We objected to and opposed the

resolution calling for an investigation of the oleomargarine tax law in Wisconsin. We supported the bill which was passed for the exemption of hay, grain, and feeds from taxation. We supported the passage of the enabling act making it possible for the state highway department to take advantage of $625,000 annually in federal aid in the construction and improvement of farm-to-market roads. We objected to and opposed the bill cutting the oleomargarine tax from 15c to 2c a pound. We supported a bill which would provide for the reorganization of the Department of Agriculture and Markets which did pass in special session. The Council was the only farm organization that actively supported this measure.

No doubt, there was much legislation of interest to you people, that the Wisconsin Council of Agriculture could have helped with had we known your wishes. Mr. Chambers spoke of the movement on the part of pharmacists to hamper the sale of insecticides through the usual channels. I heard the debate on that very bill.

At the present time, we are working on national legislation in Washington, opposing a cut in the federal appropriation for Bang's disease control. Mr. Chambers mentioned the need for an adequate federal appropriation for grasshopper control. Perhaps legislation of that kind has been slipped up on because we did not know the wishes of you people.

In closing I want to say, that your organization, as I have been learning of it and hearing of it, has done an outstanding piece of work in the interests of the producers and I want to congratulate you at this time and thank you for the opportunity of these few moments. Organized producers of Wisconsin's many farm crops and products stand ready to work with the organized producers of Wisconsin cranberries.

COMMENTS AND DISCUSSIONS

Mr. A. U. Chaney, President of the American Cranberry Exchange of New York, was called on for a few words:

I don't think I have anything to say. We have had, this year, the biggest crop on record and we still have some of them on hand now and will have next year. The encouragement that I see in this is not the big crop that was the main trouble, in my opinion, but the depression that struck us. People "laid off" on luxuries for a little while. If the rate of consumption had kept up as it was existing in September, October and November, we would have had a different feeling today. It struck us and we suffered in consequence. The encouragement that I see is that it was not the big crop that stopped us.

Chairman Lewis: I would like to learn more about grasshoppers. We really had grasshoppers up in our country last year. We walked out on the dykes in August and September during harvesting and just a cloud of grasshoppers flew past us. I didn't think they would ever do much damage.

I was up at a little cranberry bog north of us, about twenty miles, where the fellow had about one acre of cranberries and had a big crop. He told me that the grasshoppers were on his vines. He told me I had better look around at home. I did look around and did find a few, but not very many. We flooded before harvesting and had to flood quite deeply and noticed berries floating in the water. As the the wind blew, they drifted over to the shore. These were the berries cut off by grasshoppers, there is no question about it. We

took these berries and examined them. All had about 1/16 to 1/8 of an inch stem attached to the berry to show where it was detached from the stem.

How long does it take a grasshopper to mature?

E. L. Chambers: It depends upon the grasshopper. The common ones found around here take about fifty days. They start hatching about the middle of June and they are laying eggs about the last of August.

Chairman Lewis: "How long are they when mature?

E. L. Chambers: It depends upon the species. The common roadside ones are about 1" in length.

Chairman Lewis: Most of the ones I noticed were about 1" long. Is it possible that some of the large grasshoppers from the West might migrate into this area? I mean those about 3" long.

E. L. Chambers: We had an area in Spring Green where they came in. Just one area, but the Rocky Mountain locust does migrate in clouds. They are carried by the wind about 150 to 200 miles at a time. We have had grasshoppers blown in from the west, usually from the Dakotas. If they increase at the same rate next year as last year, I hate to think of the number of grasshoppers we will have next year.

The dykes offer a good breeding place for grasshoppers. The poison bait should be put out just when they are hatched.

Mr. Potter: There has been a little disagreement and uncertainty about the unemployment insurance. One member stated that he had made a statement on his labor employment. Mr. Bean and I were called on at New Lisbon to meet a state man and he insisted that this applied to our interest. That same day, we called Mr. Goldsworthy and said that we had a meeting here that day, and would like to have Mr. Goldsworthy tell us about that and get a letter to that effect from whoever is in charge at Madison. We would like to know where we stand on that.

Chairman Lewis: We had a letter a year ago that we were not affected by that insurance.

Maybe you were referring to the social security program rather than the state unemployment insurance.

Chairman Lewis: We are not affected except if the sales company were packing cranberries in a packing house or canning, we would be affected. But, if any grower, as far as the federal government is concerned, is packing his own crop, he is not affected. But, if he moves his own crop to town or to some other property to pack it, his employment would be affected. Any grower packing his own product is not affected. The state unemployment insurance does cover packing if it takes 16 weeks, but if you pack less than 16 weeks, it does not affect you. Nobody here in the county or in the state packs as many as 16 weeks out of the year.

FINANCIAL STATEMENT OF THE WISCONSIN STATE CRANBERRY GROWERS' ASSOCIATION

Calendar Year 1937

			Receipts	*Disbursements*
Jan. 1		Balance on hand	$100.15	
Jan. 7	Check No. 158	A. C. Rockwood, 150 St. Env. for Rat Pet.		$ 4.88
Feb. 12		Dues	10.00	
Mar. 10	Check No. 159	C. S. Smith, bal. of Salary to June 1, 1937		50.00
June 16	Check No. 160	Wis. Horticulture Soc. 41 subscriptions		16.40
June 16	Check No. 161	Crystal Jossi, Steno. services, Dec. 16, 1936		4.00
		Bank check charges		1.44
Aug. 11		Dues	14.00	
Aug. 24	Check No. 162	A. C. Rockwood, 60 St. Env., 28 one cent st.		2.25
Sept. 1		Dues	14.00	
Sept. 4		Dues	8.00	
Sept. 9		Dues	6.00	
Sept. 15		Dues	22.00	
Sept. 22		Dues	8.00	
Dec. 30	Check No. 163	C. S. Smith, Salary to Jan. 1, 1938		80.00
		Bank charge		.44
		Total Receipts and Disbursements	$182.15	$159.41
			159.41	
January 1, 1938		Balance on hand	$ 22.74	

Officers for 1938

President—Ermon E. Bennett, Wisconsin Rapids, Wis. R. No. 3.
Vice-president—J. H. Bean, Camp Douglas.
Secretary-Treasurer—Clare S. Smith, Wisconsin Rapids, R. No. 3.
Executive Committee—Mrs. A. C. Otto, Wisconsin Rapids, Mrs. C. A. Jasperson, Port Edwards.