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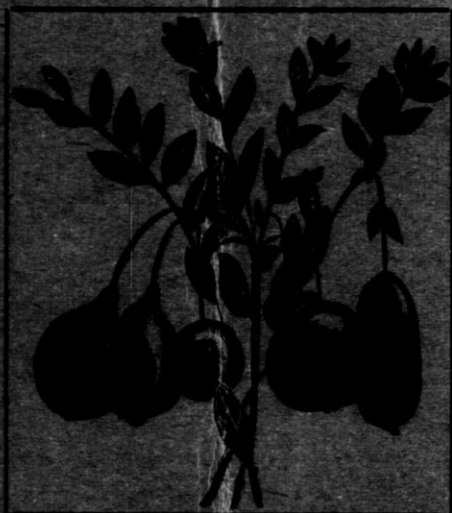
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WISCONSIN STATE
CRANBERRY GROWERS'
ASSOCIATION.



SEVENTEENTH
ANNUAL MEETING,
GRAND RAPIDS, WIS., JAN. 12, 1904.



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PROCEEDINGS

Of the 17th Annual Convention of the Wisconsin State Cranberry Growers Association.

The seventeenth annual convention of the Wisconsin State Cranberry Growers association occurred at the City hall on the West side on Tuesday morning at nine o'clock. The attendance was fairly good for a January meeting, tho many of the familiar faces at an event of this kind were absent.

This fact was explained by the conditions of prosperity that have existed all over the country among cranberry men, saying that many who are usually at home attending to business at this time of the year, are now away traveling, engaged in spending some of the profits that the last few years in the cranberry business has netted them.

In the absence of Charles Briere, whose sickness prevented him from attending the meeting, S. N. Whittlesey took the chair and called the meeting to order, he being the vice president of the association. In opening the meeting, he said:

West Side Miss Anna Kather, Alvia Neumann, Edlie Brooker, M. P. Sweet.

"Fellow growers:—Our esteemed president, Mr. Charles Briere, is very sick and unable to preside as usual at

this meeting. Our sympathy and devout well wishes are with him and his family.

The past year has been a fairly prosperous one for Wisconsin cranberry growers. Unlike the previous year, which was a prosperous one for both grower and dealer, the year just passed has brought considerable loss to the buyer. While this is unfortunate for the buyer it is also unfortunate for the grower, who to some extent, may be to blame for it and may have to pay for it next time. The whole Wisconsin crop could have been sold early at good prices, \$6.50 for a good bell and cherry to \$7.50 for a strictly fancy berry, Jumbos and Bell and Bugles, and moved out of the way at a profit, but in too many cases the grower hung on too long for higher prices and at the last minute he got it (lucky dog), but a sag in the market caught the buyer. Perhaps we do not sufficiently appreciate the fact that our best interests demands that we safeguard all interests concerned. We are not, all of us sufficiently thorough in our grading. We raise this fruit to sell, not to eat, and while some small pie ber-

ries left in would not hurt the sauce much, it hurts the sale. All buyers particularly require that all pie or small berries of $\frac{3}{8}$ inch or under be taken out. They are not so particular about further grading. This is more to the advantage of the grower. Our machinery and methods are frequently inadequate; they must be improved. When hand picking over is necessary, it should be thorough and not a pretense. Avoid handling as much as possible. We can pick over and paw over berries and damage them at every process. If we brand our packages, the brand must tell the truth, or trouble will overtake us.

An association or trust of all the growers for the purpose of marketing the crop thru one able and responsible agency will come as soon as the growers awake to a lively appreciation of the spirit of the times and their own interests.

The water supply and drainage requirements of cranberry growers render the business, the interests and operations of all cranberry growers particularly, interdependent and mutual. If all or any of us cannot rise to a sensible solution of this situation we probably can and will snuff ourselves and some of our neighbors with us out of business.

The experimental station of the association has been transferred to the state. The state now, under the direction of Dean Henry of the University, is propagating varieties and experimenting with methods and conditions in a thorough and scientific manner. The state is also investigating the causes of the poor keeping qualities of a large part of the crop of Wisconsin cranberries. The state is doing in this instance just what a state ought to do; what a state is for.

In the state the people have an organization practically omnipotent thru which they can do anything they will. And it is surprising how little they do for their own betterment and how much they turn over to private interests to make what there is in the traffic."

The next subject on the program was the report of the statistician.

This was made by Judge Gaylor. He spoke of the vital importance of the prices in governing the consumption of berries, and stated that the consumption of the fruit was constant, and that the price was changed by the supply, rather than the demand. He stated that it was of great importance that the supply of fruit be known definitely to the growers, as upon this information they could base their prices better than on anything else. He stated that some growers in the east had concealed the largeness of the crop and had by this method kept berries at an abnormal price for a time, and that the subsequent slump in the market price worked to the detriment of these same growers. His statistics also showed that the consumption of the berry was increasing. He gave the crop for the year 1903 as 550,000 bushels in New England, 450,000 in the middle states, and 100,000 in the western states, or a total of 1,100,000. This is twenty per cent above the average for the past seven years.

M. O. Potter, treasurer of the organization, then made his report, which showed it to be on a sound financial basis.

Prof. A. R. Whitson of the University of Wisconsin then gave an address, taking as his subject, Co-operation in Water supply and drainage. He told how necessary it was that

growers should work together in this matter, and this a fact that the growers are beginning to appreciate more and more, and there is no doubt but that the day is rapidly approaching when cranberry men will work as a unit in this matter. Prof. Whitson also told of the great irrigation scheme at Greely, Col. which aptly illustrated his standing on the question.

A letter was received from Dr. W. M. Wilson, the Milwaukee weather man who spoke at the August meeting of the convention. It was expected the Mr. Wilson would be present at this meeting, but he stated in his letter that January was one of his busy months, and much as he would like to attend the meeting, it was impossible for him to do so.

A letter was also received from G. A. Murray of New London, who had been assigned the subject of, The Best Method of Planting and Caring for Vines after Planting. Mr. Murray stated that he had been in the business of growing cranberries only three years and felt as if he was in the kindergarten when compared with some of the veterans in this section of the country, and consequently excused himself from expressing any opinions at this stage of the game.

A letter was also read from Lucian J. Fosdick, one of the veteran growers in Boston. Mr. Fosdick is an earnest advocate of the 32 dry measure quart crate as a standard for shipping instead of the barrel as it now exists. He expressed his regret at not being able to be present at the meeting and stated that he would furnish an article later in which he would give some of his views.

J. J. Emmerick spoke on the subject

of fertilizers. He has been experimenting the past summer on four different kinds, but at this time his researches have not extended over enough time so that he was able to give any definite information on the subject. He intends to continue in the work, however, and will be able to give some information that will be of benefit to all the growers.

S. N. Whittlesey spoke on Early vs. Late Draining. He expressed himself as being strongly in favor of early draining. This started a discussion in which several of those present took part, and the general sentiment among the good growers present was in favor of early draining.

D. F. Smith of the firm of Smith & Murphy of Green Bay, then spoke on the Best Methods of Marketing. Mr. Smith is engaged in the commission business and gave a very interesting talk from his point of view. It was his opinion that one of the most requisite things between the grower and buyer was confidence. After this had been established it was his opinion that the whole crop could be handled by one man or firm of men who would be able to place the crop to the best advantage and at a less cost than is now done. His advice was for co-operation, and this was the solution of many of the difficulties that have been thorns in the side of the growers.

Prof. Sandsten spoke on Insects and Fungus growths that tend to interfere with the growth of the cranberry. The professor has succeeded in separating two fungi that attack the cranberry, but has not investigated the matter fully enough to enable him to make any report that would be of any benefit to growers. The only insect that bothers the fruit

to any extent is the fruit worm, and so far the only efficient fight against this pest is made by flooding. Professor Sandsten is also advocating the drying of the berries thoroughly in the packing house, and thus save a lot of loss later on by the rotting of berries by their being put away wet.

L. W. Haskins of the University of Wisconsin has been investigating the effect of water on the berries during the growing and picking of the same.

He has investigated a large number of cases where berries have rotted after being sent to market and has decided that much of it is caused by the water on the berries and their being packed in a wet or damp condition, which produces a condition that favors the rotting of the berries later on.

Fred W. Gebhart of Warrens read a paper on the construction of ditches, dams and bulkheads, which was very practical in its suggestions and was listened to with interest by those present.

James Gaynor talked on the part being played in cranberry culture by machinery, and stated that in his opinion there was yet much to be done in this line. Mr. Gaynor is the inventor of a ditching and scalping plow and a grader, all of which have proven great labor savers. There was a fine display of samples from the experimental station, there being some 180 different varieties. A committee consisting of Prof. Sandsten, L. P. Haskins, E. K. Tuttle, D. F. Smith was appointed to select certain varieties for propagation.

E. K. Tuttle read a paper on Preparing Vines for Raking.

This is a subject that interests cranberry men in this section now, as it is becoming apparent that the

scarcity of pickers will soon force all growers to adopt this method of harvesting to the exclusion of the old way.

Judge Gaynor had an article on Conditions that Favor the Blossom Bud, which was of a scientific nature and was listened to with interest by those present.

There was a general discussion whether official inspection by the government would be a good thing for the growers and whether it would not be beneficial to compel every grower to brand his barrel plainly with the growers name and the kind of berries the barrel contains, after which it would not only be easy to trace any poorly packed or bad berries to the person or persons that were responsible for the trouble, and besides this it would be a check on those persons who had any inclination to put any inferior stock on the market.

There was nothing definite done on the matter.

Those present at the meeting were S. A. Warner, Warrens; F. J. Hoffman, John M. King, Charles Snippen, Mather; Nels Johnson, Valley Junction; Fred W. Gebhart, Richard Rezin, Warrens; L. M. Purviance, E. K. Tuttle, E. A. Granshaw, Mather; Prof. A. R. Whitson, Prof. E. P. Sandsten, L. P. Haskins, University of Wisconsin; S. N. Whittlesey, Cranmoor; John B. Arpin, M. O. Potter, A. E. Bennett, C. E. Lester, W. H. Fitch, John A. Gaynor Grand Rapids; James Gaynor, Cranmoor; C. G. Dano, Mather; J. J. Emmerick, Cranmoor; John Graither, Guy Potter, Geo Hill, G. W. Paulus, Grand Rapids, E. E. Warner, Cranmoor; J. D. Potter, Pittsville; J. J. McGovern, Cranmoor; C. M. Stevens, Mather; Ralph Smith, B. M. Vaughn C. S. Whittle-

sey, Grand Rapids.

The secretary was instructed to cast a ballot for all of the old officers of the association, who are as follows:

President—Charles Briere.

Vice President—S. N. Whittlesey.

Treasurer—M. O. Potter.

Secretary—W. H. Fitch.

Member of Ex. Con.—A. C. Bennett.

Statistican—John A. Gaynor.

Fires

(By M. O Potter.)

I am on the program to give you points on fire, which most of you have had your share of experience as well as myself in the years of 1893 to 1895. As I am no writer I will make a few suggestions. The first we should see to are fire breaks or strips of unimproved land which can be burned or plowed, and should be burned every spring or plowed as the dry weather approaches. 2nd, We should prepare some way of fighting fire with pumps.

Each marsh should have a pump mounted on some vehicle that a horse can be hitched to large enough to hold a pump and two men to stand on and pump, and at least 75 feet of hose, and go to the fire. Then if there is any show to get water we can do something. And all should turn out and go to where the fire is.

The third and greatest danger that should be seen to is the drainage system that is being pushed for the money that is in sight. To rob some hard working farmer that has accumulated a few dollars, from northern Illinois or southern Wisconsin. He will come on these lands and commence business, and in a few years to move off from the land, only to find his little pile vanished as the soil

vanished or disappeared in some way. You must remember these deep drain ditches are drawing from a long distance 12 months in a year. That shortens the water supply and dries the marshes ready for fire. And these farmers will have to set fires in order to clear the land, and also to burn the fiber from the soil so it can be tilled. Cranberry men should all work together and do all in their power to keep all drainage districts as far as possible from our lands.

As the marsh lands of Wood Co. are valueless only for cranberry culture. We have had three or four wet seasons that makes us careless and we do not keep prepared which we should. We will get dry seasons again and then without being ready we are liable to have loss by fire.

The Blossom Bud.

It is known to the grower of all kinds of fruit that some years his plants show an abundance of blossoms, and other years a great scarcity. Why is this?

This inquiry ought to have been made of some of our botanists at the University instead of being referred to me for, altho I have read everything I could find on the subject, my opportunity for personal observation is too limited, and I can only restate to you what has been discovered by others and the facts that they have established are about as follows:—

1st. The Blossoms for our next years cranberry crop were matured in September and October last.

2nd. Dryness, coolness and sunshine in September and October are favorable to the formation of blossom buds, while warmth, moisture and shade, either from clouds or over

hanging vegetation, retard the formation of fruit buds and stimulate what are known as the vegetative functions of the plant; hence it follows that if our vines are kept wet, warm and shaded during the months of September and October, the terminal buds on the uprights will not ripen into blossom buds, but will unfold in the following spring and extend the uprights without producing blossoms. Hence, vines that go into winter quarters green instead of being of a ripe, reddish brown color are not only in a poor condition for wintering, but they are likely to show but few blossoms the following season.

3rd. As a rule, animals do not reproduce, nor plants bear fruit during the period of most vigorous growth. Vigorous growth is unfavorable to reproduction, but as a certain amount of vigor is necessary both to the plant and the animal, it is only excessive growth that should be repressed.

4th. Vines tramped down into the water or in a horizontal position until winter sets in, are not likely to bear blossoms the following season; not merely on account of the excessive moisture, but because of the horizontal position. The reproductive function ceases in most plants when forced into a horizontal position. Hence rolling vines early in the fall before the blossom buds are all formed especially rolling them in the water, is liable to seriously lessen the next year's blossoms.

J. A. GAYNOR.

Bulkheads and Ditches

(By Fred W. Gøbbhardt.)

In the fall of 1902 I had a large number of stone bulkheads put into my pitches to replace the wooden ones

which were decayed. I told my mason that I wanted them put onto wooden platforms, and most of them were built that way. There were a number that were put on the ground without any plank foundation. The latter were a failure as the frost must have heaved up the stone floor, and we did not get it down deep enough below the frost line; the floor and sides cracked and let the water off.

We, however, built a large bulkhead in a very soft place and we used at least a cord of rock loose and started our foundation and stone and cement floor on that and up to the present time it appears to hold all right.

There were a number of mistakes the mason made when I was not there, in building the wall too abrupt and not giving them width enough. Both sides of the walls should be smooth, so that the dirt and sand when it settles around the bulkhead is firm against it.

I would suggest adding a wing on each end of the wall on the upper side. I used 4x4 or 4x6 as a frame for the perpendicular pieces also the bottom and top pieces that act as horizontal braces. This frame work is for holding the slash boards in position.

I found that there was a great pressure from the outside to the center as the weight of the dirt and sand had a tendency to crack the walls if the walls were built too narrow. They should be not less than 2½ feet in thickness and three feet in thickness would be better.

I use portland cement. It is my opinion that the stone bulkhead will be the bulkhead of the future, as it has the weight and durability. By another season I can tell more about

them.

In regard to ditches, we all need better drainage and quicker drainage and also quicker flooding, which is essential to cranberry culture.

Packages

[(Lucian J. Fosdick.)

I deeply regret that I am unable to accept your kind invitation to be present at the association convention in Grand Rapids on the 12th inst., and to address you upon the topic assigned me.

My business duties alone prevent my acceptance. It would be a very great pleasure to me to meet the officers and the members of the association.

I am not a large grower of cranberries, yet I am an enthusiast in the cultivation of this fruit and do not feel that I have attained my ideal in cranberry culture short of raising one hundred barrels to the acre.

Bog building, cranberry culture, harvesting and marketing are to my mind four vital problems to be solved by all cranberry growers and to this end I believe our association together with the Cranberry Grower edited by our secretary, W. H. Fitch, will become great factors.

The topic which you have assigned me comes under the head of marketing. Why not adopt as the cranberry package a 32 qt. dry measure two-compartment crate?

Marketing may at first sight seem to be a very simple problem but it is in reality far beyond a simple problem; it is a complex problem, so complex that in many particulars under present conditions it works to the serious disadvantage and the material loss of the cranberry grower.

One of these injurious disadvantages to the cranberry grower in the marketing of his berries is the non-uniformity of the package in which cranberries are packed and put upon the market.

The question may be asked, "Why not market all cranberries in barrels?"

To this question I will answer that the cranberry barrels are not uniform in size. They appear to be the same size but vary in holding capacity.

My observations have been that one hundred barrels made out of uniform stock by a first-class cooper who attempts to make them the Massachusetts standard size, to-wit: to contain one hundred quarts "dry measure", will in reality vary anywhere from 100 quarts to 107 quarts.

The question may be asked, "If a Massachusetts standard cranberry barrel should contain just 100 quarts, and if a cooper makes one barrel that will contain just this quantity, why he cannot make 100 or 1000 barrels of equal contents?"

My answer is that he does not make them of uniform holding capacity and I am convinced that he cannot unless he takes much more time in setting up barrels than the price will warrant. I have seen barrels which have been made in many different cooper shops, all of which possessed these variations as to holding capacity.

I believe it is wholesome to have a law regulating the capacity of the cranberry package and if the law says, "a barrel of cranberries shall contain not less than 100 quarts and a cranberry crate not less than 32 quarts."

The grower is thereby required to use barrels and crates of such capaci-

ty. In the use of barrels he must give more than 100 quarts which is unjust to himself. In the use of the bushel crate he can give full measure which is just to the buyer.

Crate stock can be sawed to dimensions so that one crate or any one of 100 crates will hold just 32 quarts.

Barrels vary more or less, as will be admitted by coopers, cranberry growers, market men and all who are familiar with this style of package.

In the use of barrels the grower of cranberries must have a barrel which will hold not less than 100 quarts and to this end the cooper must make them to hold no less a quantity.

May I illustrate? A grower raises, say, 100,000 quarts of cranberries equal to 100 barrels.

He uses the Massachusetts standard barrel which "shall contain not less than a 100 quarts."; these barrels varying in fact as I have previously explained from 100 to 107 quarts., which makes an average of 103 ½ quarts to the barrel, a very conservative estimate.

This means practically to the grower a loss of 3½ per cent of his shipping crop which is equivalent to loosing thirty five barrels out of every one thousand.

It may be said that, notwithstanding this apparent fact, that the berries represented by this thirty five-barrels to the one thousand are not lost because the retail buyer gets them, etc.

In reality they are lost to the grower

And again if one retail dealer buys a barrel of cranberries containing 107 or 105 quarts how about the dealer who buys a barrel containig but 100 quarts?

To this question it can rightfully

be said that he gets full lawful measure and must be satisfied, but herein an inequality exists all the same, which works to the disadvantage and to the loss of the cranberry grower so long as cranberries are marketed in barrels.

How can this inequality to both the cranberry grower and the purchaser of cranberries be obviated?

The answer is, "let all cranberry growers adopt the two compartment bushel crate 32 quarts dry measure."

This stlye of package can be readily made of uniform holding capacity and when all cranberry growers conform to its adoption they will give just and lawful measure and the purchaser will get the same.

California fruit growers have adopted the crate form of package for the shipment of their fruit to market.

New England apple growers are already making large shipments of apples in crates and it is quite certain to replace the apple barrel in the very near future.

The barrel rate for shipments of cranberries is little less than the rate on crates but there is no good reason for the difference. The fact is that crate shipments will occupy less cubic feet of space than the same quantity of cranberries will occupy when packed in barrels, and it is reasonable to conclude that if the question of freight rates was brought to the attention of the proper railroad authorities that this difference would be adjusted to the benefit of the crate shipments.

All up-to-date cranberry growers store their harvested berries in picking crates "slightly different but similar to the shipping crate and holding 32 quarts." for the reason

that experience has taught them that this is the best package for storage purposes for two reasons; they can be packed up compactly and cranberries will keep in these bushel crates better than in any other form.

A cranberry barrel is not a proper package in which to ship cranberries.

Let me illustrate this point: A cranberry barrel will hold 100 pounds of cranberries and one can readily see that the cranberries in one end of the barrel are subject to a great pressure by the weight of the cranberries above them.

For instance: we pour 33 and one third pounds of cranberries into a barrel and the barrel is one third full.

We pour 33 and one third pounds more into the barrel and it is two thirds full. We pour 33 and one third pounds more into the barrel to complete the filling and thus we have on the first one third, sixty-six and two thirds pounds pressure and this condition continues to exist so long as the barrel remains full.

To press cranberries into a barrel, haul them several miles over the road to the freight station, transport them a long distance by rail, team them to the commission house, thence to the freight station for another railroad transit, another teaming to the store of the purchaser, the berries all this time being subject to this great pressure, and then expect them to open up sound and solid packed is out of reason.

For one reason if no other all cranberries should be packed in a two-compartment bushel crate for they will reach the retail dealer in the best possible condition and, for all handlers, it is a more desirable package where store room counts and be-

sides the bushel crate gives the retailer a desirable package for his hotel, restaurant and boarding house trade.

Foreign dealers already express a preference for the two-compartment 32 quart cranberry crate for the reason that it carries cranberries in much better condition than the barrel carries them.

The two-compartment crate holding "32 quarts dry measure" is the proper shipping package for cranberries.

1. It will keep cranberries in the best possible condition.
2. It is easily handled.
3. It requires for equal holding capacity less storage room than barrels.

It is a desirable package and much liked by the jobbing trade.

It is a package that is strictly honest in measure.

Review of Preliminary Work at Experimental Station.

(H. A. Ramsey.)

The committee in charge of the program asked me to give a report of the work performed on the Cranberry Experiment Station the past year. Owing to the fact that the season was somewhat advanced and the condition of the grounds, the work of necessity was largely preparatory. Before systematic and scientific work could be carried on so as to yield the best results and to be any degree accurate, the grounds and planting had to be put in proper shape. Mr. Haskins and I spent most of our time from July 1st till the middle of November and later, on the marsh, though Mr. Haskins was there some time previous to July 1st. After definite arrangements were made for the lease of the

ground a small house 12x20 was erected on the station to serve as a laboratory and temporary quarters, as to properly superintend the work we had to be on the ground a good share of the time.

The present nine or ten acres which the station now comprises was leased by the Wisconsin State Cranberry Growers' Association to the University of Wisconsin. Of these ten acres there were already planted about three acres or more of vines, the work having been previously carried on by the Cranberry Growers' association. Looking at the map it will be seen that there were then five sections planted to vines. These sections ran nearly the whole width of the piece and had an average width of fifty feet. Of these five sections two were covered with a very vigorous growth of vines, while two were but sparsely covered. One section was cut up into squares varying from 14 to 16 feet on a side and were being used by the Association for the propagation of varieties from their original nursery. It was found practicable to weed only the two lower sections as the other two sections planted to vines had a very sparse growth and were entirely overgrown with wire and bull grass and other noxious weeds. On the two sections that were weeded the weeds and grass were pulled by hand. The wire grass where once it gets a good start is hard to eradicate by pulling as it breaks off at the junction of stem and root and as the grass propagates by means of numerous runners it will come up the following season in nearly as great an abundance. The only effectual way of keeping it out is to keep the sections weeded for a year or

two, or perhaps three, after planting and give the vines chance to get started well and crowd out the grass. In some instances rolling has been found a decided help. The so called bull grass is a very bad weed on many marshes and was found quite abundantly on the Station. It grows in dense tufts or bunches and the only means of getting it out is with a knife or some other sharp instrument as it cannot very easily be pulled and not leave the roots in the ground.

When once established in a place it spreads very rapidly both by seeds and runners.

There are also two species of moss which are very troublesome in some localities and for which no sure means of eradication has yet been devised. The question of weeds will be treated more fully in the official report. Specimens were collected of all troublesome and noxious weeds and are now being determined and worked over.

It was found more practicable to scalp the two sections where the weeds had won such a strong foothold and held the vines back, and accordingly were pulled and the bog rescalped and will be replanted in the spring. The section containing the little plots onto which varieties were being planted was weeded two times during the season. A sixth section which had been previously scalped and the scalplings thrown up into windrows was rescalped and made ready for planting. The scalplings from this and other sections were used in the construction of a road along the east boundary of the station. Frequent rains during the season caused considerable trouble as at first we had great difficulty in getting rid

of the surplus water and even after flooding for the frosts the same difficulty was encountered. The water would all flow away if given time enough, but with the present drainage we could not run the water off and dry the marsh before the sun came out too hot in the forenoon. On July tenth especially, the water could not be gotten all off till nearly noon. A cheese cloth was stretched across a small area some two feet above the vines to test for blight. The cloth was not put up soon enough, however, as the berries were probably blighted before the cheese cloth was put up. Berries continued to blight even within the tent, and which seems to point to the fact that all blight is not caused by intense heat in the presence of water. The stalk on which the berry is attached turns brown and dies before the berry shows any sign of withering, but is thus ultimately deprived of nourishment and succumbs to the inevitable. It is a question what causes the death of the stalk or if the stalk but shows the symptoms earlier than the berry. It may be of bacterial origin and may have its primary cause back in the flower. The question of blight will be taken up more carefully next season.

Considerable difficulty was also experienced in getting men to do the ditching, scalping, weeding, etc., and the work suffered somewhat from this. Frequent rains also interfered with the work. Experiments for the determination of the probability of frosts were carried on and an electrical apparatus was so arranged that it would give an alarm when the temperature would fall to a certain point.

A reservoir comprising some two

acres was built and water can be had for flooding the Station from this, and can be done very quickly. Ditches were widened and deepened, new ones constructed and outlet both widened and deepened for a distance of half a mile, so that the marsh can be flooded very quickly, and drained in a short time. A tower was placed in the reservoir with a weather vane and an anemometer in cooperation with the U. S. weather bureau. The triangle or flat-iron piece lying between the east boundary and the original section was scalped and the scalplings were used to build a road along the east boundary. The scalped ground was used to finish out the original sections so that they now all extend the width of the piece.

The two lower sections were divided up into four and eight subsections and each subsection so arranged that it can be flooded and drained independently of the others. The relative merits of early and late taking off of water and also of early and late flooding can by this means be determined.

The two sections which were scalped and also the triangle is being sanded to the depth of three inches and on other sections in process of making experiments will be carried on with different depths of sanding. The Wisconsin State Cranberry Association has some one hundred and eighty-seven small plots planted to different varieties of cranberries. They are all designated by numbers and are as yet not named. Of these one hundred and eighty-seven, sixty-five were removed to the Station by the association this last spring. The varieties removed were the first sixty-five plots or varieties. Here are found varieties from all cranberry

growing regions in the United States. A number of the so called varieties are seedlings grown from fruit of some vine on the Station and means of comparison between parent and seedlings from fruit is offered by this means. It was the intention of Wisconsin State Cranberry Grower's Association and is the intention of the State Experiment Station, by keeping careful record of each variety to select therefrom desirable varieties and propagate the same. This year the one hundred eighty-seven varieties were all carefully observed and all desirable characters in any variety noted. A record book made especially for the purpose was used and number of each variety was entered in the book along with the name of the originator or sender when planted. Each variety was judged on the scale of ten as related to size, color, form, gloss, uniformity, keeping quality, firmness, productiveness, season, vigor of vine and flavor. To get the size of a berry, its length parallel to its long axis was first taken, that is from the calyx to point of attachment. The second measurement taken was along the axis of the berry at right angles to the first, and the third one was the shortest one through the same plane. Three measurements were thus taken and a reasonably true index of the size of a berry obtained. Varieties varied greatly in size and form as also in color.

To get the form the berry was cut in two, parallel with its long axis and an outline drawing made of the same by placing at the surface on the paper and a pencil passed around the outside of the berry. Color was judged also on the scale of ten, the darkest ones marked ten and the

lightest ones one. The ones with the best gloss were marked ten and the ones with the least one, and so uniformity, productiveness, flavor, vigor of vine, season, were all marked similarly on the scale of ten. Keeping quality and firmness were also marked in the same way, only these are not recorded until some time during the latter part of the winter. By these markings comparison can be drawn between the different varieties, changes can be noted, and improvement or retrogradation observed.

I should say three varieties were generally selected for being especially large, three for fine color, and so on, while others were marked for propagation for having three or four of these qualities of character to a marked degree. Each vine was marked and the berries of that vine picked and stored. We are thus enabled to more intelligently select our varieties and test them. By cross-fertilization efforts will be made to improve varieties by crossing a variety possessing several desirable characters to a high degree by lacking others with a variety possessing these others in an equally high degree. These will be crossed with the former and bring about production of varieties possessing to a high degree the characters sought, but varieties of this nature are seldom constant so it will be largely the chance if varieties desirable and with constant characters are produced. Our surest means is that of careful selection and breeding of existing varieties. Cultivating of each variety with the view of bringing out but a single character will be carried on and these afterwards crossed. That is, some will be cultivated for size alone and others for color. Because

of the time of the year that the work was begun and the unfamiliarity with the merits of the different varieties no crosses were attempted this season but will be during the coming year

There was but one insect which caused any material damage to the fruit, namely the cranberry fruit worm. The moths appeared on the marsh in great numbers about the middle of July and remained especially numerous for about two weeks. The young caterpillar appears on the outside of the berry about six or seven days after the eggs are laid. It may attack as many as three or four berries before it ceases its devastating work and forming a cocoon buries itself in the ground some time during September. The only known remedy for this insect is flooding. The best time to flood is when the worm lives on the outside of the berry, which it does for two days after it appears.

Fungus diseases were confined principally to the fruit and no serious disease was found attacking the stems or foliage of the plants. The so called cranberry scald is the only exception. In the case of this disease the fungus lives through the season in the stem and leaves of the plant and through the flower infects the berry. The fungus was found in the fruit quite generally but none were at the time found in the vegetative parts of the plants bearing the infected fruit. There were but few cases of this so called scald though numerous diseases pass under the name of scald. A very prevalent disease which became quite noticeable just before picking time is another fungus disease where the berry lost its normal color and assumed a hayline transparent one. The hole

inside of the berry was permeated by a dense waft of fungal hyphae. It is possible that this disease had its origin in the flower and possibly before. The berries were probably predisposed to disease by the unusually wet condition of the marshes. It is further found that nearly all the berries which softened in the barrels after they were sold this fall are all infected by a fungus and the whole inside of the berry is filled with branching hyphae of this fruit fungus. It is quite probable that previous injury and wet condition of the berries paved the way for the wholesale infection by this fungus.

I do not think the fungus is the primary cause of the unusually bad condition of the berries though found in nearly every softened berry, but has gained the foothold it did by the previous softening or moist condition of the berry. The berry when once infected would be rapidly permeated by the fungal hyphae and the fungus would spread rapidly from berry to berry. The fungus was found in many stages. Its life history will be worked out if possible and also the time of its origin.

This is but a brief outline of the work carried on at the station this year and besides I have said nothing of the work carried on in relation to frost and other things more properly belonging to another department. After all it was largely a preparatory work to make scientific and systematic work possible. All efforts were made to familiarize ourselves with conditions there to observe and note lines along which to work and in general seek the best possible means of furthering the best interests of the cranberry industry.

The Season of 1903 From a Buyers Point of View.

I regret very much to have to write you that it is impossible for me to be with you on the 12th. The Western Fruit Jobbers Association, of which I am secretary, has a special meeting at Chicago on Monday and Tuesday, January 11 and 12. This being on the same date as your meeting prevents my being with you.

Since your executive committee honored me with a place on your program I had hoped that I would be able to attend and say a few words about the market of 1903.

So far as the Wisconsin growers and those who dealt in Wisconsin berries the season, just closed, has been what I would call a very satisfactory one. This has been a very peculiar season on cranberries from a dealers' point of view. At the beginning of the season the opinions of the larger handlers differed quite widely as to the future of the market. It was very apparent we had large crop to market. Some of the large eastern dealers seemed to have the idea that without regard to very largely increased crop that prices were bound to rule high and urged the growers generally to hold for future high prices. On the other hand most of the western dealers insisted from the start that prices were too high to market the crop and advised their grower friends to let loose and sell. One of the most important things in marketing a crop of anything is to avoid as far as possible any declining market. Buyers will not partake freely of any perishable article except on a strong market and a steady market. It has been many times de-

monstrated that when cranberries cannot be retailed at 10c a quart and make a good margin for the retailer that they move slow. On account of the high price that ruled the early part of the season not enough of the berries went into consumption to hold the market. So many berries were left in the hands of eastern growers that they lost their confidence and they have been thrown broadcast on the market without regard to price. Good Jersey berries sold as low as \$4.00 to \$4.25 per barrel. This shows a decline of from \$1.50 to \$2.00 per barrel from the high point.

I have not time or space to write all I would like to write, but I do want to say that the Wisconsin growers acted very wisely in selling just at the time they did. It so happened this past season that there was a gap between early Blacks in Cape Cod and Jerseys, Cape Cod Early Blacks cleaned up earlier than usual and Jerseys were somewhat backward in coloring. This gave Wisconsin an unusual opportunity to dispose of their berries at good stiff prices during the gap. I want to caution you that this particular condition is not likely to happen every year, and had it not happened this season the Wisconsin growers would have made a great mistake by holding firm for prices at which they started. Congratulate yourselves, therefore, that the good prices which you received for your berries was largely the lucky conditions at the time you sold. I mention this that all may guard themselves against being guided another season by conditions that existed this past season.

I would like to suggest that the

growers do not want to get the mistaken idea that the more competition there is between buyers the better it will be for the growers. Unless one or two firms get enough cranberries to handle profitably so that they can afford to make the marketing of cranberries a specialty you will find that the present larger operators in cranberries would take hold of other things. When this happens it will be up to the growers to market the berries direct to jobbers in a very scattered way and it will not then be competition between buyers to buy your berries but it will be competition between growers to sell their berries. The larger operators must necessarily sell in car lots and to jobbers only. Unless these operators are protected and permitted to make a legitimate margin, they will be forced to drop cranberries from their specialty list. I feel that there ought to be a mutual relation of confidence and good will between the grower and those who make it a special business of marketing cranberries, and that, as far as possible, such dealers should have the protection of the growers. In turn I appreciate that the operators must treat the growers right and deal fair with them, and work with them mutually toward advancing the cranberry industry. There should be a closer relation between the grower and operator. If the cranberries could be absolutely under the control of a very few operators there would be a much better average price obtained for the entire season. I therefore solicit the growers to bear in mind that if they desire their berries to be marketed by those who make it a specialty that they do what they can to protect

them.

Again regretting the fact that I am unable to be with you and hoping that you may have a good and prosperous meeting, and that next season you will have even better results, both as to crop and price, I beg to remain, Yours very truly,

A. U. Chaney.

THE CRANBERRY

The Production of Varieties and the Merits of Each

(By A. C. Bennett.)

To handle this subject properly, would require a thorough knowledge of all the varieties now grown; the demands of the markets as to varieties, and an intimate acquaintance with the plant itself; also a thorough knowledge of the laws governing reproduction; the effect of environment upon this particular plant, and many other things; and it should, as I believe, have been given to someone better acquainted with the subject than myself.

Variations of the cranberry are produced readily by planting the seeds, and by cuttings from sports, which seldom occur on the wild vines, but may be formed under cultivation. —They are single branches on a vine, producing different varieties from the parent stem—By cross fertilization we may produce almost any form of berry, early or late, and of any desired color, from clear white to almost jet black; even a sweet cranberry is quite as possible as was the first, sweet apple, and a seedless cranberry, as a seedless orange, or a seedless apple. The flavor is today more varied than the wild apples, but has been less investigated.

The markets of the world today call

for large berries of a bright glossy color, shading from the bright red to dark; an oblong berry. Such command the highest price in the market. The grower will find it easier to and quicker to meet this demand, and reap the reward, than it is to educate the public. Small berries may make the most sauce to the quart, and be the best flavored, and the best yielders, and white berries the best keepers; but they will not sell as readily.

What the grower wants is a variety of cranberries that will always sell. No matter how much the market is glutted, the best of everything will always sell. There is nothing too good for the American people. The ideal cranberry would be a good yielder; one that will adapt itself to the greatest differences of soil and climate; be uniform in size and color, the best of keepers and the best flavored, a point that will count in the future; also a rank grower, so as to assist to keep down the grass and weeds; and above all, others an enduring variety. All kinds of fruit under cultivation run out in time—degenerate—and new varieties take their place; hence it is wise to start with a new variety that has been tested.

In crossing to produce the ideal variety, great care should be taken, and remember that it must be done by one crossing of established varieties, so as to produce a hybrid that shall be strong and productive, or this should be done gradually; as the union of varieties widely differing from each other, while they are productive in the first generation, are often barren later on.

The environment often makes great changes in size, form and color. The same variety grown on Cape Cod,

and on the Pacific coast, would be changed so as to not be recognized as the same berry. A light colored variety grown on a marsh, deficient in iron, transplanted to a soil having plenty of iron, changes its colors until the berries would be classed as separate varieties. The keeping qualities are also varied by soil and climate, and conditions.

If we have a dry season in the fall, followed by a wet season, the next year we get a good crop of cranberries, but their keeping qualities are not as good as the berries that are grown in the dry fall season. When the drought comes early in the season, and then come rains, just before, and at picking time, the berry makes a rapid growth which is tender. Such berries will not keep well, and especially if they are gathered wet; and are allowed to remain in that condition until they are sorted, and barrelled for market; (as I saw done last fall). In such a case, varieties count for nothing: they will rot, and would in the barrel. Such parties damage the reputation of every Wisconsin grower, and themselves. I will hold up both hands in favor of "Public Inspection," or any other means to stop such practices. The owner was not at the plantation when I was there.

Raking of Berries.

(By E. K. Tuttle.)

Worthy President and Members of the Cranberry Growers' Association: Once again we meet and as we look back we can see the old year tottering in the distance and we have the progressive kid at our side full of questions as to how we are planning our duties as cranberry growers the coming year. Resolutions being in

order at this time of the year, can we not as a body resolve

We will commence now and take a portion of our marsh and sand say put on $1\frac{1}{2}$ inches and during the summer get after the ditches and make them $2\frac{1}{2}$ feet deep and drain ditches every rod that we may harvest as many berries in the middle of sections as we have near the ditches, and when our berries are harvested and vines become mature before flood- ing get after the vines and prune.

Our esteemed secretary allotted me the subject, "Does Raking of Berries Injure the Vines more than Hand Picking" If they are old matted vines, I would say yes. If they are sanded or pruned, doing away with runners and vines are upright, I would say no.

Should it not be of more interest to us as growers to post our selves how to prepare these vines so we can rake and not injure them. I have spent most of my life in nursery work and growing of fruit, apples, grapes, currants, strawberries and blackberries, and at time of cranberry harvest I have been at the marsh. When the grape, currant and blackberry had finished fruiting and the wood became mature, we had to go to trimming, and the apple trees in the month of March and June was their allotted time of discarding a portion of their wardrobe.

The strawberry being of shorter life we had to renew by planting new strong, vigorous plants and when we look back to those dry seasons and see how strawberry plants put out their runners and the wind carried them from one side to the other, there not being enough moisture in the soil to enable them to root and at

the close of the season the old plant became exhausted. In looking at our old cranberry vines with their runners stranded up in the grass, I cannot but compare it with the above sanding and covering these runners and each becoming rooted and self supporting and many uprights for fruit where we had but one before and the old exhausted wood burned and discarded and the warmth and new life giving powers of the sand and at harvest we can gather the berries with rakes, and if we are neglectful as to putting on water and not too heavy a frost our berries go through all unhurt.

And just a word in regard to experience in trimming. A year ago last spring we used three of the eastern vine pruners on part of a section and we trimmed regardless of having many vines left for that fall's fruiting. We did not harvest many berries but you should have seen the crop the past fall and we could rake the berries nicely and berries were one third larger.

Mr. Vaughan of Middleborough, Mass. told me of flattening down hay rake teeth and sharpening them and using team for trimming I tried this a year ago last fall and altho this was out a slight pruning; it did away with the runners by raking one way the way the vines lay and at harvest time we could use our rakes raking with the vines. I used the McCormick rake on three sections about three acres and we were about four hours in pruning. Some of it I went over twice. It is very inexpensive and did the vines lots of good, and if we could but use this on a portion of our marsh each year and sand during the winter, we would harvest double the fruit at $\frac{1}{2}$ the expense.

My neighbor, Mr. Plummer, pruned the Stansbury marsh (it's a sanded marsh) a year ago last fall and cleaned all his ditches $2\frac{1}{2}$ feet deep and I wish you could have seen his vines and the crop they had the past fall.

Should you attempt to grow grapes, currants, blackberries, raspberries or any other kind of fruit without pruning and fertilizing, how long would you stay in the business and pay running expenses? Then why not sand and prune the cranberry vines? When our eastern growers and those that have had experience here tell us sand is as beneficial as well rotted manure on a garden and one acre of sanded marsh will bear as many berries as three acres not sanded or pruned. My idea in reading this paper to day is not that I may impart knowledge to these older ones but that it may excite a discussion and these old pioneers will let fall some thoughts they may bring out and we catch some new ideas to take home with us.

Pollenizaion of the Cranberry

(By A. C. Bennett.)

Experiment No. 1. About twenty-five years ago, we selected about a square rod of vines in the wild open marsh, and pulled out all the grass, weeds and moss, leaving only clean vines. The vines on it grew finely; blossomed profusely, but produced no berries of any account. This continued for several years, until that section was scalped and planted; then it commenced to bear, and has continued to do so up to the present time. This impressed me with the belief that the cranberry did not readily pollenize itself; but that some insect did the work: probably hiding in the near-by

moss and grass; and perhaps, operating only at night.

Experiment No. 2. In the spring of 1893 when I had charge of the Wisconsin Cranberry Exhibit at the World's Fair: there was sent to me a large box of cranberry vines, just ready to blossom. They were placed where they had light and air, but no direct sunshine. They blossomed out very full and the blossoms stayed on a long time (indicating a lack of pollenization) and they produced not a single perfect berry, tho they were well tended and the vines looked very healthy. This tended to confirm my previous impressions. These vines were shipped at a time when the insect was active, and they probably left the vines during the journey, or the installation of the vines, and it showed me that the cranberry did not readily pollenize itself.

Experiment No. 3. Out on the Midway, a sample cranberry marsh about forty feet square had been placed which had been shipped there early in the season, and was neglected until the fore part of June, when it was turned over to my care, and the weeds and grass pulled out to a certain extent; but the size of the piece prevented the escape of all of the insects. A system of irrigation was established, and on this small plantation, several quarts of perfect berries were grown. As I had several fruit-worm millers there, I inferred, naturally, that they had done the work of pollenization, as they would be examining the flowers to lay their eggs there, soon after the berries were set; but after visiting a section of New Jersey, where the fruit worm had never been known; and seeing the vines loaded with berries, I was obliged to abandon the idea.

I wrote to A. J. Rider and asked him by what means the cranberry was pollenized. He suggested that the wind might be the agent, as in the case of the corn. When we see that the lack of pollenization alone would blight every blossom, we see the importance of knowing by what means this occurs. If by an insect, we should know its life history, so as to protect it and not drive it off, or kill it by untimely flooding. We hope to have something reliable on the point, from the state experiment station; and it is very fortunate for us that the state has taken up the work, with means and men of ability and zeal, to promote the subject.

Secretary's Report.

It is with regret I have to announce the enforced absence of President Briere on account of sickness. His conservative counsel and sound business judgment have contributed very much in placing the association on its present substantial foundation and I am sure I voice the sentiment of each and every one of our organization in wellwishes for his speedy recovery to health.

Booming.

It is stated that an evil anticipated or apprehended is half averted or avoided the reason given therefor being that precautionary measures are taken that modify or minimize the untoward happening; and, so, it is believed the recent impetus given, in some sections, to cranberry culture should be given the notice and thought that it deserves.

Of various avocations the cranberry industry is one far removed from the quick-rich plan, the season of phenomenal profit being the exception

rather than the rule, the old and observant grower giving as his opinion that the proportion of pronounced success falling to the lot of those engaged for any length of time in the business being one in sixteen.

A note of warning is therefore given to the ignorant or innocent, to well weigh contemplated enterprises or extensions that damage or detriment may not be unwisely or unwittingly inflicted. To this end sound knowledge, reliable information and a broadened understanding reached thru attendance at meetings of progressive producers, or from published accounts of their proceedings would seem to be of importance.

A Cranberry Journal.

In accordance with the belief that the time had arrived for a publication specially representing the industry, there has been issued during the past year a monthly periodical, and the favorable words of approval already received encourage the hope that its continuance may be assured by sympathetic and substantial support, and be regarded regularly as a welcome visitor.

The St. Louis Fair.

A creditable display it is opined could not but be of great advantage to the state. It is therefore urged that cordial co-operation be given in every way possible.

Membership Dues.

While the experimental feature of our organization has been turned over to the care and custody of the college of agriculture of the State University, there remains much other important work for the association, and it is hoped, a prompt remittance of the annual fee by everyone will enable its usefulness to be continued. If the supply is to be materially increased

the consumption must be augmented. With a firm faith in the wholesome culinary virtue and value of the cranberry, and the employment of advanced methods there should be little doubt but what this can be accomplished.

Fertilizers for Cranberry Vines

In June last I received through Mr. Duncan, agent for the German Kali Works, four different kinds of artificial fertilizers.

About the 25th of the same month I applied these at the rate of about 200 pounds per acre, upon a piece of mossy vines about four rods square, putting it on in strips across the square, leaving the alternate strips untouched by the fertilizer.

The first effect I noticed, a few days after applying the fertilizers, was that it generally killed the moss over the strips upon which the fertilizers were applied, and especially so over the strips upon which the sulphate of potash was used.

I could not see that these fertilizers had any perceptible effect upon the growth or vigor of the vines. The weather was rainy about that time, and I think if I had made a second application in dry weather, I would have secured better results; for afterward I applied the sulphate of potash on a section of the experiment station where the vines were free from grasses and other foul stuff and the effect was a decided and noticeable change. Within a few weeks after, the vines showed a much richer color where the sulphate of potash had been applied. I understand that this fertilizer is used on cranberry vines in the east with good results, and I intend to give it a more systematic trial

during the coming season.

I also applied common salt on vines on the experiment station, that were being choked with what is known as timber moss, at the rate of ten bushels per acre. Within a few days after applying it the moss was all dead, and the vines appeared to be uninjured by the application.

I hope to continue these experiments during the coming year, and will be glad to report to you at our next annual meeting, the results of my experiments. J. J. Emmerick.

Crop Statistics.

The principal use of the cranberry crop statistics is to ascertain the supply of that fruit to be placed on the market for consumption. It is known to every one that the price of any commodity is regulated by what is known as the law of supply and demand. In the case of cranberries, the demand is exceedingly constant from year to year; hence, it follows, that the price of this fruit is regulated by the supply. This is true of nearly all staple articles of human food. Take eggs for instance and your grocer will tell you that ten times as many eggs are consumed when the price is 12c a dozen, as will be consumed when the price is 25c a dozen.

If one man was the owner of the entire cranberry crop of the United States, he would have to regulate the prices by the supply. If he had 2,000,000 bushels at his command, he could probably dispose of the whole at \$4.00 per barrel, while if the entire crop was one fourth that amount, he would not be able to dispose of the whole at \$8.00 per barrel.

From this it will be readily seen that it is of the very first importance

that a tolerably accurate estimate of the entire crop of the country should be procured at the opening of the marketing season, and the prices regulated at the outset, according to that supply, for if the prices are too high in consideration of the supply it will retard consumption and prices will be sure to fall, and a large part of the crop will go to the dump, This means loss and failure to somebody, while if prices are started too low, it will stimulate consumption and before the end of the marketing season, there will be no cranberries at any price, or perhaps only at prices that practically prohibit consumption.

Believing now that I have shown sufficiently the necessity for reliable statistics, the problem is up to me to answer how they may be procured. Our statistician should first procure a book, properly ruled for the entry of statistics on the subject. He should seek to secure a list of, say about 50 growers in Massachusetts, 30 in New Jersey and 10 in Wisconsin, who would send him estimates of their crops during the latter part of the month of August. As fast as these entries come in, they should be entered on the record.

He should, at the same time, procure a list of all railway stations in the United States from which cranberries are shipped, and arrange to procure from the railway officials, the amount of cranberries shipped from each of these during the marketing season. The estimate made by the growers will be found from year to year to bear a certain percentage or ratio to the actual shipment, just as the assessor of land does who does not assess land at its true value, it will be found that on the average their

assessments bear a certain ratio or percentage of relation to the actual sale value of the lands. By applying this principle of average from year to year, a very accurate estimate of the actual crop in sight, can be made from the collective estimates received through the growers, and prices can be regulated accordingly.

Our friend Porter of the Coble Co. has another method that is peculiarly his own, and is more expensive than the one that I suggest. Perhaps it is more satisfactory and profitable to him, but is not so satisfactory and profitable to the growers. He starts in, the latter part of July on the Wisconsin crop, takes a hurried trip through Berlin, looks over the marshes, talks with growers, gets their estimates, and then hurries over to the Wisconsin valley, making the same kind of estimates; he then hurries away to New Jersey and does the same thing, and ends up with an excursion on Cape Cod. His eyes are open to all he sees, and his ears are open to all he hears relative to cranberries. The fact is, he is not able to see or hear anything else during this part of the year. All of this information that he collects is his own private property, or the property of those who employed him, and we may ply him with questions as much as we please, and while we get only polite answers, we never know when we reach the bottom facts in his cranium.

His method is an expensive one, but it is decidedly thorough, but of very little public utility; hence am of the opinion that the plan above outlined is the one, and the only one to which we can resort. J. A. Gaynor.

Marketing

(D. F. Murphy.)

Mr. President and Gentlemen of this Association. :—I scarcely know why I was asked to reply to the question as to the best method of marketing cranberries. My experience in marketing cranberries has been limited; but as I have had considerable experience in marketing other products in a large way, I presume it is for this reason I have been asked to meet you today. I beg to assure you my effort today will be no oratorical gem but a few facts plainly told.

I believe that any plan of marketing which does not protect the interests of the buyers and sellers alike will surely fail.

No scheme for selling will be satisfactory, that does not have for its basic principle, confidence. Confidence of the buyer that he will get what he buys. Confidence of the seller that he will get his money for what he sells. Confidence of the buyers that the party selling is reliable and able to deliver any goods he may contract to deliver. Confidence of the seller that he will receive the orders of the buyers, when conditions are equal; and that the buyer is reliable, competent, able and willing to fulfill his contract, this confidence must be mutual.

Therefore, I declare confidence must be the "key note"—the essential basic principle of any satisfactory and successful plan of marketing.

How best to gain, promote and maintain this confidence between the buyer and seller is to my mind the only question for us to consider in perfecting a model method of marketing. Andrew Carnegie tells us that during the last 50 years the world has

experimented with three great economic propositions:—

Competition, Profit Sharing, Cooperation and Consolidation.

First let us consider Competition, "the life of trade" (that kills the trade). Competition—"the survival of the fittest" (but commercial death to the millions of unfortunates who failed.) Competition—the direct cause of so many thousands of financial, physical and moral wrecks. Of Competition figuring financially, we need not speak. Is there one among you who is courting sharp competition in his business—do you want it? Have you not felt its cutting and withering presence. Is it a desirable thing? Is Competition a good thing for you to have in your personal business, in your corporate form, or in the nation? I will leave each man to answer for himself.

From the evils of Competition grew the loathsome commercial diseases of poverty, dishonesty and moral corruption.

Morally it is responsible for the corruption of thousands of honest, happy and industrious men. It is responsible for the person who if he were a doctor, he would be a quack. If he were a lawyer, he would be a shyster; if he were a cranberry grower, he would be a commercial hyena; a mixer of qualities, a short measure artist; in fact, a fakir; depending upon shady methods to gain an advantage over an honest competitor. These are the diseases, clearly defined, for which Competition is responsible.

Is there no remedy known? Yes, there is the remedy of profit sharing, which will help but will not wholly cure; but the last and greatest of all

is co-operation and consolidation—the best known—the largest tried—the panacea for all the ills that Competition is responsible. It has been found satisfactory for thousands of cases; among the most noted is the Standard Oil Co., the American Sugar Refining Co., the Iron industries, the raisin growers of California and thousands of others that you can readily call to mind. All were sick and were cured by this wonderful medicine. Why not try it—it's cheap and cannot harm you.

I believe that co-operation and consolidation are necessary and essential in the marketing of any product. It is necessary that we may gain the confidence that we have previously spoken of. I would mass the whole moral support of the producers; I would unite the intellectual and financial capital of all branches and establish one seller for their united product; thereby doing away with competition among the producers. I would make this Central Selling Agency so strong that their statements would be accepted as truth by any and all buyers in Christendom. I would make this agency so strong that any buyer would rely implicitly upon its guarantees as to a standard of quality, weights, measure, etc. I would make this agency so strong that any buyer or combination of buyers could come there and buy one barrel or the entire crop of this association with full assurance that he would get the quality and amount he bought, delivered as bought; that the price he paid would be maintained by the association; thereby assuring him of a profit for his investment and right here I want to repeat that to get the best results, the interest of the buyer and seller must alike be safeguarded.

How much more money could a buyer or combination of buyers pay for a crop under such a guarantee as this than they would when compelled to take the chances of selling their purchase at a profit and have to compete with Tom, Dick and Harry prices, unreliable packers and many other uncertainties that are likely to kill any profit they could make. I believe any such buyer would pay and could well afford to pay three times as much as these guarantees would cost the association to make. I would establish this selling agency and let it gain the confidence of every buyer in the United States, by posting him honestly as to supply and demand; the conditions as they exist, from the commencement of the growing season to the end of the shipping season. Any buyer who is thoroughly posted from a reliable source will have enough confidence in the buying season to give you his inquiry and order. I would keep in close touch with every car lot buyer so that if it was thought to be to the mutual interest of all parties concerned, future contracts could be entered into based on a percentage delivery, later when the crop is gathered in competing sections, and a firm calculation can be made. All these, together with a guarantee that the opening prices would not be lowered by the association, would enable the association to sell absolutely the crop before it was grown and take no chance of loss. All these contracts and guarantees are valuable to the buyers and costs the producer nothing. Then why not proceed along the lines and get the benefits.

To sum it all up, I believe the best method of marketing is to first organize the producers. Bunch their pro-

ducts together. Establish a standard of quality, so you and the buyer will know what you have to sell; then establish a general sales agency, under a competent manager, who will have power to bind the association (with the sanction of a small executive board). I would offer the combined product to as many buyers as possible. I would have the business so conducted that the highest prices would be obtained at a minimum of cost. I would have the growers grow the product, the seller sell it, and buyer buy it, and all lines work together in harmony and peace, as Providence has divined we should; and as was exemplified to us by that man from Galilee.

Destruction of Insects.

In response to request for results of experience in the use of lanterns for killing millers the following answers were received:

Wyatt & Purdy, Valley Junction, Wis.:—We used them for several years with some success, but with thorough winter flooding millers have disappeared..

John Bent, Rock, Mass.:—I have not used lanterns on my own bogs, but have seen them used with very good results.

Wm. B. Claffin, Hopkinton, Mass.:—Good on small bogs but on large, 30 to 50 acres, it may pay, but cannot say.

A. C. Bennett, Cameron, Wis.:—Yes, I used wide awake torches set in center of tin milk pans set on posts 4 feet high, gave best results. Put pans two thirds full of water; drop a few drops of kerosene on top of the water; light lamps at dark and let burn all night; pans 60 feet apart; re-

sult, pans average 400 to 500 millers to each pan.

Chas. W. Badger, Boston, Mass.:—Good results, but with kerosene torches, not lanterns.

Observations and Opinions as to Best Time for Gathering the Crop.

G. N. Bacon, Mather, Wis.:—While not having made actual trial, my impression is best keepers are picked about September 15 in Wisconsin. All varieties differ; some kinds must be gathered in the white; others at a later stage for best results.

H. H. Heald & Co., Sandwich, Mass.:—Early picking keep the best.

Wyatt & Purdy, Valley Junction, Wis.:—Think medium late do best.

John Bent, Rock, Mass.:—I would not advise very early or very late picking. I usually commence about the 10th of September and pick thru the rest of the month.

Wm. B. Claffin, Hopkinton, Mass.:—Pick late as can before frost; even a chill injures keeping. Be sure and keep dry and cool.

Alexander Birss, Prairie, Wash.:—Could hardly tell; it began to rain when we commenced to pick; had to pick nearly all wet and dry them.

Lucian J. Fosdick, Boston, Mass.:—Pick soon as berries are an average good color; white or green berries are undesirable.

A. C. Bennett, Cameron, Wis.:—Neither early nor late; a berry not fully ripe, one that has matured slowly and picked carefully when dry and kept in a cool place till the surplus water has evaporated from the inside and the outside.

Chas. W. Badger, Boston, Mass.—Rather favor late picking.

J. J. Emmerick, Cranmoor, Wis.—
 This year our early picked berries
 were in much better condition at time
 of shipping than the late picking and
 colored up well in house.

Report of Treasurer.

Receipts.

| | |
|--|----------------|
| March 6, 1903. State money | \$250.00 |
| Ordinary membership fees | 33.00 |
| Life Roll | 30.00 |
| Advertisements, reports, pamphlets | 31.07 |
| | <hr/> \$344.07 |

Disbursements.

| | |
|---|----------------|
| Order No. 77. Wisconsin Valley Leader printing | \$ 14.75 |
| “ “ 78. W. H. Fitch, sec'y's salary 8 months | 26.67 |
| “ “ 79. Chas. Briere, supplies for convention, work on experiment station | 52.00 |
| “ “ 80. P. H. Davis, livery | 3.00 |
| “ “ 81. A. L. Fontaine, printing | 12.50 |
| “ “ 82. J. A. Gaynor, weather bureau equipment | 3.55 |
| “ “ 83. James Gaynor, experi- ment station | 72.00 |
| “ “ 85. Alex H. Muir, duplicator and supplies | 9.10 |
| “ “ 86. Wisconsin Valley Leader booklet | 25.05 |
| “ “ 87. Grand Rapids Tribune, printing | 19.90 |
| “ “ 88. W. H. Fitch, sec'y, print- ing and postage | 7.29 |
| Interest on orders | 4.19 |
| W. H. Fitch, financial sec'y, printing, postage stationery, bulletins, circulars | 94.07 |
| | <hr/> \$344.07 |

M. O. POTTER, Treasurer.

Report of Financial Secretary.

Year ending December, 31, 1903.

Receipts.

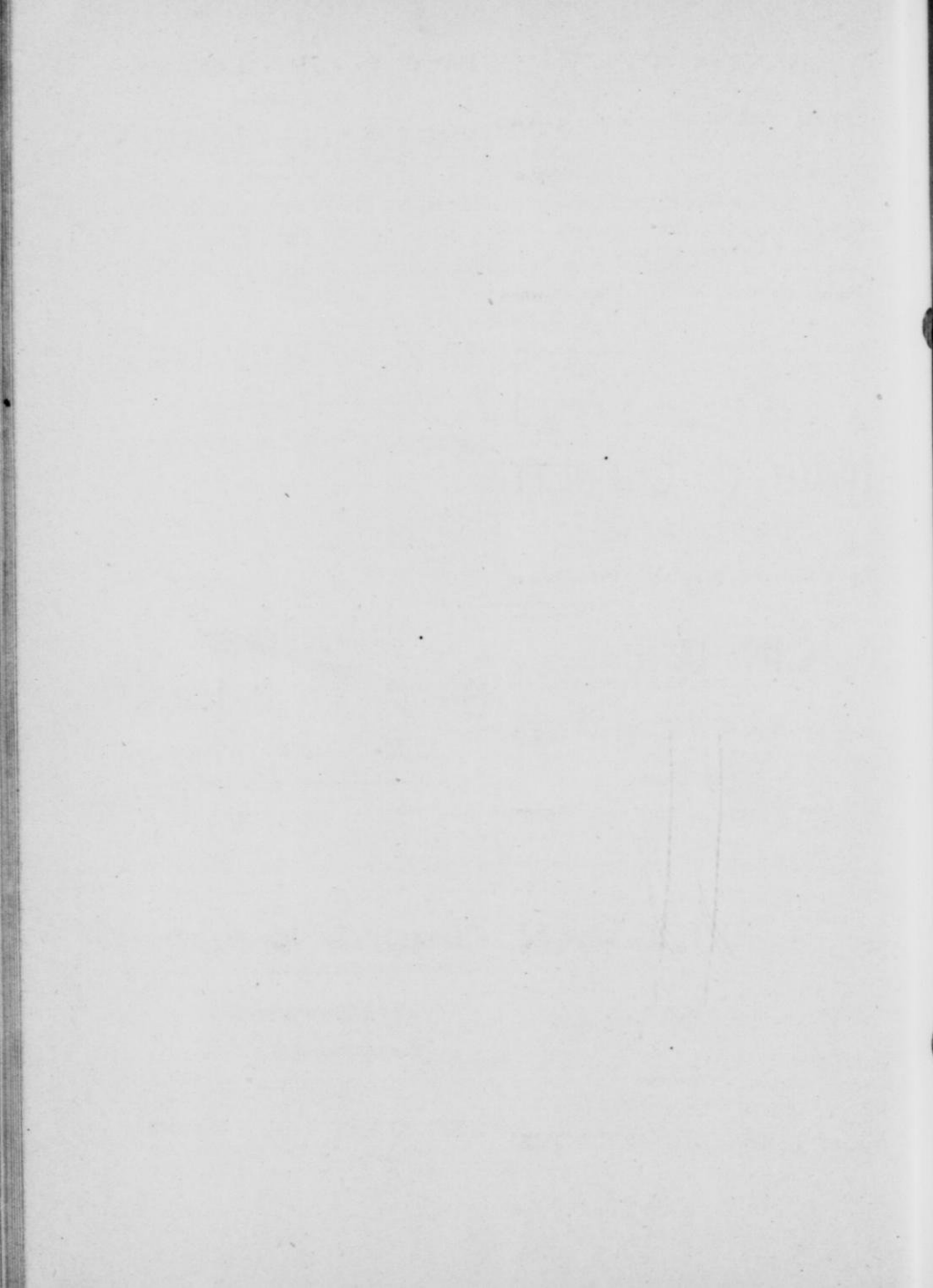
| | |
|--|----------------|
| State money due | \$250.00 |
| Ordinary membership dues | 33.00 |
| Life roll | 30.00 |
| Advertisements, reports, pamphlets | 31.07 |
| | <hr/> \$344.07 |

Disbursements.

| | |
|---|-------------|
| Order No. 89. Exp. experiment station | \$ 30.00 |
| “ “ 91. Secretary's salary 6 mo. | 40.00 |
| “ “ 92. Printing and postage | 30.00 |
| “ “ 93. Supplies for convention | 16.31 |
| “ “ 94. Work ex. station | 11.86 |
| “ “ 95. Supplies for convention | 19.47 |
| “ “ 96. Stamped envelopes | 21.40 |
| “ “ 97. Secretary's salary 3 mo. | 20.00 |
| “ “ 98. Circulars and stationery | 8.85 |
| “ “ 99. Supplies for convention Expense reports, bulle- tins, circulars | 24.50 |
| | <hr/> 94.07 |

\$316.46

W. H. FITCH, Financial Secretary.



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The Witter.

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Wisconsin State Cranberry Growers' Association.

CHAS. BRIERE, President, Grand Rapids.

S. N. WHITTLESEY, Vice President, Cranmoor.

W. H. FITCH, Secretary, Cranmoor.

M. O. POTTER, Treasurer, Centralia.

A. E. BENNETT, Member Executive Committee, Grand Rapids.

OBJECTS.

IMPROVED VARIETIES.—At the experimental station located between Elm Lake and Cranmoor, there are being tested and propagated over 100 different kinds of the best known and proved species. Cuttings from these vines will be disposed of under rules and regulations of the Executive Committee.

BETTER GRADING AND PACKING.—To establish, and take measures, to insure the use of uniform packages, for marketing the fruit so as to secure the confidence of dealers and purchasers by this evidence of fair and honorable dealing.

EXTENSION OF MARKET.—By making known wholesome and culinary virtue and value of the cranberry.

REPORTS, BULLETINS, CROP ESTIMATES, ETC.—To advance the interests of those engaged in the industry by obtaining and distributing statistics of the condition of the crop in this and other states, from time to time, and disseminate information and instruction calculated to promote the interests of the cultivator.

MAILING LISTS.—A roll of leading growers et al in United States and Canada, revised to date of purchase, can be had of Secretary, Cranmoor Wis. Price Two Dollars (\$2.00.) Names of Wisconsin growers, One Dollar (\$1.00.)

MEMBERSHIP.

ORDINARY.—Annual fee, fifty cents (50c) which may be sent in stamps. A prompt remittance by those in arrears, and others desiring to join the association will be appreciated.

AUXILIARY.—Besides growers the association makes eligible and welcome to membership those who more or less connected with the industry, recognize a mutual good and gain in the aims and accomplishments of the organization.

LIFE.—From consideration of convenience and that the usefulness of organization may be more immediately enlarged and extended a **LIFE ROLL** has been established the fee for which five dollars (\$5.00) will cover all future dues. The names of such members will be published in annual reports of association together with postoffice address, shipping station and business card, the latter feature of which it is believed will be found of co-service and benefit.

To Correspondents.—Requests for special information should be accompanied by self addressed stamped envelope.

To Advertisers.—Our publications being accredited as authoritative, their value as an advertising medium is apparent, and cards from reliable firms will be received at following flat rate: Reports of January and August meeting, one dollar per card (1/2 page.) Bulletins, crop estimates, etc., one dollar per card (1-12 page.)

Ordinary Membership Coupon.

(Grower or Auxiliary)

Office of Financial Secretary, Cranmoor, Wis.

Enclosed please find fifty cents (50c) [stamps received] for one year's fee in payment for publications, etc., of association.

Name P. O. Address

Shipping Station..... Street Number..... P. O. Box.....

Date of Remittance.....

Life Membership Coupon.

(Grower or Auxiliary)

Office of Financial Secretary, Cranmoor, Wis.

Enclosed find five dollars (\$5) for life-membership fee for publications, etc., of association.

Name P. O. Address

Shipping Station..... Street Number..... P. O. Box

Date of Remittance

Read the Fruit Trade Journal, weekly.

The representative paper of the Fruit and Produce trade. Gives accurate market reports, prices, and all other news of the trade from the principal cities of the United States, Canada and Foreign Countries. Subscription price **THREE DOLLARS** per year. Sample copy on application.

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THE CRANBERRY GROWER.

A Journal for, of and by those engaged in the industry. Published monthly by the Cranberry Grower Publishing Co., Cranmoor, Wis.

Price \$1.00 per year; 50c, six months; 25c, three months. Address all communications to

Editor W. H. FITCH, Cranmoor, Wis.

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Office in rear of Steib's Drug Store on East
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- M. M. CHEW**, *Williamstown, N. J.*
Real estate, surveyor and conveyancer. Grower and dealer in cultivated cranberries.
- R. A. EVERSON**, *South Hanson, Mass.*
Grower and dealer in high grade fruit and vines and manufacturer of Cape Cod Champion Picker.
- J. J. EMMERICK CRANBERRY CO.**, *Grand Rapids, Wis.*
Growers of cultivated cranberries. Address all communications to Geo. W. Paulus, Secretary and Treasurer, Grand Rapids, Wisconsin.
- ALFRED EDGAR**, *Island Heights, N. J.*
Cranberry grower. Freeman P. O., Box 24, Island Heights, N. J.
- W. H. FITCH**, *Cranmoor, Wis.*
President Cranmoor Cranberry Co. Cultivated marshes.
- L. J. FOSDICK**, *29 Bedford St. Boston, Mass.*
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- CHAS. H. PITMAN**, *Brown's Mills, N. J.*
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- EMULOUS SMALL**, *Harwichport, Mass.*
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- JUDD M. WATT**, *Embarrass, Wis.*
Proprietor Hotel Wait. Reasonable rates and first class service.
- S. H. WATERMAN**, *Cunberland, Wis.*
Cultivator and dealer.

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- BENNETT & HALL**, *New York.*
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- GINOCCHIO-JONES FRUIT CO.**, *Kansas City, Mo.*
No. 519 and 521 Walnut St.
- JOHN GRAITHER**, *Centralia P. O., Wis.*
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