



## Minnesota State Horticultural Society Records.

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No. 1752 Date \_\_\_\_\_

DEDICATED TO THE

Minnesot. Horticultural Society,

By \_\_\_\_\_

Case.....1.....

No. 23.....

Scrap book  
Deposited by Myron Elliott

This Book is  
to be Preserved  
and it will be of  
Great Value in 1966



Winona  
1867 or 69

Quercus agrifolia 1869  
C. in before 1869  
see page 52

# STATE HORTICULTURAL SOCIETY.

The annual meeting of the Minnesota State Horticultural Society, was held in this city, last evening. John S. Harris, Esq., of Houston county, President, in the chair, and J. W. Harkness, of Faribault, Corresponding Secretary, acting also as recording Secretary.

Wyman Elliott, of Hennepin county, Treasurer, made a report, which shows that the Society (financially speaking) is sound.

After considerable discussion it was determined, on motion of P. A. Jewell, of Wabashaw county, to postpone the election of the officers of the Society until the annual Winter meeting.

## DISCUSSION ON FRUIT PROSPECTS IN MINNESOTA.

The Society then took up the question of the probability of the success of the cultivation of apples and other fruit in the State, with a request that Col. John H. Stevens, Editor of the *Farmers' Union*, Minneapolis, report the same.

P. A. Jewell, nurseryman, said, in substance, that in his travels through Southern Minnesota last Spring, he had observed with regret that a number of varieties of standard trees had been injured by the bark being bursted just above the surface of the ground. He was pleased to observe, however, that the Duchess of Oldenburg and Red Astrachan were free from injuries of this character.

His confidence in the success of the cultivation of the apple was not shaken by these injuries, as last season was an unusual one. At the suggestion of Mr. Secretary Harkness, Mr. Jewell observed further that forest trees received the same injury from the early frost that apple trees did. In this suggestion the Society unanimously endorsed him.

S. Bates, of Winona county, said that he, too, lost some fine trees out of his orchard and nursery last season, by the bark bursting, but noticed where he packed the earth solid around the trees they received no injury. He expressed great hopes in the future in regard to the fruit prospects of Minnesota. He spoke highly of the Ben Davis apple and other varieties.

Col. D. A. Robertson, Professor of Agriculture in the State University, in reply to a call upon him for information in regard to the success and prospects of apple growing in the country above Ramsey and Hennepin counties, said that the apple question was settled in that region of the State, that a number of old varieties, including the Duchess of Oldenburg, Fameuse, Plum Cider, Fall Stripe or Saxton, Haps, Sweet Pear, and Tetoffskie, have proved to be adapted to the climate, requiring there only the like soils and culture that are necessary to success in more southern latitudes. He also named a number of new seedlings of great merit, and that there were several hundreds of new seedlings in the State, out of which a selection should be made and named by the society, and recommended for trial and propagation. He was satisfied that a number of new and valuable varieties, Summer, Fall, and Winter, would thus be demonstrated and made known to the pomological world, which would secure a high rank to Minnesota as an apple producing State—that in the originating of new varieties of merit our progress had been most satisfactory and indeed wonderful.

After very thorough investigation into the origin of the hardiest and best seedling apple trees of the State, he had ascertained that they were all from the seed of standard varieties of apples of the most northern apple-growing regions of this country—from Maine, New Hampshire, Vermont and northern New York chiefly, which he explained was in accordance with the ascertained results of scientific research into the causes of plant variation, which proved that better new varieties could be produced from seed obtained from distant regions of similar climates. For this purpose he had procured, on behalf of the

State University, seeds of the best apples of Russia, for distribution in this State, and production of new seedlings. Col. R. gave the scientific explanation of the cause of the bark splitting off our apple trees—not peculiar to Minnesota—which occurred near the culm of the trees, close to the ground. The cause was the action of alternate extremes of temperature, freezing and thawing, or sudden changes in the Autumn, when freezing weather suddenly followed very warm weather. The sap cells were then full and from sudden freezing and thawing the partition between the sap and the air cells were torn, disorganized. This breaking up of tissues produced an effect analogous to the sudden thawing and freezing of the animal organization, causing mortification. Drainage from the surface and wrapping with paper early in September, before freezing weather, would obviate this bark bursting, as he had proven in his own orchard and observed elsewhere.

Mr. A. S. Shearn of the Northwestern Nursery, Rockford, Ill., being called upon, said that it was idle to say that the apple would not thrive in Minnesota. Those on exhibition to-day at the State Fair—the product of this State, were the finest specimens of the different varieties on exhibition he ever saw.

In regard to the bark bursting near the surface, it was a common event all through the West. He had observed it not only in Illinois, but in Wisconsin and Iowa, as well as in Minnesota. Of course, this was confined to unusual winters.

D. W. Humphrey of Rice county, thought that the apple question was pretty well settled in this State, but he wanted to say, that in addition to the different varieties recommended by the society, he found around Faribault that the Saxton or Fall Stripe, was doing very well.

Mr. Secretary Harkness, of Faribault, called the attention of the society to the importance of a remark made by Mr. Jewell about top working, or in other words, the grafting or budding of the semi-hardy varieties on those of the hardy kinds. After a very free discussion, this project was endorsed by every member of the society.

Hon. Chas. Hoag, of Hennepin county, had visited every school district in that county, and it afforded him much pleasure to bear testimony to the bright prospects of the raising of apples in that section of the State. He saw several orchards that were full of choice fruit.

The President being called upon, gave a flattering account of the fruit prospects in his neighborhood, and especially in his own grounds. In answer to a question by Col. Robertson, he said that he knew of several Flemish Beauty pears and other varieties that were bearing and appeared hardy. He had no doubt of the ultimate success of the pear in the State. He had lost last Winter a few apple trees, but that was common in all latitudes. He enjoined upon all the necessity of pruning trees—if at all—in June. In reference to winter killing, he was satisfied the injury was done in October. He had a hickory tree killed in his garden, last winter, from the same cause.

He thought pear trees should be set over a trench filled with small stones, which should be properly drained.

New seedlings were of great moment. He continued his remarks in an interesting manner.

It was then voted that the President should collect and send samples of southern Minnesota apples to the American Institute, New York.

Also, a committee consisting of Col. D. A. Robertson, of the State University, and Col. John H. Stevens, of Minneapolis, to collect samples in Northern Minnesota, and dispose of them in the same way.

The Society then adjourned to meet in Faribault early in January next.

roman

see page 52



Rochester Oct. 4, 1867  
 The second Annual meeting of the Minn.  
 Fruit Growers Association was held at Rochester  
 Minn. Oct. 4, 1867. Vice President Chas. Hoag  
 in the chair. J. W. Harkness was appointed  
 Secretary pro tem.

The Association proceeded to the election  
 of Officers, which resulted as follows:

President	A. W. McKinstry	Faribault
Vice Pres.	Chas. Hoag	Minneapolis
Secretary	J. W. Harkness	Faribault
Cor. Sec.	J. W. Harkness	Faribault
Treasurer	John R. Kepner	Little Valley
Executive Committee.		
	E. C. Cross	Rochester
	J. W. Rollins	Elgin
	Hyman Elliott	Minneapolis
	J. S. Harris	La Crosse
	R. A. Mott	Faribault

On motion of J. W. Harkness the following was adopted  
 Resolved, that we extend a cordial invitation  
 to all persons feeling an interest in the  
 success of fruit growing in Minnesota  
 to cooperate with us by joining our  
 association.

On motion it was

Resolved that the Secretary be  
 instructed to correspond with  
 Col. Robertson, asking him for a report  
 with a view to its publication.

The remainder of the meeting was  
 occupied with a discussion of  
 various subjects connected with  
 fruit growing.

Adjourned sine die.

J. W. Harkness  
 Sec. pro tem.

# PROCEEDINGS

OF THE

## Minnesota Fruit Growers' Convention,

HELD AT FARIBAULT.

Jan. 30 and 31, 1868.

A Convention of the members of  
 the Minnesota State Fruit Growers'  
 Association, and others interested  
 in Fruit Growing, was held in Faribault,  
 pursuant to call, Jan. 30, 1868.

The Convention was called to order  
 by the President, A. W. McKinstry, who addressed the Convention as follows:

GENTLEMEN: It gives me pleasure to welcome you as members of the Fruit Growers' Convention. Your presence, representing as you do widely separated portions of the State, evinces the general interest which prevails upon this subject, and is auspicious for the future advancement of this interest. It could scarcely have been anticipated, however, that our youthful society would be as strong as similar organizations in other States, for it is to be remembered that we have peculiar obstacles to encounter. In other States no question exists as to the feasibility of raising fruit, the main points for consideration being that of what selection of varieties and methods of cultivation to secure in this branch of industry the highest success. Here, on the contrary, we have to encounter at the outset, the strongest doubts as to whether fruit, or apples at least, which constitute the great essential of a fruit country, can be raised at all; or, at the best, can be produced in sufficient quantity to justify our claim to be a fruit growing State. And this doubt is expressed, not by theorists merely, but in numerous instances by practical men, who have devoted time and means to experiments in this direction. Hence, until this point is definitely settled in the popular mind, it will be in vain to expect a high degree of efficiency and prosperity in the Association. Yet the existence of this doubt renders all the more necessary the existence of a State Fruit Growers' Association, for the bringing together of men engaged in experimenting in this branch of industry from different sections of the State, through whose intercourse attended with a mutual comparison of experience which has been acquired under widely differing circumstances of soil, and methods of cultivation, we can look for an authoritative solution of this question. If there is any interest in our State which peculiarly requires the advantages arising from mutual co-operation and the most thorough interchange of the results of experience and observation, it is the interest of the Nurseryman and Fruit Grower.

One of the most important of controverted points at the present time, and one which, I trust, may receive some elucidation from your deliberations to-day, is with regard to the feasibility of the attempt to produce hardy and desirable varieties of seedlings. There are some, whose

unfavorable experience in attempts to raise hardy trees from nursery stock or the seed, have led them to assume that the only prospect of making an apple producing State of Minnesota exists in the project of sending to Northern Europe or the Asiatic interior for selections from the hardy varieties which it is alleged are successfully grown there.

The fact that the climate of Minnesota is exceptional adds considerable force to this suggestion. We are situated on the most elevated table land of the North American Continent, without the advantage of the proximity of the great bodies of water which temper the air of most of our northern sister States. The range of the thermometer is great, the extreme variation at one post of observation in the State during the past year, having been 139°, and the variation between the winter and summer mean having been 54°. Another peculiarity of our atmosphere arising from the same cause, is its extreme dryness, which experience has shown to be an unfavorable element as respects the growth of fruit. Yet that these facts do not controvert the position that apples can be raised in Minnesota is demonstrated by the truth that in central Russia, which presents a parallel in point of climatic peculiarities, apples are successfully raised, and of excellent quality. It is probable that they have succeeded there only by reason of a series of trials extending through successive generations, during which out of the hosts of varieties which have proved failures, a few hardy kinds have survived. From the experience of some of our Nurserymen and amateurs there is reason to infer that success in this direction will reward our efforts here; yet, considering the length of time that is required to test not only the thorough hardiness but the quality of the fruit of a seedling apple tree—time we can ill afford to spare from the brief span of our years—it may well be questioned whether it would not be expedient, while relaxing no exertion in the raising of seedlings here, to secure from Northern Europe the introduction of the varieties which are the most approved there.

And in this connection, a few words may be appropriate with reference to the value of the fruit raising interest to this State as a matter of political economy. I have not the statistics to show what is the aggregate amount of fruit and nursery products now imported into our State, but a few facts under this head will serve to furnish an approximate idea of the extent of the annual drain upon the resources of our State growing out of our failure to produce fruit.

There were received at the single station of Faribault last fall, 1727 barrels of green apples, and about 400 barrels of dried fruit, the aggregate value of which would be about \$15,000. Adding to this aggregate the amount received at Dundas and Northfield, and the further amount of the orders filled by nursery agents for trees and stock from abroad, and we shall find the amount annually drawn from Rice county alone, will fall little, if any, short of \$25,000. The statistics of the importations of St. Paul, the past year, show that 20,987 barrels of green, and 3,821 of dried fruits were imported, the aggregate value

of which would probably reach \$160,000. From these data we feel justified in assuming that considerable over a quarter of a million of dollars a year are drawn from the resources of our State, to supply our people with the essential articles of fruit and fruit trees, from which it will be seen that we annually use up no small proportion of the profits of the wheat crop, and that the subject of saving this amount to the pockets of our people, is one which may even well claim the august attention of our State Legislative body.

In another aspect, as we believe, our society may well claim for the advancement of its objects, some assistance from the State. The promotion of immigration has been held to be of such importance, as to have justified the appropriation of \$10,000 from the State Treasury the past year, for the purpose of securing a share of the influx from the over-populated countries of Europe. But is it not readily apparent that if the fact can be established and authoritatively proclaimed, that Minnesota is an apple-producing State, and that any one of ten or fifteen hardy varieties of fall and winter fruit may be planted with as much certainty of a successful result as in Western New York or Michigan, that we have established an inducement for immigration far surpassing anything the State can offer through immigration agents? And the class which would thus be tempted to take up their homes upon our broad and fertile prairies, would comprise the best element of our country, being the intelligent, hardy and enterprising farmers of moderate means, from the Eastern and Middle States, who are now held back or turned to Missouri or Southern Iowa by the fear that in coming to Minnesota they must forego the privileges of fruit.

I would suggest that the experience of practical fruit culturists has already been sufficient in the State to warrant the commencement of a list of hardy varieties which shall furnish a basis for additions as future experience shall warrant. Such a list would prove of value to those embarking in the cultivation of fruit, and save them from the waste of time and money into which they might be drawn by unreliable nursery agents.

I need refer but briefly to the question of small fruits, which—the point being conceded that they can be raised in abundance,—will elicit from our Association only discussion as to the best varieties and methods of cultivation. Yet there is a great deficiency of knowledge on these points, and if this Convention can be the means of stimulating the interest of the masses, and turning general attention to the subject, it will confer great and lasting benefits upon the State. To one point under this head, however, it has seemed to me well that the particular attention of the Convention should be invoked. I refer to the cultivation of Cranberries. The facts that this fruit is indigenous to our soil, that it is capable of preservation and transportation to a great distance, that the demand at home is not only large and increasing, but that it always finds a ready sale in the eastern markets, should stimulate us to especial effort to enhance the value of this branch of fruit growing. The Cranberry raisers of New Jersey find the fruit so profitable as to justify the expenditure of



from \$500 to \$1,000 per acre in the preparation of their grounds for the business. It may well be questioned whether the marshes of Minnesota, with a much less expenditure, may not be rendered equally productive and remunerative. Would it not be well to take measures for the offer of a premium for the promotion of Cranberry cultivation in our State. It has seemed to me advisable to extend the sphere of our Society's operations, by rendering it not alone a Fruit Grower's but a Horticultural Society. It is eminently appropriate that the encouragement of the culture of Flowers, Shrubbery, and the products of the garden, should be combined with that of Fruit, and I would suggest whether it would not be advisable to change the original plan of our Society by converting it into a Horticultural Association.

Gentlemen, I have thus touched upon some of the points which it seems to me may be profitably considered by our Convention to-day. I have no doubt that your practical experience will enable you to elaborate and perfect plans looking to the advancement of the fruit-growing interest in the State, in a manner much better than I could suggest, and I will therefore trespass upon your patience no longer.

At the conclusion of the President's address, the minutes of the last annual meeting of the Association at Rochester, were read by the Recording Secretary, Wm. Wheeler.

On motion of R. A. Mott, a Committee of three was chosen by the Convention, charged with the duty of listening to the discussions, and reporting near the close of the session such resolutions as would seem to embody the views of the Convention upon the various questions discussed. The Committee consisted of Messrs. A. A. Hubbard, of Medford, R. A. Mott and Wm. Wheeler, of Faribault.

J. W. Harkness, Corresponding Secretary, read communications which he had received from Messrs. R. Kepner, Little Valley; J. G. Harris, La Crescent; Samuel Bates, Stockton; D. A. Robertson, St. Paul, and B. L. Day, Hastings, expressing regret that they could not be present, and making valuable suggestions with respect to the fruit-growing interest.

On motion of R. A. Mott the President was empowered to arrange an order of discussion for the various topics.

J. W. Harkness was elected Treasurer, *pro tem*.

On motion of Mr. Hamilton a Committee of three was appointed by the Chair, to report a revised Constitution at the next annual meeting. The Committee consisted of Messrs. Hamilton of Winona, Harkness of Faribault, and Elliott of Minneapolis.

The President announced the following programme for discussion, with time to be devoted to each proposition: 1st, The question of receiving aid from the Legislature, and the propriety of sending to Europe for hardy stocks and seeds, 30 minutes. 2d, The holding of a State Fruit Exhibition, 15 minutes. 3d, Best methods of securing organiza-

tion of Branch Fruit Associations, and promoting an interest in fruit-growing among the people, 15 minutes. 4th, Best varieties of apples, 30 minutes. 5th, Methods of cultivation, 30 minutes. 6th, Grapes, 30 minutes.

The discussion of the first question was opened by R. A. Mott, Esq. He thought something should be done for the fruit-growing interest of the State. He read an extract from Col. Robertson's address before the Society last year, with reference to the practicability of securing hardy trees from Sweden and Russia. He thought Col. R. was right. The experience of our fruit growers in attempting to make native varieties succeed had been very unfavorable. Judge Berry had estimated that he had spent enough time and money in experimenting in fruit trees to have furnished himself with all the apples his family would need for twenty-five years. He had set out trees and had better experience than the rest, for he had produced one little, hard apple. Gentlemen from Winona, Wabasha and La Crescent had sent specimens of fruit they had raised; but the proximity of their river renders their location more favorable than Faribault. It was to be questioned whether these varieties would succeed in all sections of the State and under all circumstances. It seemed to Mr. M. that the people of Minnesota feel interest enough in this subject to bear the expense of sending to Europe to import hardy kinds. Our State last year expended \$10,000 to promote immigration, most of which was spent in printing a pamphlet to tell about Minnesota. Now let the State do something for this object. We should send some gentleman competent to decide upon character of soil, similarity of climate, and adaptation of varieties to our soil.

Mr. Hubbard called for the reading of Col. Robertson's address. It was read by the Secretary.

Mr. Harkness thought it well to look to home for hardy varieties. If he had hopes of Legislative aid, would favor the plan of sending abroad; yet he thought that good varieties of Fall and Winter apples could be raised here. He had been through different parts of the State and knew that hundreds of bushels of apples had been raised last year. He thought the object of this society was to encourage raising our native fruits, not discourage it. There are five or six varieties which can be raised in various localities. Some gentlemen had said fruit could not be raised outside of the bluffs. Fruit is raised in the south part of Goodhue Co., in Waseca, in Blue Earth, in Rice and other counties. He would favor asking the Legislature to appropriate several hundred dollars to be expended in premiums for the encouragement of raising seedling varieties. There are seedlings in several parts of the State which are valuable and would probably be brought into notice by this course.

Mr. Hamilton, of Winona, said that his experience warranted the belief that there are kinds in Wisconsin and Minnesota which are hardy. He had seen apples in some soils near the river prove a failure, while others do well on the same farm. It seemed to him that we should give a chance to native varieties. Among those which he considered suited to our climate he

would mention the Duchess of Oldenburg, Fameuse, Red Astrachan, Perry Russet, Tetofsky and the Crabs, which give a variety of Fall and Winter fruit. The Fameuse keeps till the middle of January; the Perry Russet till June. With these and the Duchess of Oldenburg for a summer apple, we have a variety which will afford fruit the year round. When we go through the country how few of our farmers do we see who have the small fruits. If the Association would encourage the growth of these it would accomplish a good deal.

Mr. Dorrance, of East Prairie, Rice Co., said that nine years ago last March he sent for 900 apple trees. The Nurseryman sent him 2,000. He could not give the names for he was not acquainted with varieties. He had kept cattle, sheep and hogs out of his orchard; had lived in southern Wisconsin and set out trees three times before he could make them live: he did not consider his selection of fruit good; he had Red and Green Sweetings; could recommend the Green Sweeting as hardy; Pippins are not so. He had one bearing tree which came labeled Seek-no-farther; supposed it to be such. Some of his trees bore in three and some in four years. His soil was a sandy clay. He had 64 bearing trees; did not think any tree grower should be discouraged; he had heard reports in circulation every year that Dorrance would not raise any more apples; but he knows no good reason for them. He would not trim trees; trimming kills them.

Mr. Hubbard referred to the statement of Mr. Dorrance that he had a clay soil. According to his experience that was the best soil, but unfortunately for Minnesota we have little of it. He had resided in Wisconsin for many years, and found that the best orchards were on clay soils or heavy soils. He had been back to Wisconsin four times, and had always been astonished to find their soils so poor compared with ours. He should be astonished if he had not lived there to find that men could get a living on such poor soils. They raise a number of kinds, but few comparatively, are perfectly hardy. The eastern parts of Minnesota are like Wisconsin, and better adapted to raise apple trees than this section. Ninety-nine one-hundredths here are failing in their efforts to raise apples. Mr. H. spoke of the greater dryness of our climate than in Wisconsin and Iowa. As to varieties he had had the best success with Duchess of Oldenburg. Had brought a number of varieties from Wisconsin—Fameuse, Red Astrachan, Talman Sweet, Red Romanite and others, and set them out in Faribault. They killed down: had turned barrels over them, including Fameuse, Talman Sweet and Canada Red, and they killed under the barrels. Duchess of Oldenburg was not injured and Red Astrachan stood next best. He thought it would be money well expended to send abroad. Would not discourage raising seedlings, but he did not expect to live long enough to see such varieties as Mr. Harkness had spoken of raised on this soil. They might grow on Mr. Dorrance's land. A Mr. Allen in Waseca Co. is suc-

cessful in raising seedlings on a stiff clay soil much like Milwaukee brick. Apples might be grown in bluffy regions along the Mississippi, but we cannot succeed here, and might as well face the music. If we could have an appropriation of from \$5,000 to \$10,000 to send a man to Europe, every man in the State might soon have an orchard. If we had got to raise seedlings to stock the State, he didn't want to eat any apples from them. He had a relative on the railroad half-way between Moscow and St. Petersburg, who writes that there is an abundance of fruit there.

Mr. Stuart thought we could get cions at less expense by sending to the Agricultural department at Washington. He had tried 150 varieties of native fruit, and could recommend none for general cultivation except the Duchess and Siberian and Hyslop Crabs.

Mr. Mott had no confidence in the Agricultural Department. Mr. Dorrance's orchard was peculiarly situated. It is surrounded north, east and west with trees, with large sloughs in the vicinity which may have had an influence on his trees. Not every man can get such a farm.

The question of holding a State Fruit Exhibition was then taken up and discussed.

Messrs. Mott and Harkness favored the holding of such an exhibition.

Mr. Stuart proposed to appoint a Committee for the purpose of examining fruits which might be sent to them and reporting.

Mr. Hubbard doubted whether enough interest would be felt to secure an attendance of people at an exhibition of small fruits. If an exhibition was held, it should be at the time of the State Fair.

On motion a committee consisting of Messrs. Elliott, Hubbard and Stewart was appointed to make arrangements with the Agricultural Committee for holding a Fruit Exhibition in connection with the State Fair.

The subject of the best method of interesting the people in Fruit growing was taken up.

Mr. Hamilton suggested that it would be a good plan to select some one paper to publish articles to be written by members of the Association.

Mr. Stewart suggested that the *Farmers' Union* published at Minneapolis would be a suitable medium, being an agricultural paper and having a large circulation.

Mr. Mott thought it would be difficult to organize efficient branch associations. Faribault was a good town, but it was difficult to keep up an organization here. Thought the best plan was to invite all persons to join our State Association.

Mr. Harkness concurred in this view.

Mr. Wheeler proposed to instruct the Committee on Resolutions to prepare a series of questions bearing upon Fruit Growing to be distributed with a request for information.

The question as to the best varieties of apples and mode of treatment was then taken up.

Mr. Hamilton gave his method. He would not set trees over three years old; would take them up in the spring if the nursery was near; if not, in the fall; he would secure

all the root possible. If the ground was not too wet would mulch; would only prune in June and prune but little then; would mulch his trees some time in the winter and leave till spring. The great cause of the killing of the trees is that the sap starts too soon; the sap is frozen and the bark starts off. If mulched the sap is kept back; the principle is the same as in burying grape vines. A great many advocate raising a hoed crop in the orchard. His impressions were not favorable to this. Some of the best orchards in the State were seeded to clover. A good nurseryman never cultivates his trees except to keep the ground clean about them. He would let trees grow up like bushes, and head within a foot of the ground. Those apples [referring to some fine specimens of the Perry Russet and Northern Spy upon the table] were raised by Mr. C. P. Buck, of Winona, than whom no one was more careless as regarded the cultivation of his garden. They hung as full as any trees he had seen in Michigan, and were as thrifty, and smooth in their bark. Mr. Hubbard would take issue as to the cultivation of an orchard. He thought grass poison to an orchard tree. Did not object to mulching but one could not go far enough. With trees of a moderate age in an orchard, the roots interlock and one would have to mulch the whole orchard. In Fond du Lac Co., Wis., his father seeded down his orchard, and the result was that he didn't raise his own apples, when he should have had a hundred bushels to spare. The trees grew lousy; many died and the others made no growth. Finally plowed it up and manured it, and now raises fine crops. Trees won't bear pruning as well in the west as in the east. In New York one could cut off limbs as large as his leg with impunity. In Wisconsin trees are safely trimmed from mid-winter to last of June. Trees should be headed low so as to shade the ground from the sun. Our soil is black and consequently too warm. Does not think a tree makes good wood on such a soil. Our wood grows differently from Western New York. Our oak burns green, but oak there cannot be burned green without other wood with it. In New York trees don't bear as young, but live longer.

Mr. Hamilton spoke of the plan of the Canadian of digging a large hole and putting a large, flat stone in the bottom. These were all hardy. Mr. Harkness believed from one-half to two-thirds of the trees were killed by too much cultivation. Would cultivate no tree later than July. Thought disease often arose from pruning in all seasons of the year.

Adjournd till 7 P. M.

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Adjournd till 7 P. M.

Convenion re-assembled at 7 o'clock. The subject of this morning was resumed.

Mr. Brand considered that the Red Astrachan, Talman's Sweet, Fameuse and Duchess of Oldenburg were the best varieties. Considered Red Astrachan as hardy as the Duchess; perhaps a little hardier in certain situations; in some might not be as hardy. Had planted 1,000 Du chess stocks and they had win-



ter killed. He regarded the Red Astrachan as the hardiest one could cultivate. Would place stones under trees, and the soil, whether wet or dry should be three feet deep. Advised making deep drains under the roots 3 to 3½ feet deep, and filling in small stones. This serves for drainage.

On motion, the President appointed a committee, consisting of Messrs. Harkness, Elliott, Hamilton and Hubbard, to report a list of varieties of Apples suitable for cultivation in Minnesota.

On motion of Mr. Mott, the subject of small fruits was then taken up in the following order: 1st. Cranberries; 2d. Raspberries; 3d. other small fruits.

Mr. Mott urged the cultivation of the Cranberry in consequence of its certainty, its great productiveness, and adaptation to transportation. He read a report of the cultivation in New Jersey from the Patent Office Report of 1865.

Mr. Elliott read from Fuller's Fruit Cultivator as to the habits of the Cranberry. He thought the report of 1,300 bushels to the acre in the Patent Office Report absurd, as it would make the fruit 1½ inches deep all over the surface. Thought 175 to 200 bushels to the acre would be an average. Ground should be flowed to keep off insects.

Mr. Frink had seen the Cranberry crop gathered in Shieldsville. The marshes had no sand, and the Cranberries did not grow where the ground was not overflowed.

The cultivation of Raspberries was discussed.

Mr. Mott had tried the Doolittle Black Cap, and knew it to be a fine berry. Thinks that in this State we don't need to import varieties. The wild variety is as good as the Doolittle after two or three years cultivation. They should be planted so as to be partially shaded. After fruiting cut out old canes. Hills should be three feet apart, rows six feet apart; three to five canes to the hill. As the branches reach out cut off the ends; keep the ground thoroughly forked up. His berries lasted three weeks last year, and no fruit in his garden afforded him so much pleasure. Had cultivated them nine years, and they had constantly grown better.

Mr. Stewart said that there were many varieties among the wild as well as the tame raspberries. Thought if Mr. Mott had a kind as good as the Doolittle Black Cap, he had something quite valuable.

Mr. Mott said that the variety he had was not common, and people were accustomed to come to the place where he had procured them for their berries, on account of their being better than the usual wild kind.

Mr. Jackson expressed his preference to Doolittle Black Cap to all others, two to one.

Messrs. Jewell and Stewart spoke well of the Philadelphia Raspberry. The question of strawberries was taken up.

Mr. Frink had set out Hooker's, Hovey's and Wilson's three years ago. Could not discriminate between them now, but the berries now produced on his vines are better than either of the three originals.

A discussion ensued, Messrs. Mott, Hamilton, Jewell and Wood participating, as to the probability of the berries becoming hybridized. The balance of testimony appeared to be that they would not. Messrs. Elliot and Stewart endorsed the Wilson's Albany as the best market berry for Minnesota.

Mr. Hubbard spoke of currants. They are a hardy fruit and too apt to be neglected. Currants should be thinned every year, the new shoots cut away, the old ones left. Would leave one or two new sprouts to a hill. The fruit is much larger when cultivated.

Mr. Stewart planted three feet apart each way; let them stool out and cultivated with a horse plow. As the wood gets old and decayed, cut it out.

Mr. Elliott spoke well of mulching, to keep the ground moist during drouths. Thought it a correct practice to thin out, leaving but two or three new shoots, and also cut away a part of old stocks every year. An acre of currants would produce from \$200 to \$250 per year.

Mr. Wood was surprised not to have heard of a different manner of pruning. His practice was to cut the top from every sprout, from two to four inches. Covered the ground with chip manure, and always had good crops. Mr. Dawes from whom he had his system, always trims low, and lets them spread out near the roots.

Mr. Elliott mentioned that the currant worm troubled them some at Minneapolis. He was accustomed to shake them off the bushes on a cloth and kill them.

Mr. Hubbard wished to hear about plums. Inquired concerning Miner's Seedling.

Mr. Jewell said it was extensively planted in Grant County, Wisconsin. Trees grew very large; fruit was not entirely exempt from curculio; thinks it a wild plum related to the Chicasaw variety. Believes no other variety of cultivated plum will be able to stand our climate.

Mr. Mott spoke on behalf of our wild plum. Would not discourage planting cultivated varieties, but by selecting the best wild varieties, might secure an abundance of excellent fruit while experimenting with the others.

Mr. Hamilton recommended the wild plum for a wind break. Such a hedge was better than willow or evergreens, as it would bear fruit, as well as keep off the wind.

Mr. Elliott spoke of a gentleman near Fort Snelling, who had excellent success in mulching. Our native plums are very fine. One variety from the grounds of Mr. Wm. Harrison, was taken to the St. Louis Fair, and pronounced superior to the Miner Plums. Mr. E. makes a practice of grafting from the best trees.

Adjourned to Friday morning at 9 o'clock.

#### SECOND DAY.

FRIDAY MORNING, Jan 21.

Convention was called to order by the President. In the absence of the regular Secretary H. C. Whitney was elected Secretary, *pro tem*.

The minutes of the preceding day's session were read, corrected and approved.

The Committee on Resolutions reported as follows:

*Resolved*, That the Corresponding Secretary be instructed to send out a series of questions to the various Fruit Growers of

the State, for the purpose of eliciting information for the use of the Association, and to present a compiled report of such information at the next annual meeting.

*Resolved*, That the Legislature be asked to appropriate a sum sufficient to send one or more agents to Europe to procure varieties of fruits adapted to our soil and climate; also to appropriate the sum of \$500 for the purpose of paying premiums on Minnesota grown fruits.

*Resolved*, That while we would by no means discourage experiments for the introduction and cultivation of all varieties of domestic fruit, we would earnestly urge upon all Fruit Growers in the State the importance of further efforts for the careful testing and improvement of the fruits indigenous to our soil, especially Plums, Cranberries, Raspberries and Blackberries.

On motion, report was received and laid on the table, and the committee continued.

The Committee on the varieties of fruit submitted the following report:

In recommending a list of Fruits for general cultivation your committee find it very difficult to arrange a list of apples that are adapted to all sections of the State. While we would not wish to misguide any in recommending a list of apples that are not all perfectly hardy in all sections, we think that in justice to the more favored localities we should put on that list a few varieties that are worthy of further trial. There are two varieties that are perfectly hardy, worked on hardy stocks, which we would recommend for general cultivation in all soils, viz.: DUCKNESS OR OLDENBURG and TETOSKY.

We would further recommend for sheltered localities with heavy soils, and in close proximity to water, the GOLDEN RUSETT TALMAN SWEET, FAMEUSE, RED ASTACHAN, PERRY RUSSETT, HASS, BEN DAVIS and NORTHERN SPY.

All of which is respectfully submitted.  
J. W. HARKNESS,  
WYMAN ELLIOTT,  
A. A. HUBBARD,  
A. G. HAMILTON.

Mr. Staples, of Wisconsin, had tried growing apples but had met little success except with the crabs. The Tetosky had been the hardiest and most thrifty of his own trees. So far as he knew it had done the best in that place.

Mr. Hubbard objected to the recommendation of the Northern Spy. It was not a first rate hardy apple but might be raised in some localities.

Mr. Jewell stated that the Tetosky is of Russian origin, but not a crab. One of its peculiarities is its very large leaves. It drops its leaves by the 15th or 20th of October, earlier than any other variety, and matures its wood very early. It is as hardy as Siberian crab, and he had no doubt of its entire success in this State. Its roots are peculiar, being long and fibrous less than roots of other trees. It makes a moderate growth in the nursery.

Mr. Harkness objected to the Tetosky on the ground of its not having had a sufficient trial. He had differed with the majority of the committee in assigning it to the position it occupied in their report.

Mr. Hamilton had corresponded with parties in Wisconsin who have had trees bearing for five years. It is not called a crab. Thought it could be recommended for this State. Localities make a great difference, as Winona and other counties can raise fruit while others cannot.

Mr. Jewell explained the origin of the Tetosky. It was obtained of a Mr. Gifford near Milwaukee. Mr. Gould gave it the name of Russian Crab. Mentioned places in Western Wisconsin where it had succeeded well, but thought it had not been thoroughly tested in the worst localities of the State.

The discussion was continued by Messrs. Humphrey, Elliott, Hamilton, Stewart and Mott, most of them being favorable to the endorsement of the Tetosky.

The report of the Committee was finally adopted with the exception that the words "in close proximity to any considerable body of water," were inserted, and NORTHERN SPY stricken from the list.

Mr. Mott offered the following resolution, which was adopted:

*Resolved*, That the Executive Committee be authorized to engage one or more persons to address the Society upon subjects connected with Fruit Growing, at its next annual meeting.

On motion of Mr. Humphrey, the subject of Grapes was taken up.

Mr. Stewart recommended Clinton and Concord.

Mr. Humphrey related the experience of a gentleman from Owatonna. His vines had been set three years. He had eight kinds, including Hartford Prolific, Concord, Clinton, Isabella and Delaware. He had concluded it was no use trying to succeed here, except with Clinton and Concord. He pursued the German method of pruning, which was to cut off 1st year's growth within eight inches of the ground; trained to a trellis 3 feet high; every year after 1st cut back to within two buds of place of last year's cutting.

Mr. Hamilton said that Dr. Ford of Winona, had the best success with Hartford Prolific, Concord, Clinton and Delaware. The Delaware was the best table grape, and had been grown with best success. Thinks all these vines should be laid down and covered. The Black Cluster Grape is raised in Winona. It is a very hardy grape, and never needs covering. Has been exposed to heavy winds and had the leaves all cut from the vines, but bore grapes. The man who owns the original vine raises six or eight bushels from his trellis. The grape is as large as the Isabella. It originally came from New York, under the name of Black Cluster, but that is probably not its true name.

Mr. Jewell confirmed the favorable reports of this vine; there was no question of its hardiness in that locality. Thought the success of the Delaware depended largely on the original vigor of the plants. The vitality of many vines were injured by the attempts of nurserymen to propagate too fast. The vines should be propagated by layers rather than eyes or cuttings. A straw covering will answer for Delaware and Concord. Isabella, Iona and Adirondac had not succeeded well as far as known. Rogers' Hybrids have done well.

Adjourned to 1½ o'clock, P. M.

#### AFTERNOON SESSION.

Convention was called to order by the President.

Mr. Mott explained the law regulating the measuring of fruit.

Mr. Elliott said custom made law, and it had become customary to use wine measure in selling small fruits. He had noticed that the hucksters were accustomed in buying small fruits to use a round tin measure, of the dry measure standard. If he could sell strawberries by wine instead of dry measure, he could save one quart in six.

Mr. Mott offered the following resolution, which was adopted:

*Resolved*, That the Legislature be requested to regulate the measurement of small fruits.

Mr. Jewell gave a description of the Soulard Crab. It originated with an old gentleman named Soulard. Was a hybrid between the



List of Members present at  
the Annual Meeting at Minneapolis - Sept. 30, 1868.

Chas. L. Ames	St. Paul.
H. Lowater	Goodhue.
Geo. C. Chambers	Watertown
D. A. Robertson	St. Paul.
L. M. Ford	"
J. L. Gimes	Minneapolis
J. S. Harris	La Crescent.
Chas. P. Cook	Garden City.
Peter M. Gideon	Excelsior
L. A. Jewell	Rochester
Mrs. C. A. Jewell	"
A. W. McKinstry	Faribault
Wm. Wheeler	"
J. W. Harkness	"
Datus Day	Farmington
Thomas Moulton	St. Anthony
J. B. Fleisher	Minneapolis
Wyman Elliott	"
A. Stewart	Richfield
J. A. Stevens	Minneapolis
M. J. Abbott	Medford
S. Bates	Minneapolis
C. M. Loring	"
Charles Snyder	St. Peter
S. Bates	Stockton
J. S. Shearman	Rockford Ill.
Charles Andrews	Marquette Ill.

Proceedings of Minnesota Fruit-Growers Association.

The Minnesota Fruit Growers' Association held its annual meeting at Minneapolis, on Wednesday evening, September 30th, 1868.

The President, A. W. McKinstry, of Faribault, upon taking the Chair made some very happy remarks, congratulating the Association upon its prosperity, and upon the increased indications of success in fruit growing in Minnesota.

Col. D. A. Robertson, of St. Paul, addressed the meeting at some length upon the cultivation of fruits in high latitudes. His remarks were full of interest to the Association; abounding as they did in facts necessary to the successful growing of apples in Minnesota. A copy of the address was requested for publication.

Mr. J. W. Harkness, of Faribault, Corresponding Secretary, made a report embodying the experience of quite a number of successful fruit growers in the State, in reference to varieties, soil, culture, shelter, &c. The principal points brought out in the report were: 1st, Hardy kinds; recommending Duchess of Oldenberg and Haas as hardy. 2d, Cultivation of ground among trees. 3d, Preference for clay soil. 4th, Shelter from winds. 5th, Heavy mulching.

On motion of Col. Robertson, the report was received and ordered to be placed upon the record.

A motion to adopt the report as the sense of the meeting, started quite a discussion, which turned chiefly upon the varieties recommended.

Mr. L. M. Ford was not satisfied with the hardness of the Duchess. He had known it winter-killed, in several instances.

Col. Robertson thought it perfectly hardy, when properly cared for. He thought trees were often lost by improper treatment. He had lost some himself by having them pruned at the wrong season. Trees pruned in either Spring or Autumn were likely to die. He favored summer pruning, last of June the best time.

Mr. J. S. Shearman thought the Haas perfectly hardy; also, the Duchess.

Mr. Peter M. Gideon had found the Duchess stand the winter, except some trees from which he had cut cions in Autumn; trees so cut had either winter-killed or dropped their fruit the next season.

Mr. Cook, of Blue Earth, had never had the Duchess top-killed in winter.

The Association adjourned to meet on Thursday evening, Oct. 1st.

The discussion of the Corresponding Secretary's Report was resumed; speakers being limited to five minutes, and confined to the topics of soil, cultivation and mulching.

Mr. Ford thought clay soil the best; and favored cultivation and mulching.

Mr. Gideon thought clay and lime in the soil indispensable to the growth of the tree; was in favor of mulching, but didn't think cultivation of ground necessary. He had succeeded best with trees in ground sown to grass. He had trees winter-killed in ground cultivated, while those in grass land had stood well, they being heavily mulched all the year.

Mr. J. S. Harris thought clay and lime in soil necessary; also mulching. He cultivates his ground; would not allow weeds or grass to grow in his orchard, as they exhaust the ground.

Mr. Cook said he has many varieties doing well. His soil is sandy loam on clay subsoil. He cultivates the soil. Has never mulched.

Col. Robertson thought clay and lime in soil necessary. He cultivates the ground for a short distance around each tree, but has never mulched.

Mr. Stewart favored a clay soil, heavy mulching, and thorough cultivation. He told of a Mr. Allen, of Waseca, who had a seedling orchard which he had cultivated while the trees were young. They grew finely and looked healthy when they came into bearing. He then seeded his orchard down in grass and the trees immediately began to fail.

Mr. Gates has some fine Duchess trees in bearing, part of them in cultivated ground, others in clover sod. He don't see any difference in their healthiness.

Mr. Snyder, of St. Peter, said his trees on sandy land had failed, while those on clay had done well. He cultivates his ground in the early part of the season. He don't think mulching does either good or harm.

Mr. Bates, of Stockton, has had good success. He cultivates and mulches.

On motion of Col. Robertson the following resolution was adopted:

Resolved, That it is the sense of this meeting that the mulching of trees, and a soil containing an admixture of clay, are necessary to success in growing apple trees.

The subject of protection from wind was then made the order of discussion.

Col. Robertson thought protection from winds was necessary.

Mr. Ford thought protection from winds did no good. He had known trees which were protected die, while others not protected lived.

Mr. Elliott thought protection from winds absolutely necessary; as did also Mr. Andrews, Mr. Sherman, Mr. Stevens, and Mr. Snyder.

Mr. Stewart would protect from wind by evergreen hedge, and from sun by having low-headed trees.

Mr. Jewell thought protection from wind unnecessary. He had known numerous instances in which

trees protected had died, whilst others exposed to the winds had done well. He thought trees should be protected from the sun in Spring.

Mr. Bates considered a good wind-break indispensable to an orchard.

Several resolutions were offered expressive of the sense of the meeting, but none of them seeming to express it very fully, the subject of the Secretary's Report was laid over for discussion at the next meeting.

The following officers were elected for the ensuing year:

President—Chas. R. Hoag, Minneapolis.  
Vice-President—J. S. Harris, La Crescent.  
Recording Sec'y.—Wm. Wheeler, Faribault.

Corresponding Sec'y.—Truman M. Smith, St. Paul.

Treasurer—Wyman Elliott, Minneapolis.

EXECUTIVE COMMITTEE.

D. A. Robertson, St. Paul.  
H. Lowater, Goodhue.  
J. W. Harkness, Faribault.  
E. H. Kenedy.  
S. Bates, Stockton.

On motion of Col. Robertson the following resolution was adopted:

Resolved, That the Secretary be instructed to make a compiled report of the proceedings of the Association, for the past and the present year, and present the same to the Governor of the State.

The Constitution of the Association was amended by changing the name to "MINNESOTA HORTICULTURAL SOCIETY," and providing for a division of the State into districts, each of which should have a vice-president.

Col. Robertson, Chas. R. Hoag, Wyman Elliott and Truman Smith were constituted a Committee of arrangements for the next meeting of the Society.

The Secretary was ordered to have the proceedings published in the leading papers of the State.

On motion, the Society adjourned to meet in St. Paul, in January—the day to be fixed by the Executive Committee.

WM. WHEELER, Secy.



Report of Corresponding Secretary,  
read before the Fruit Growers Association  
at Minneapolis, Minn. Sept. 30.  
1868.

At the Fruit Growers' Convention, held  
at Faribault Jan. 30 & 31, 1868, the following  
resolution was adopted.

Resolved, That the Corresponding Secretary be instructed to send out a series of  
questions to the various Fruit Growers of the State, for the purpose of eliciting infor-  
mation for the use of the Association, and to present a compiled report of such infor-  
mation at the next annual meeting.

In accordance with this resolution  
following questions were prepared and  
sent out to all fruit growers whose  
names could be obtained.

- 1st.—What varieties of Apples have you planted?
- 2d.—What is the character of your soil, also subsoil? Specify whether on high  
land or in a valley, in timber or on prairie.
- 3d.—In what direction does your Orchard ground descend? If sheltered by timber,  
in what direction?
- 4th.—Is there any large body of water, (lake or river,) near you?
- 5th.—What preparation do you give the soil, and how deep do you set your trees?
- 6th.—How late in the season do you usually cultivate, and what kinds of crops do  
you raise among them?
- 7th.—Have you mulched your trees, and at what season of the year, and what with?
- 8th.—Do you ever prune, and at what season of the year?
- 9th.—In what locality or State did your trees originate?
- 10th.—Have you grown any Apples? If so, what amount, and of what varieties?
- 11th.—State your opinion as to varieties and mode of cultivation, with further re-  
marks upon any important points which in your opinion are not covered by the above  
questions.
- 12th.—If you have fruited any new Seedlings or varieties of Grafted Fruit, that you  
cannot name, will you send me a sample of the fruit in season of fruiting, and if pos-  
sible, previous to our annual meeting, which occurs on the second day of the State Fair.
- 13th.—Have you any superior varieties of native small fruits, viz: Plums, Cherries,  
Raspberries, &c., which may seem to you worthy of general introduction? If so,  
please send specimens.

At the Convention it was generally  
understood that members should  
forward the names of such <sup>persons</sup> as they  
thought would contribute the desired  
information. But with a very  
few exceptions they have not only failed  
to do so, but have failed themselves  
to send answers to those questions.



Not one twentieth of the <sup>circulairs</sup> ~~questions~~ sent out have been answered.

I have received a few very good communications; but not one hundredth part of what the importance of the subject demands: and the comparative success in various portions of the State would warrant us to expect.

The following summary presents the essential points of the communications received. Other communications than those mentioned were received, but those presented serve to give ~~the~~ the experience of the whole.

Wm L. Lincoln of Itabasha writes:

"I have planted Red Astrachan Janense, Northern Spy, Price's Sweet and Crabs. I think these and Tallman's Sweet perfectly hardy and suited to our climate. I have fruited Red Astrachan and Hyslop Crab. My grounds are a quarter of a mile from the Mississippi river, sheltered on the South and West by bluffs. Soil a sandy loam, with clay subsoil, well enriched with stable manure. I mulch trees every fall with coarse manure. Prune in Spring after trees are in blossom.



4

Have grapes. Hartford Prolific now ripe. August 30. Vines strong and healthy. I cover them in winter, with straw.

R. C. Cadz of Freeborn County: Has planted Fameuse, Golden Russet, Perry Russet, Saxon, Tallman Sweet, Bailey's Sweet, Red Astrachan Sweet Pear, Duchess Oldenburg, Price's Sweet Fall Harvest, Fall Orange, Smoke House, Peach Apple, St. Lawrence, Early Harvest & Rousseau; All these are doing well, and appear healthy and hardy. Has fruited Duchess, Oldenburg, Price's Sweet, Munson's Sweet & the Crabs.

3

Have some seedlings doing well. Early Richmond, May Duke, Early Purple & Common red cherries have done well; also Flemish Beauty Pear. -

Location - high prairie - soil sandy loam, with stiff clay subsoil. Eastern exposure, protected by artificial grove. Cultivate ground in hoed crop. Don't give late cultivation, as it induces too late a growth. Plants trees at same depth as they stood in the nursery. Has had best success with trees when well mulched in November, with manure.



(6)

John Dean of Blue Earth City has planted Duchess Oldenburg, Perry Russell, Fancuse, Red Astrachan, Gallman Sweet. These are well tested and hardy with him; he has other varieties not well tested.

His grounds are a high, undulating prairie; soil, a sandy loam, on clay subsoil; protected by an artificial grove. Gives same cultivation as for corn, ceasing about the middle of July. Late in Autumn plows dirt up to trees. Prunes in June.

(7)

J. R. Drake of Northfield has planted nearly all kinds kept by nurserymen; finds Red Astrachan, Duchess Oldenburg, Fancuse, & Perry Russell quite hardy. Has fruited a number of seedlings, some of them quite promising. Has about a dozen trees in bearing.

His ground is high prairie, sandy loam soil on clay subsoil; eastern exposure - enriched with well rotted manure. He considers cultivation necessary to success; thinks corn a good crop to raise in orchard. Lost one orchard by seeding down to grass. Mulches with manure - Prunes lightly in June.



8  
 Opm L. Wilson of Mankato  
 has succeeded in raising  
 Baldwin, Summer Pearmain, Gillyflower  
 and several kinds of winter fruit,  
 the names of which are unknown.  
 Thinks he will succeed with many  
 other kinds. His orchard is upon  
 timber land, two hundred feet  
 above the river, inclining to the  
 North and West; and sheltered  
 on the South & East by timber.  
 Soil a clay loam, mixed with  
 gravel - Clay subsoil. He thinks  
 such a soil well adapted to  
 fruit growing. He cultivates  
 the ground, growing some hoed  
 crop: preps potatoes, beans, or

9  
 some low growing <sup>crop</sup> ~~stuff~~, that  
 will not shade the trees in  
 Summer. He shades his trees in  
 Spring with boards nailed together  
 in shape of V., this protects  
 them from the scorching rays  
 of the sun. Don't think mulching  
 of any use. Prunes early in  
 Spring - Sometimes pinches tips of  
 limbs in fall to make them ripen  
 up well. Has some excellent  
 native plums; the best he has  
 ever seen anywhere -



10  
 Mr G. H. Sylvestre of Woodland  
 Chabshaw has planted many  
 varieties. Amongst ~~these~~ are  
 Sops of Wino, Saxon, Fullman  
 Sweet, Perry Russet, Harvest  
 Bough, Kirkbridge White, Red  
 Astrachan, & Duchess Oldenburg.  
 These he considers his hardiest  
 kinds. Has raised from five to  
 twenty bushels of apples a  
 year for six years. The principal  
 kinds fruited being those here named.  
 Has grown some seedlings, a few  
 of which have borne. His ground  
 is oak openings - high - with southern  
 exposure - sheltered on the North.  
 Would prefer northern ~~exposure~~

11  
 inclination, so sheltered.  
 Soil, a black loam, on clay  
 subsoil.  
 Thinks it advisable not to cultivate  
 much or late; thinks it induces  
 a quick and late growth, leaving  
 the wood not fully ripened, and  
 too full of sap to withstand a  
 severe winter. Recommends mulching  
 freely instead of cultivation. Prunes  
 at all seasons; thinks June the best.  
 Has had trees succeed well on new ground,  
 planted second season after breaking.  
 plants about six inches deep;  
 Has Flemish Beauty Pears, in  
 good ground doing well.



12

In examining this correspondence I have been struck with the great similarity of <sup>the</sup> experience of those who have succeeded in raising fruit. All have succeeded with about the same varieties; those recommended by your Convention in January. All are in favor of Cultivation early in the season; in favor of mulching, with one exception, in favor of summer pruning. High locations, with Northern exposure seem to have succeeded best. Shelter for the trees has too been an important point with all. Trees on clay subsoil seem ~~to be the most favorable for trees~~ to have succeeded

13

better than on any other. Although there are many localities where trees are doing well on the open prairie under very unfavorable circumstances. It is very gratifying to learn that there have been so many varieties fruited here that are known to be tender in Wisconsin, and are seldom raised there except by top grafting on the Siberian Crab or some other hardy stock. I cannot close this report without giving some of my views upon this subject. I think the surest road to success to be that of topgrafting on Crabs. I have the present season seen tender varieties doing



14

doing remarkably well top grafted  
on the Louisa, Siberian, & Trans.  
Crabs.

~~The fruit for winter use~~

I have no doubt, that by  
top grafting we can raise  
many varieties here, that are  
now considered tender, and  
even our hardy kinds, or those  
that succeed well in favored  
locations, as the Tannet, Red  
Astrachan, Perry Russet, & Golden  
Russet, will do much better  
top grafted on ~~hardy trees~~, Crabs,  
than they do root grafted.

The Duchess of Oldenburg is about  
the only tree that is yet known

15

in all localities.

to be perfectly reliable, root grafted.  
The Haas or Maryland Queen  
seems however to be growing in  
favor, and in my opinion, will  
be found to be as hardy as  
the Duchess—

In planting it is very im-  
portant that the soil should  
be thoroughly prepared; and  
thrown up in such a manner  
that the trees shall stand upon  
ridges. In cultivation the ground  
should be left smooth in autumn,  
with furrows between the rows  
to carry off the water. And  
it really seems that the orchard  
is of enough importance to



10  
 be entitled to the undisputed right  
 of the soil. In such case, all  
 the cultivation necessary is plowing  
 once or twice, in the early part  
 of the season, always turning  
 the soil towards the trees, but not  
 against them, afterwards harrow smooth.  
 If grass & weeds grow up late in  
 the season, mow them down and let  
 them remain on the ground.

It is my opinion that more trees  
 are killed by injudicious pruning  
 than by any other one cause. I think  
 June the most favorable time, if it  
 must be done.

Too much cannot be said upon  
 the importance of good wind-breaks.

It is to be hoped that our legislature will  
 follow the example of some of our  
 sister States and make some law  
 for the encouragement of the  
 cultivation timber. The day is  
 coming, and not far distant,  
 when to have been five years on a  
 prairie farm without having a bit  
 of timber for shelter will be a  
 reproach to any farmer.

A word here as to the best forest  
 trees to plant, and I will close.

The Soft Maple & Cottonwood are  
 easily propagated, and are good  
 protection. Other kinds might be mentioned.  
 The European Larch and Norway Spruce  
 the most valuable of all. Easily  
 transplanted and rapid growers.  
 One instance (out of many) of which  
 I will <sup>make</sup> mention of the latter kind is  
 on the grounds of R. Douglass of  
 Kaukaigan. Ill.



13 years ago the tree was transplanted  
being then One foot in height. I  
recently measured, and found  
it to be 46 inches in Circumference.  
18 inches from the ground, and at  
least 30 feet high



## State Horticultural Society.

The annual winter meeting of the State Horticultural Society convened in St. Paul on Wednesday, the 2d of February. In the absence of the President, John S. Harris, Esq., of Houston county, the Hon. R. J. Mendenhall, of Hennepin county, was elected President *pro tem.* J. W. Harkness, of Rice county, Corresponding Secretary, was elected Recording Secretary *pro tem.*

Hon. R. J. Mendenhall, Chas. M. Loring and Robt. W. Cummings were received as delegates from the Hennepin County Horticultural Society.

On motion it was ordered that the session of the present meeting be continued for two days.

Ordered, That J. W. Harkness and Col. D. A. Robertson be a committee to communicate with the House of Representatives for the purpose of obtaining the use of the hall for the evening session.

Ordered, That both branches of the legislature be invited to attend the evening meeting during the delivery of the annual address by Col. J. H. Stevens.

A committee was appointed consisting of Amasa Stewart, M. W. Leland, of Olmsted, S. Bates, of Winona, Judge Baker, of Ramsey, and P. M. Gideon, of Hennepin, on order of exercises.

On motion the Secretary was directed to prepare a report of the proceedings of the meeting for publication, which should only be considered the official report.

The Society then adjourned until 4 o'clock P. M.

## AFTERNOON SESSION.

Society met pursuant to adjournment.

Mr. Stewart, from the committee on exercises, made the following report:

1. Soil and location best adapted to the growth of apples.
2. Variety of apples.
3. Taking up, handling and planting.
4. How extensively should fruit be cultivated to receive the recommendation of the Society.
5. The Pear culture.
6. Plums.
7. Cherries.
8. Grapes.
9. Currants.
10. Gooseberries.
11. Raspberries.
12. Strawberries.

The committee recommend rules of action governing nurserymen sending out stock. They also recommend a small appropriation from the State, to be used by the Agricultural Farm in growing and testing fruits.

Which was adopted.

On motion of Col. D. A. Robertson, a committee consisting of Judge Baker, Messrs. C. M. Loring, Leland and Jordan, was appointed to report at the next meeting a system of organization.

The Society then took up the report of the Committee on Exercises, and the first subject was considered, viz: Soil and location best adapted to the growth of apples.

Mr. Bates, of Winona county, said he had resided in this State for 15 years. His location was considered favorable by many for growing fruit, but he considered it no more so than many others. He raised apple trees as well on his grounds as they can be produced in the east. He thinks trees will do well in dry soil if not too much exposed from bleak winds. Mr. Aldrich, of his neighborhood has over 1,000 trees in an orchard that are very promising. His land is clay soil.

Mr. Stewart, of Hennepin county, thought high locations the best—near water, favorable. The best soil is a sandy loam, clay sub-soil.

Mr. Gideon has been planting trees for fifteen years, some are doing well; has tried different soils; has found little difference in locality; tried north hillside soil, rather high, with good success; never had good growth on black soil until he set the trees deep—say from 6 to 12 inches above the collar; as an orchard with trees surrounded

by timber on the north. He cited many instances of good results from deep planting: has sold many trees planted on clay soil which did better than those he planted on his own ground.

Mr. Leland said that with a northern slope protected by timber, deep working and no manure, with winter mulching and proper care, trees will be successful in any locality.

Mr. Jordan thought the northern slope the most preferable. The sap starts, on the southern slope, in the winter. His conclusions were that any soil with lime in it is good. He believed in protecting bearing trees.

Adjourned to 7 P. M.

## EVENING SESSION.

The president announced the subject for discussion to be the "varieties of apples."

On motion the discussion was postponed to the morning session and Col. Col. Stevens delivered the following address:

Mr. President and Gentlemen of the State Horticultural Society:—In responding to the resolution passed at the last annual meeting, I will now proceed to deliver the annual address, but I cannot assume the responsibility without much diffidence.

Permit me to congratulate you on the successful labor of the society for the past year. Again has the old adage proved true that patience and perseverance will accomplish many things.

We meet under the most favorable auspices. Since this time last winter the vine has produced more than forty kinds of grapes. The fruit of all fruits, the apple, exceeded our expectation. We were favored with an abundance of small fruit. Choice varieties of ornamental trees have been introduced. The delicate, beautiful flower bloomed and imparted its fragrance to the air. An increased interest is being manifested by the people in that which is so closely connected with horticulture. The labor of the society has not been in vain.

Horticulture is as much a branch of industry as agriculture. It is fraught with as much moment to the world. It is a necessity as well as a luxury.

Said Horace Greeley a few years since to Woodford L. Wilson "I would not live in Minnesota." "Why?" asked Mr. Wilson. "Because," replied Mr. Greeley, "you cannot raise apples." Now, there are thousands who agree with Greeley that a country which is barren of fruit is not fit to live in. This however cannot be applied to Minnesota now. We are becoming a fruit producing people. The past season apples were raised from the Iowa line through the great rich belt beyond the Sauk Rapids. Those who should know best believe we shall eventually supply the Valley of the Mississippi with this fruit, as we now do portions of the east with wheat and flour. This may appear visionary, but we would have been called visionary if we had predicted in 1849 that the embryo state was in subsequent years to furnish New England with the staff of life, and yet the probabilities are more favorably now in regard to the apple than it was then to the wheat.

True we were under a cloud for a long time. We planted but did not harvest. Our trees withered and perished. Whether it was the frosts of winter, or the sun of summer that caused them to prematurely die no one has been able to determine. Plant as we would the trees sickened and died. Possibly and probably tender varieties were used, which may account for a portion of the difficulty.

No wonder, then, we became discouraged. Orchards, to the third and fourth planting, failed; a constant drain on the pocket without a ray of light in the future, influenced us in abandoning the enterprise. But those days, with their trials, have passed away. It is said that the same difficulties in regard to the propagation of the apple, has to be encountered in all new countries.

An yet some persevered. The far north was visited. Seed was gathered instead of trees. The germ of a few—very few, perhaps one in ten thousand, may be one in twenty thousand, some say one in one hundred thousand—has brought forth fruit. Be this as it may, we have over two hundred varieties of seedling apples thus propagated, some of which are of rare merit, and few of an inferior quality. One of these seedlings, the Wealthy, propagated by Peter M. Gideon, of Hennepin county, is pronounced by eastern pomologists to be superior to any new variety of apples that has been introduced for the last decade.

As the country becomes improved, as our soil becomes reduced to a proper state of cultivation, it seems that the *Pyrus Malus* particularly in certain localities succeed in reaching maturity. Where the soil or the climate, or some strange fatality was poison to them a few short years ago, they flourish now. Perhaps our seasons are changing. Evidently we have much to hope from certain standard varieties of apples as well as those seedlings of a Minnesota birth.

But should all of these fail we have a reserve to fall back upon which is impregnable. The Siberian family are as hardy as the oak. They should be extensively cultivated. In our success with the *Pyrus Malus* do not let us forget their half brother, the Siberian. A few years since had we known their value we should have prized them more than silver or gold.

Let us "render to Caesar the things that are Caesar's." Let us pay tribute to our Harrises, Robertsons, Bates, Gideons, Summers, Rollins, Kellys, Posts, Fords, Stewarts, Elliots, Brainards, Grimes, Drakes, Brimhalls, Goodyears, Cooks, Bells, Hoags, Ways, Woodruffs, Martins, Harvey Wilsons, Norrises, Dorrances, Perkins, Woodwards, Hawkins, Truman Smiths, and others who never faltered as the clouds lowered through so many dark years of failure.

Our soil, climate and latitude seem favorable for prolific crops of small fruits. In the fall of 1856, Mr. E. Whitefield, the artist, sent some McLeod county soil to Prof. Hays, of Boston, to analyze. That learned gentleman said that such soil should produce strawberries as large as New England walnuts. Why, the treasurer of this society raised last year near three hundred bushels of this fruit. By a copious use of this healthy berry, fevers are banished from our thresholds. The strawberry of Minnesota is not the strawberry of the Egyptian region of Illinois. Ours is juicy, plump, fat—suitable feasts for the gods. Our raspberries, currants, gooseberries, blackberries, blueberries, are all cultivated with so little labor, and so reliable and hardy that it is in the province of every household to have them.

The cranberry, too, is a profitable luxury. Large quantities of the wild fruit are shipped every autumn. We have the testimony of Wyman Elliot and A. D. Foster, gentlemen of acknowledged horticultural worth, that the cranberry can be cultivated with great profit. Late frosts in the spring are the bane of this fruit in New England and New Jersey, but here we are free from such visitations, which renders it unnecessary to overflow the marshes to prevent the frosts from destroying the blossoms. It is reduced to a certainty that from four to six hundred dollars per acre can be realized from properly cultivated fields of cranberries.

For the first time we gathered tame cherries last season. Previously we failed. This valuable fruit in the early years of the State seemed to follow the apple and was thrown aside. It may now be considered as one of our profitable products.

The record on grapes is satisfactory and more favorable than expected. Some forty varieties are in bearing. From one vine four years old, Richard J. Mendenhall, the able President of the Hennepin County Horticultural Society, harvested over two bushels of Delaware grapes. The quality of the grapes are infinitely superior to those from below. As Mr. Mendenhall is an educated horticulturist as well as a thorough entomologist, the society can profit by his experience. Your attention is most respectfully directed to the success of Truman M. Smith, of St. Paul, in the culture of this superior fruit.

Whether a very great improvement can be made in the introduction of new varieties of plums remains to be seen. Our natives are very desirable. While most all the old standard varieties have reached a doubtful maturity, those to the manor born are being cultivated, and the quality of fruit greatly improved. The Excelsior, Harrison and several other varieties are quite equal to the Minor and Wild Goose, and scarcely inferior to the standard plums of the Middle States.

Our progress in regard to peaches is far from satisfactory. Its cultivation may afford recreation to amateur gardeners though we have several instances of the trees bearing fruit the past season, and it is not impossible but at some future day the more hardy varieties may be cultivated with profit.

The pear also fruits. But little attention has been bestowed to its cultivation, and that little in an indifferent manner, but the trial is well worth making, with a reasonable prospect of success.

As a people, much attention is given, and homage rendered at the shrine of Flora. It is not local. Orders are sent from most



every post office to Vick, Bliss and Peter Henderson. Lawns and flower gardens are appreciated. Fragrant roses, scarlet lilies, magnificents, climbing vines command the attention of the ladies. The royal dahlia, the double petunia, the geraniums, gladioli, heliotrope, hyacinths, pelargoniums, tulips, verbenas and kindred flowers and plants are becoming household words. The early spring is welcomed by white, yellow, lilac, blue and striped crocuses in advance of the bright, yellow, honest blossom of the dandelion. These gifts are God's bountiful blessings. The home is happy where the flowers bloom.

The list of shade and ornamental trees should receive the attention of the society. We have those that are upright and those that are weeping. We can select from native varieties and from those that are imported. We have the elm and maple, which are so beautiful in New England, and to which that section of the Union is so much indebted for a large proportion of its picturesque scenery. We have the mountain ash with its emerald foliage and crimson fruit; the linden, hackberry, the silver-leaved poplar, coffee tree, the golden and white birch. This is a native list. Why not dot the roadsides with them?—skirt the fields, fill the yards—a home for singing birds, a pleasure for every one who has life and being? We have, too, the green-boughed pine, cedars, spruce, balsams, with their quiet and gentle ways, to weave into the different nooks, corners and by-places, thus adorning our city homes and making the village residences so handsome, and pretty in the free, broad country, which God made.

Of ornamental shrubs such as the acacia flowering almond, barberry, snowberry and snow balls, spiraea syriaca with the ever green, holly leaved shrubs, selections can be made that cannot fail to be satisfactory.

The society should lend its influence in encouraging the cultivation of timber on the prairies. In less than a decade from the time it is lodged in the ground, the European Larch will be of a sufficient size for a fence post. This is a question which must be met. We cannot conceal the fact of the existence of a large treeless district west of range thirty—extending to the Dakota line. This vast territory contains the richest soil in the state. "Rough hew it as we will" fuel is becoming less and less as each year rolls around. How easy to reverse this misfortune.

The attention of the society should also be bestowed upon the propriety of the early introduction of live fences or hedges. They are the cheapest, the best fence in use, and a system of hedges can be inaugurated which will be lasting.

The cultivation of several products of a semi-tropical character, such as the sweet potato has received considerable attention for the past few years. The experiment has proven satisfactory. We are assured that it is a law of nature that all plants, fruits and roots as well as flowers, reach greater perfection in a climate visited by snow in the winter, but the climate should be of a sufficient length to afford time for them to reach ripeness before interfered with by the frost. It is demonstrated by actual experience that those products of a tropical or semi-tropical origin become matured in less time in this state than in the latitude of St. Louis. It is also proven that the properties, richness, and qualities of these products, compares favorably with those raised at any point north of the rapids of the Lower Mississippi in the neighborhood of Keokuk, Iowa, or in Central Iowa, and in some instances they are pronounced of a superior quality.

The importance of devising ways and means for the protection of our orchards from the severe winds, will not be questioned. These wind-breaks must necessarily be composed of belts of trees, because air is necessary for the good health of the fruit trees, and it won't do to cut it off from a free circulation in the orchard by a solid wall. Deciduous trees, such as the willow and ash and evergreen, say the Norway spruce and red pine, are fast growers. We have been obliged to ferret out our own horticultural difficulties. We have no precedents to follow. That which is a balm in New England and other states, is a poison here.

We have much to expect from a proper system of hybridizing. It is said that the bee and other insects, as well as the wind, have an agency in transmitting the pollen of the blossom from one tree to another. When these things are understood, it would seem that we could accomplish much in the production of new varieties of the apple, and perhaps other fruit. It is supposed that the Transcendent, Hislop, Grant, Colfax and other apples so common

in our gardens, are the accidental results of hybridizing of the Siberian with the common apple. If by the result of accidental propagation choice and new varieties of fruit have been introduced, there is no end to the bright hopes that may be realized by the educated hand of man in the same field.

The society will have occasion to use their influence to protect the people of the State from the imposture of tree peddlers. These sharks frequent every locality. It is only safe to purchase trees from reliable nurserymen and their agents.

This is the land of insects. Our bugs and worms, our caterpillars, leaf and bark lice, ticks, ants, flies, millers, moths, borers and maggots eat long, devourate, consume the foliage of vegetation, and frequently strip an apple tree at one sitting. They are destructive when in the larva, as well as when full grown. They are the terrible enemies of the Minnesota horticulturist. How necessary it is for us to have a State Entomologist. The study of entomology should be studies in our schools.

It is to be hoped that the day is not far distant when every school house will have its flower garden and nursery, so that the scholars may also be taught the art of grafting, budding and other matters appertaining to horticulture.

Experience has taught us that mulching is necessary. There is not a tree that bears fruit, not a shrub, or vine, or cane that produces berries but all are the better for this handiwork. Plant as we may, cultivate as we will, or whatever may be the quality of the soil, or however favorable our grounds may be, mulching is indispensable. It is necessary in cold weather, in warm weather—necessary at all seasons.

The important matter of pruning will occupy your attention. We all want to know at what season of the year it is best to apply the pruning-knife. Some of us are favorable to early spring, some one time, others at another. My own experience is that the first of June is the best season. Trees should be cut back for their own good, and the question is, at what season of the year should this be carried into execution?

The society should impart to the people of the state what varieties of soil is best adapted for setting out orchards. The lay of the land, or the exposure of the surface should be considered. A northern exposure is considered by many to be much better

for the growth of apples than a southern one. In central Minnesota a northern exposure with clay sub-soil, is desirable.

The subject of grafting is one fraught with much moment to us, and we are now educated to one fact in this matter, and that is, the only reliable trees for this section are those which are grafted in the root. Stock grafting will not answer our purpose at all. Many of our nurserymen who propagate only hardy trees are prone to use tender varieties of apple roots for grafting purposes. In consequence of this oversight, unless the trees are protected by heavy mulching, they are liable to root-kill in the winter. Thousands of Siberian crabs were killed a few years since in consequence of being grafted into the tender apple roots.

We have a law on our statute books requiring the proper officers to make annual returns of the quantity of grain raised, the number of horses, cattle and sheep, the amount of hay cut, and other important statistical matter in each town, which is sent to the capital and properly published. The law is a good one as far as it goes. Such information is valuable, but why not include in the returns the number of bushels of apples raised in each town, the quantity of strawberries and other fruit produced. It is presumed that an amendment of the law to this effect would meet with the hearty approval of the people.

The society at its last annual meeting passed resolutions respectfully asking a small appropriation to be expended under the auspices of the society. As an incident of the beneficial aid secured from the State, Kansas last season through the legislature of that state granted the small sum of five hundred dollars to their state horticultural society. With this money all the new seedling apples were gathered and forwarded to the American pomological society at its meeting in Philadelphia. The result was that the new state took the first premium on new varieties of apples. No one for a moment doubts who is fully posted in regard to the quality of seedlings but what Minnesota, had she been represented, would have produced the better apple. It is to be hoped that our excellent legislature will cheerfully respond to the petition of the society.

The society should at the earliest possible period practicable hold a State Fair. Through the aid of the State Agricultural Society, we are able to place on exhibition the fruit of our labor, but it is presumed that a separate fair would be more satisfactory to the horticulturalists of the State. The few county fairs which have been held reflected much credit to the societies. The one at Minneapolis on the 4th of last July under the superintendency of that efficient horticulturist and florist, Chas. M. Loring, Esq., was pronounced superior to anything of a kindred character ever held this side of Chicago.

The society has been honored by the appointment of one of its members to the professorship of agriculture in the State University and Agricultural College. It is a matter of congratulation that so good an appointment was made. The welfare of those who are in attendance at that popular institution will be safe in his hands.

The West has sustained severe loss in the death of Benjamin D. Walsh, a state entomologist of Illinois, which melancholy event occurred at Rock Island on the 15th of last November. His labor for the past few years has been of great service to the people of this continent, particularly those engaged in horticultural pursuits.

The society has a great work to accomplish. The mission is not simply the propagation of fruit, but it is to add comfort to the people of this great commonwealth. We wish to make their homes cheerful, happy and pleasant. Contrast the dooryard that is full of weeds, ragged grasses and litter of every description, with a beautiful green lawn, mixed with damask roses, climbing vines, blooming asters—an occasional evergreen, snow-balls and other ornamental shrubbery; and only consider that one costs but little more than the other. Who ever saw a house on the prairie without a shrub or tree planted around it but did not feel that it had a lonesome view? Wheat stacks and straw piles as large as small mountains will not suffice. Something is wanting to give it a homelike appearance. We find that it is not so expensive to raise precious herbs, such as rosemary and sweet basil, as it is to let wild buckwheat, burr weed, mullen, fennel and cockle flourish.

It cannot be expected that we can disseminate the work we are engaged in, without the aid of the press of the State. The newspaper is the great bulwark of information, and every publication from the Iowa line to Lake Superior, from the Mississippi to the borders of the Redwood, are in sympathy with us, and the fruits of our labor are transferred by these faithful missionaries to the firesides of the people.

New horticultural pursuits are being developed. For instance is not too much to expect that the day is not far distant when sugar, made from the beet, will be a great staple of the State.

We know that horticulture must travel hand in hand with agriculture, and there is no reason why the farmer should not have his orchard and garden as well as his wheat, his oats, and corn. Since the organization of the territorial government, in 1849, up to the present time, there never was a people more prosperous than the farmers of this State. By industrious habits and sterling integrity, they have made the wilderness to bloom like a garden. The choicest herds found in the East have been introduced by such enterprising gentlemen as Col. Wm. S. King, Wm. L. Ames, M. C. Potter, and others. These herds occupy the same grounds so recently the haunts of the buffalo. Every civilization found in any part of the world dwells here. A healthy and pleasant climate, a rich and fertile soil, all that is wanted to make us favored beyond the lot of almost any people, is more attention to horticultural matters. This can be done without neglecting our crops of grain, our great healthy fat stock, and the general work on the farm.

Croakers we have. They are found in every community, but they are growing less and less each year. It is expected that there will be no croaking by and by. They are becoming convinced. When they see the same varieties of apples, such as the Duchess of Oldenburg, the tetsky, the transcendent one-third larger—of an infinitely superior quality over those grown in the east and further south—it is expected they will be willingly convinced. Probably it is a law of nature that all apples that reach maturity here are larger than those raised from five to ten degrees south of us. When we consider what has been accomplished, the manner in which so many obstacles have been overcome, we cannot but feel that we have a bright prospect for our future success. Let the society then renew

their work with increased vigor.

It is to be regretted that the President, John S. Harris, the best horticulturist in Honston county, cannot be with us. He is confined to his home by severe illness, but he sends his heartfelt greetings, and assures the society of his continued co-operation with the members in forwarding the good work. He writes that his faith increases every year that we are to have a great fruit-growing state.

In concluding this imperfect address, I hope you will permit me to suggest to the society the necessity of a correct report of our deliberations. The people should not be deceived, but a correct report of the proceedings should be soon broadcast over the whole State.

A word more and I am done. There is no reason why a person who propagates a new variety of apples should not have all the benefits of that discovery. The property is his, and he should receive the benefits of his property. Trusting that our labors may be crowned with success, I leave all these matters to your better judgment.

A vote of thanks was tendered for the able address. The third subject of discussion, "Taking up, handling and planting," was taken up.

Gideon—Objected to cutting off the tap root; took great pains in planting to have roots in plenty; did not tramp the dirt, but pressed it with his hands; mulched; never watered. In packing, used moss, taking pains to have it between the roots; considered dry straw next to nothing. In setting out, cut back in proportion to the amount of root; had cut some back to stubs, but they did not grow; would leave some top preferring low ones—under one foot; those with a tap root always do best; preferred No. 1, one year old trees. He never had a low-headed tree sunburned.

Grimes—We cannot be too careful about cutting or bruising the roots; as to age, recommended from one to two years old, never over three. In setting out, would trim the roots from beneath—if not so cut, they may become diseased; approved Mr. Gideon's plan of setting, excepting he would dip the roots in water; mulching was equal to a life policy; in the fall-planting would mound up, but preferred spring-setting; would procure trees in the fall and head in.

Stevens—Trees should be taken up without bruising or drying them; thought side roots more beneficial than the tap root; thought transplanting benefited the trees. Gideon had trees of the same variety, some of which died, the others doing well; on examination he found in each instance that the dead ones had no tap root. They were, however, set on the shallow plan; had not adopted the deep planting until last spring. He generally leaned his trees to the south-west.

Jordan—Nature favors the tap-root; had not favored the practice of cutting off the roots; thought the most successful plan was to set the whole root, using No. 1 one year trees, and heading them.

Mr. Dart had, in Wisconsin and in Minnesota, two thousand trees in orchards; he paid no attention to the tap root; never watered; at first adopted the low top plan, but tired of it because he could not cultivate; trees must be cultivated. He then trimmed up so that he could cultivate with horses, and had good success; thought that with side roots the tree grew faster; thought many of the new seedlings must fail; did not favor the large hole—it stimulated too large a growth; favored large trees; the low trees were only "fashionable;" would mulch in severe drought; had injured trees by mulching and then neglecting it—if it is commenced, it must be followed up; clean cultivation is the best; favored close planting; until the last year his experience had been in Wisconsin.

Mr. Gideon never took the mulch away; when it rotted he added more to it; thought a high topped tree was about as useful as a six-foot-neck on a

man.

Mr. Wheeler asked what would make a tree bear.

Mr. Theo. Bost, of Carver, said he had two trees, one near a cattle yard, which was thrifty but barren; the other, further from the yard, was not so thrifty in growth, but bore well.

Col. Stevens favored young trees and low heads.

Col. Robertson—If we follow nature, we will only produce crab apples; disagreed with Mr. Gideon in the matter of tap-roots; thought it had been settled long ago; it was a physiological fact that the side roots and their fibers fed the tree—cited numerous authorities to confirm his statement; trees were made more prolific by increasing the feeding roots; favored deep planting, because it protected the side roots; mentioned the case of Mr. Lees, of England, who moved his trees every year to increase their yield; you can move a tree of any size, if you carry with it all its roots.

Mr. Leland—It is remarkable how transplanting increases the roots, and he thought the plan was very beneficial.

Mr. Hoag thought transplanting bearing trees impracticable; if successful it was miraculous. The tree might put on growth, but would scarcely bear fruit.

Mr. Stewart agreed with Mr. Robertson; had moved a tree in the fall, transplanted three times previously, and the next season it bore forty-seven apples.

Mr. Grimes instanced similar successes, but thought Col. Robertson's theory of moving bearing trees impracticable in Minnesota.

Mr. Smith, of Ramsey, thought the pruning of bruised roots a very important item; he instanced the cutting of roots by a gopher, which brought the tree into bearing.

Mr. Bates did not use heavy wax on grafts; did not care for the fibrous roots in transplanting; if you removed the leaves in transplanting it would not kill the tree, and fibrous roots were to one of these trees what the leaves were to the top.

Mr. Brush would mulch in winter and remove after frosts; favored day's cultivating before setting trees; set about ten feet apart.

Adjourned until 9 o'clock, A. M. SECOND DAY.

The Society met pursuant to adjournment, the President, R. J. Mendenhall, in the chair.

Moved by Mr. Leland that we proceed to the next subject, 4th topic—"How extensively should fruit be cultivated to receive the recommendation of the Society?"

A few remarks by Mr. Stuart. Mr. Dart explained the object, as he supposed it to be.

Mr. Elliot read from *Miller's Western Pomological Record* the rules of the American Pomological Society, in explanation of the topic, as he supposed it to be.

Discussion by Messrs. Leland and Stuart upon the record read by Mr. Elliot.

Considerable discussion followed in regard to the rules, when the following rule No. 1 was amended to read as follows:

That no variety of fruit shall be recommended by the Society for general cultivation until it has been cultivated for at least three years in three different sections or localities of the State.

The other rules presented was referred to the committee on by-laws and the constitution to report at the next annual meeting.

#### PEAR CULTURE

was then taken up. Col. Robertson had planted dwarf pears worked on the Quince, all were killed. He planted 60 standard pears, and they all are doing well. Mulched with swamp hay, recommended Flemish Beauty. He had seen a Bartlett three miles from St. Paul that was hardy. Pears will do well in this state when grafted on its own roots.

Mr. Hamlington moved that the society recommend the Flemish Beauty for trial. Carried.

On motion of Mr. Harkness it was Resolved, That the sense of this society be obtained by taking the vote of the members on the different varieties recommended for culture—in their order as to hardiness, No. 1, 2, 3, &c. No. 1 shall be understood to be recommended for general cultivation; No. 2, for favored locations; No. 3, for further trial.

Carried. Moved that discussion on varieties of apples be postponed until the afternoon session.

Mr. Leland offered the following resolution which passed:

Resolved, That this society recommend the public to be cautious of buying fruit trees from any but well known and reliable persons, preference being shown to Minnesota grown trees.

It was then, on motion of S. Bates, determined that the society take measures to be represented at the next annual meeting of the State Pomological Society.

Mr. C. M. Loring offered the following resolution, which was unanimously adopted:

Resolved, That a committee of three be appointed by the chair to visit the State University and Agricultural College, for the purpose of gaining information in regard to the Horticultural education of the rising generation of the state, said committee to make a report and publish the same in the several papers, for the information of the people of the State.

The President announced as such committee, Judge Baker, Chas. Hoag and Truman M. Smith.

Mr. Hoag said he was appointed on a similar committee of the State Agricultural Society, and he wished to nominate the President, Hon. R. J. Mendenhall, in his stead. The secretary put the motion, and it was unanimously adopted.

#### SMALL FRUITS.

The subject of small fruits was then taken up for consideration, and Mr. C. M. Loring, of Minneapolis, stated that he had a variety of blackberry, which he was cultivating, that was very hardy and quite prolific, which he called the Bolton from the name of the gentleman who propagated it. It was a seedling of rare merit.

Mr. Truman Smith, and all, agreed that sandy soil was the best for this description of fruit.

The same speaker deemed raspberries one of the most important of small fruits, and if properly cultivated would grow to still greater importance. He deemed the Black Caps, the Philadelphia and Clark, Golden Cap, Kirtland, and Brinkle Orange, the best kinds. The Kirtland is the best of the blacks. The Golden Cap is the best and most hardy of the yellow varieties.

S. T. Grimes, of Minneapolis, agreed with what Mr. Truman Smith said in regard to the different varieties of raspberries.

Mr. Truman Smith has cultivated both the Miami and Mammoth Cluster. He had noticed that the roots of the latter were always black, while those of the first were white. He did not protect in any way any of his blackcap berries. He also spoke of Long's Everbearing in high terms. His practice is to keep his vines well cut down, which has a tendency to make more fruit.

The subject of cherries having been taken up, Mr. Truman M. Smith, in reply to a question, stated that he had at different times tried at least fifty varieties of cherries. The early Richmond, or Early May, he said, was the best of all when grafted on the Black Morillo stock. The English Morillo has fruited and done very well, but is not as good as the Early Richmond. The Black Tartarian, May Duke, and others of that class are not hardy, and consequently cannot be relied on.

Col. Robertson spoke of a tree from the Hartz mountains, introduced by Earnest Meyers, of St. Peter. This tree he desired to see introduced generally as it fruited generally.

Adjourned till 1:30 P. M.



The Society called to order by the President.

Mr. M. Smith wanted to hear from the Society in regard to grapes.

Mr. Gideon's experience the last season with grapes was disastrous.

Jacob Miller, of Ramsey county, thought that every thing depended on planting. The ground should be side trenched. The side hills was the best ground for them. Gravel he said was the best. If there is no gravel fill up the trenches with rocks or bones. In summer they should be cut back, say the second week in August. Delaware was the best grape to plant. He illustrated his mode of planting grapes. He trimmed the roots every year. Wine made from grapes raised in clay soil was never clear. He planted his grapes from six to eight inches deep.

Mr. Smith said that last season was the worst for grapes for several seasons, but he had about two tons. The Delaware was the best grape for general use.

Considerable discussion followed in regard to grape culture, which was participated in by several of the members.

Mr. Grimes offered the following resolution, which was adopted:

*Resolved*, That the professional and amateur horticulturists of the State be requested to furnish specimens of Minnesota seedling fruit trees and plants to the experimental garden of the State University, for trial and exhibition.

Mr. Dart offered the following resolution:

*Resolved*, That three feet is the proper average height at which apple trees should branch in the orchard, and that sixteen feet each way is the proper distance between trees.

After discussion the resolution was adopted.

The selection of apples was then recommended, when the secretary was directed to send circulars to all persons in the State engaged in the cultivation of fruit.

Mr. F. M. Smith moved that the chair appoint a committee of three from the south part of the State to recommend varieties of apples and fruit for general cultivation in that part of the State and a similar committee from the north part of the State to report to the secretary. Adopted.

The president appointed the following gentlemen as such committee: J. S. Harris, S. Bates, A. C. Hamblin for the southern part of the State, and for the northern district, Col. Stevens, Wyman Elliott, Lewis Martin.

Col. Robertson asked if there was any way by which the amount of apples raised last season could be ascertained, when it was decided that at least 15,000 bushels were raised.

Committee appointed on wine: Col. Robertson, Mr. Leland and C. M. Loring, who made a favorable report.

On motion of Col. Stevens, it was resolved that when the society adjourns, it stand adjourned to meet at Minneapolis on the 4th of July next.

On motion, the President appointed the following gentlemen to write essays on the following subjects:

1st, Preparation of orchard ground before planting—O. F. Brand, of Rice county.

2d, Varieties of apples, and to what soil adapted—Wyman Elliott, of Hennepin county.

3d, Orchard cultivation, site and protection, and distance to plant—S. Bates, of Winona county.

4th, What constitutes inherent, organic hardiness, and what properties of soil are essential to hardy growth—Col. D. A. Robertson, of Ramsey county.

5th, Timber trees, and how to cultivate, Theodore Bost, of Carver county.

6th, Cultivation of small fruits—C. M. Loring, of Minneapolis.

By Mr. Loring:

*Resolved*, That the thanks of this Society be tendered to the North Star Grange of the Patrons of Husbandry, for the free use of this Hall.

*Resolved*, That the thanks of the society be and they are hereby tendered to the Pacific, the Milwaukee, St. Paul & Minne-

apolis, the St. Paul & Sioux City and the Winona & St. Peter railroads, for half fare tickets, and that a copy of this resolution be forwarded to the presidents or superintendents of each of these roads by the secretary of the society.

The society then requested all persons who are raising fruit in this state to send their names to the corresponding secretary at Faribault, Rice county, at as early a day as possible, so that they may receive copies of the report.

The official report will be published in pamphlet form in a few weeks. This report will contain all the proceedings of the society since its organization.

J. W. HARKNESS, Sec.

## STATE HORTICULTURAL SOCIETY.

## A DISCOVERY IN THE BLIGHT IN APPLE TREES.

## General Proceedings.

The State Horticultural Society held a preliminary meeting on Monday afternoon at four o'clock, at which the principal business transacted was the appointment of committees to arrange the order of business at the following day's session, and to investigate the new inquiry in apple trees which has developed in the garden of Mr. Wm. M. Harrison of this city. Messrs. Mendenhall, N. Washburn and J. S. Shearman, of Illinois composed the latter committee. A proposition that individuals joining the Society now be considered members until the annual meeting in the autumn of 1871 was found to meet the approval of those present. The meeting adjourned until Tuesday morning at eight o'clock.

## MORNING SESSION.

The State Horticultural Society met at the rooms of the Board of Trade on Tuesday morning, John S. Harris, the President presiding.

The committee chosen at a former meeting, Messrs. Mendenhall, Washburn and Shearman, to examine the trees in the garden of Wm. M. Harrison, Esq., which had recently shown a peculiar blight, had attended to their duty and submitted the result of their investigations.

Mr. Mendenhall remarked that the insect was a compensating agent of nature, and that often they went to the healthiest tree as well as any other. This blight was a new phenomenon in this quarter, and he felt it was a question of great importance.

Mr. Washburn, who submitted the report said that the trees of this garden were transplanted into a soil too much enriched, nature had been forced by this method of manuring and dressing so that she revolted at the treatment, and by checking this superabundance of growth had sent this little agent to bore into the new twig at the base and thus given us to understand that we must study better our soils and the cultivation of fruits. Mr. Washburn presented the veritable bug as found in one of the branches, and Mr. Mendenhall gave the history and habits of the creature as authorized by Harris' treatise on insects.

Mr. Shearman, of Illinois, said that it had long been an anxious matter with him in regard to what caused the blight in apple trees which was prevalent in Mr. Harrison's grounds at this time. He had often wanted to lay it at the doors of an insect, but until this morning he had never discovered them. But Mr. Mendenhall's investigations satisfied him.

It was moved by Mr. Charles Hoag, that the committee hold this subject in charge through the season, and at the annual meeting present a full written report of their investigations regarding the nature and habits of this insect. Adopted.

## PREPARATION OF SOILS FOR TREES.

This topic of discussion was enlarged upon by the President and others. Mr. Harris said a difference of opinion prevailed. He thought we should avoid digging a deep hole and filling with rich earth or manure. Ground should be well plowed, and trees planted rather shallow, well mulched, and cleanly cultivated—avoid late cultivation, or late mulching, which will promote a late growth. Trees are lost the first winter because the wood does not ripen, being pushed so late in the fall. Mr. Mendenhall corroborated the statements and endorsed the views of Mr. Harris.

Adjourned to 1½ P. M.

## AFTERNOON SESSION.

After an extended discussion in regard to matters appertaining to horticulture, it was—

*Resolved*, That the executive committee are requested to confer with the executive committee of the State Agricultural Society, and agree upon some plan by which the Horticultural Society shall have control of the horticultural department of the approaching fall fair.

It was determined that the State Society should appoint a committee to visit the different orchards in Minnesota; report the manner in which the trees are cultivated, the variety of soil, the kinds of apple raised, together with all and every information that may be necessary for those who wish to raise apples in the State.

After a full consultation Col. John H. Stevens, Hon. R. J. Mendenhall and J. W. Harkness were appointed such committee.

The following is a list of shade and ornamental trees recommended for general planting by the Society:

*Evergreens*—Norway Spruce, Scotch, Austrian and White Pines, Arbor Vita, Red Cedar.

*Deciduous Trees*—Box Elder, White Maple, Mountain Ash, White Birch, White Elm, Butternut.

After the transaction of business of ordinary importance the Society adjourned.

*Charlotta*  
*superior to in Col*  
*Stevens (winter 1870) Red House.*

*And yet they were mistaken!*



## Annual Convention OF THE Minnesota State Horticultural Society.

TUESDAY, Jan. 17th, 1871.

The Convention assembled at Firemen's Hall, in Faribault, at 2 P.M. The president, J. S. Harris, of Lacrescent, called the Convention to order. In the absence of the recording secretary, A. W. McKinstry of Faribault, was elected secretary *pro tem*.

The minutes of the last meeting were read and approved. On motion the president's annual address was made the special order for Wednesday at 2 P. M.

Mr. Leland from the Committee appointed to prepare a new Constitution and By-Laws, submitted a report.

The report was accepted. It was moved that the Constitution be taken up and acted upon article by article. Carried.

The articles were adopted separately after some amendment. The By-Laws were adopted, after several amendments.

The question coming up upon the Constitution and By-Laws, as amended, on motion the subject was laid upon the table.

Mr. Brand moved that the Chair appoint a committee of three to report topics for discussion. Carried. O. F. Brand, P. A. Jewell, and Wyman Elliott were appointed such committee.

On motion the treasurer proceeded to collect the annual dues. Adjourned to 7 P. M.

### EVENING SESSION.

The convention was called to order by the President.

The Secretary read a communication from D. Wilmot Scott, Secretary of the Northern Ill. Horticultural Society.

The Committee on topics for discussion made a report. The report was accepted.

The report of the Committee on the Constitution was taken up and debated.

Mr. Jewell moved to lay the report on the table for future consideration. Carried.

On motion, Convention proceeded to the discussion of the topics presented by the Committee on Order of Business.

The first was read by the Secretary, viz: "The expediency of electing a delegate to attend the next annual meeting of the American Pomological Society."

Mr. Leland moved that the Society elect a delegate to attend such Convention. Carried.

On balloting for such delegate, P. A. Jewell, of Rochester, having received all but two of the votes cast, was, on motion, declared unanimously elected.

Mr. Jewell declared his willingness to go, as the Society wished, and hoped every member of the Convention would aid in furthering the object of his mission by sending to him specimens of the finest apples, and other fruits the State produced.

Mr. Cook moved the appointment of a committee of three by the chair to solicit an appropriation of \$500 from the Legislature to further the objects of the Society. Adopted.

The chair appointed Col J. H. Stevens, Wyman Elliott and Truman Smith.

The 2d topic was announced, viz: The expediency of securing a report concerning all the orchards in the State.

Mr. Mott moved the appointment of a committee of three to visit the orchards of the State, in accordance with the proposition.

Mr. Harkness moved to amend

the language of the proposition by adding the words "as far as practicable." Carried.

Mr. Leland moved as a further amendment that two more be added to the committee. Adopted, and the resolution as amended was then carried.

The president appointed as the committee Wyman Elliott, of Minneapolis, A. C. Hamilton, of Winona, P. C. Cook, of Blue Earth, O. F. Brand and J. W. Harkness, of Faribault.

Mr. Jewell announced the presence of Mr. Chas. Waters, an experienced nurseryman of western Wisconsin, and moved his election as an honorary member. Adopted.

Adjourned to 8 o'clock Wednesday morning.

### WEDNESDAY MORNING.

Convention was called to order by the president.

The minutes of Tuesday's proceedings were read by the secretary, corrected and approved.

Mr. Mott, in behalf of the Directors and Superintendent of the Asylum for the Deaf and Dumb, and the Blind, presented an invitation for the members of the convention to visit that institution.

On motion the Society resolved to accept the invitation for Thursday forenoon at ten and a half o'clock, sharp.

Mr. Mott suggested the printing of certificates of life membership. He would like to become a life member, but was waiting for the Society to issue suitable certificates.

Col. Stevens suggested that it would be better to have them lithographed.

Mr. Dartt moved that the matter be referred to a committee of three. The Chair appointed Mr. Dartt, A. W. McKinstry and Col. Stevens.

The hour having arrived for the reading of essays, one was read by O. F. Brand, entitled "A Fundamental Principle for the Minnesota Horticulturist."

Col. Stevens moved that the essay be printed. Carried.

[The essay is necessarily deferred until next week.]

On motion of Mr. Harkness, the other members designated to prepare essays who had not done so, were requested to prepare them and hand to the committee on publication.

The convention proceeded to the discussion of the fourth topic, viz: The best plant to be used for hedging purposes, and method of cultivation.

The Chair announced that the question would be divided, the subject of varieties being first discussed.

Mr. Brand presented a communication in favor of the Barberry, written by Mr. H. Thacker, of Oneida Community, which was read.

Mr. Mott related his experience with Osage Orange. Had set a hedge four years ago and did not think he had lost a plant. Had covered with loose straw the first winter.

Mr. James Hoffman had tried almost everything, and had failed, but believed that cottonwood would make a good hedge. Could have a hedge in four years from the time of setting.

Mr. Jordan had no faith in the Osage Orange, and gave his experience with the White Willow. Had put out cuttings four years ago and now had a good fence.

Mr. Leland approved the willow. If set two feet apart they will produce large timber. If set eight inches apart nothing will get through. They will grow twenty feet high in two years if let alone.

Mr. Harkness preferred willow next to barberry. Thought the principal objection to them to consist in their taking up too much room. Considered cottonwood a nuisance.

Mr. Mott said the plum had been mentioned. Dr. Jewett had planted the wild plum, but it became such a nursery of worms that he had to cut it down. He would suggest the prickly ash.

Mr. Kenworthy said the ash was very thorny; the willows except the river willow would seed everywhere within twenty rods; were a nuisance.

Mr. Dartt favored the white willow; thought the barberry would not turn beasts.

Mr. Hoffman's statements respecting willows seeding agreed with Mr. Kenworthy's.

Mr. Jewell said both cottonwood and willow might turn cattle in a few years, but they impoverish the soil; would spoil half the crop within range of their roots, besides they grow too high for a hedge. The barberry is perfectly hardy; had seen bushes 15 to 20 yrs old; had no doubt of its affording protection against cattle; thought Mr. Mott's test of the Osage orange not a fair one, as his hedge might have been protected by snow.

Mr. Jewell opposed cottonwood on account of its sowing its seed broadcast.

Mr. Harkness offered the following resolution:

Resolved, That we recommend for trial as hedges, first, the Barberry; 2d, the White or Grey Willow; 3d, Lombardy Poplar; 4th, Wild Plum; 5th, seedlings of the cultivated crabs.

Mr. Dartt offered an amendment to put willow first in the list.

Mr. Waters strongly favored the barberry. Considered it useless to grow a hedge of any plant that could not be clipped to keep it in bonds.

Amendment lost.

Mr. Howe offered an amendment to add the crab to the list as fifth in order, and spoke highly in its favor for hardiness and beauty.

Mr. Dartt moved to lay the motion upon the table. Carried.

Mr. Harkness offered a resolution to recommend for trial first, the barberry, second, the white willow.

The question was divided, and taken first upon the barberry, which was decided in the affirmative.

The question was then submitted upon the white willow and lost.

On motion of Mr. Harkness the 5th and 6th topics were made the special order immediately after the President's address, in the afternoon.

Mr. Harkness moved that the president appoint a committee of three to change the form for the submission of those topics. Carried.

Chair appointed Messrs Stevens, Harkness and Howe.

The Chair offered the following resolution:

Resolved, That in the opinion of this Society, the nursery and orchard trees in this State are in good condition for wintering safely, up to the present time.

The question was discussed by Messrs Jordan, Mott, Brand, Jewell, Hoffman, Harkness, and the president.

Mr. Elliott submitted as a substitute for the resolution, the following:

Resolved, That in the opinion of this Society the nursery and orchard trees of this State are in good condition for wintering up to the present time, where properly mulched, and that in consequence of the lack of a sufficient quantity of snow, we recommend to all who have not mulched their trees to do so immediately, to prevent root-killing.

The resolution was adopted. Convention adjourned to 2 o'clock P. M.

### WEDNESDAY AFTERNOON.

The Convention was called to order by the president, who proceeded to deliver his annual address.

ADDRESS OF PRESIDENT HARRIS.

### Gentlemen of the Minn. Horticultural Society:

Although I am an enthusiastic lover of Horticulture, I feel my incompetency to deliver an address suited to this occasion. I would like to give you a history of the progress the art of Horticulture has made since the first currant bush and geranium slip was brought into the State, on the rear end of an emigrant wagon, down to the present date; but it would require the labor of months to gather the statistics to enable me to do so with any degree of accuracy, although it extends over but a few years of time. It is scarce twenty years since the whole of our State was a wilderness—the home of the wild Indian. Where beautiful and stately mansions now stand, scarce a decade of years since the blue smoke curled upward from the rude wigwam, and where then the buffalo and deer found ample and undisturbed pasturage we may now behold broad fields, stretching away until lost in the distance, that in summer are covered with golden grain, furnishing the staff of life to millions of human beings. Thriving villages are springing up all over the State and its resources are being developed as by magic.

Previous to 1865 the fruits of the State were chiefly wild crabs, wild plums, wild grapes, strawberries, blueberries and cranberries, and many of these were found only in certain localities of limited extent. A great many trees of apple, plum, and cherry, had been planted previously, but they met with such certain and speedy death during the following winters, that it came to be believed by about ninety-nine out of every hundred that it was useless to attempt to raise fruit in such a cold country. The farmers settled back upon this opinion and claimed that our natural fruits must suffice them until they could make a little with which to locate in some better country. A majority of our citizens have lived in the eastern States and been accustomed to an unstinted supply of apples, peaches, pears, plums, cherries, &c., and to be deprived of them and have no hope of ever seeing or using them more, takes all the poetry out of their lives. How many a poor wife is almost broken-hearted, and weeps bitter tears when memory compels her to contrast her present lot with the past, the days and the home of her girlhood, and she would almost exchange every hope of her life for one day's ramble in the orchard and garden of the old home, that she might feast her eyes upon the rosy-cheeked apples, golden peaches, and luscious, melting pears, and regale her senses with the fragrance of the little flower bed in the garden, and she cries, "Alas! alas! will it always be so?" No, my friend, it will not always be so.

I perceive that I am digressing from my subject and I will again return to it. This cry against the possibility of raising apples was at its height in the years 1865 and '66. About this time Col. Robertson, of St. Paul, entered upon the work of collecting the experience of those who had attempted to raise fruit, with the view of digesting and sifting it to see if there was not a ray of hope that by some process of culture a few varieties might be found that would endure our climate and produce fruit. This work resulted in stimulating a few persons, who had never given up to the popular opinion, to make a more thorough trial and a final settlement of the question. Soon after this, and while it was yet believed throughout the whole country that apples could not be raised in Minnesota, this Society was organized, and scarce a dozen men could be found in the State that would enter into this Horticultural organization, because they had

no faith that it would result in a success. Nearly all the fruit on exhibition at the State Fair being held at that time was raised in my orchard; but I was a stranger to every Horticulturist in the State, and hailed from a locality unknown to the majority of the people in attendance at the fair. But meagre as the display was, and unknown as was the exhibitor, it created a sensation which resulted in the organization of this Society and the dawn of a new era in fruit culture, and, although but little over five years have transpired, the majority of the people now believe in the ultimate success of the apple. The ball is rolling on. The exhibition of fruits is beginning to be a leading feature of our fairs, and thousands of trees are being planted now where dozens were then.

The people all over the State are awakening to the importance of planting trees, and now the opportunity occurs for us to exercise an influence for good. It devolves upon us to ascertain the causes of the many failures that still occur, and the way by which they may be avoided. Some action should be taken at this meeting in reference to new Minnesota Seedlings. I am inclined to believe that we may hope for much from this source, if we adopt measures to thoroughly test the many varieties now growing in the State. I recommend only such to be propagated and sold as were hardy, productive, and reasonably good. This would enable the people to purchase intelligently, and could not possibly be any disadvantage to the nursery men. And for the greater protection of the people, all agents representing nurseries in other States should be required to have a certificate from the proprietor of such nursery showing that they are authorized agents, which should be endorsed by the President or some member of the Executive Committee of this Society. I have other suggestions to make having a direct bearing upon the usefulness and prosperity of the Society, but they will come in more naturally at the close of my remarks and I will pass on to notice another department of our work.

Up to the present time we have scarcely entered upon the field that lies open before us, the apple question being considered so momentous that it has occupied the greater part of our attention, but there are other fruits but little behind that in importance which ought to be grown by every farmer—yes, by every household in the State. It devolves upon this Society to array them before the public and point out the best varieties and instruct in the best methods of propagation, cultivation and protection.

Ignorance of the scientific part of Horticulture is one of the most prolific causes of failure. No doubt the majority of the people are excusable for this ignorance, for they have been their own schoolmasters, but if this Society will collect, digest and disseminate the information that can be derived from the experience of the best and most successful fruit growers and encourage experiments, this darkness will begin to lift, and the quantity, quality, and variety of the fruits grown and consumed will continue to increase very rapidly. When the *modus operandi* is understood, I believe that Minnesota will produce pears that will rival those of California in size and beauty and excel them in quality, and at an early date they should be discussed in our meetings.

Grapes are already coming into favor with the people, and no better grapes can be shown east of the Rocky Mountains than were produced in this State last season. There are but few varieties worthy

of cultivating and we should notice the best, that the people may know which to plant, and save themselves the vexation of waiting for grapes, and lo, they have nothing but wild grapes.

Strawberries and Raspberries are perfectly at home in our climate, and so easily grown that there is no excuse for being without them, and the Currant will yield its fruit for every one who will take the trouble to plant the bushes. Still this Society may do much to improve and encourage the cultivation of all of them. Thus far the tame plum (*Prunus Domestica*) has succeeded but very indifferently, and in most localities it is money thrown away to plant them extensively. But we have native plums but little inferior to the best of them, and if they were looked up and brought into cultivation they would very likely improve and become good enough. It is claimed by the best Botanists that the Sloe (*P. Spinos*) is the original parent of the tame plum. If such large and delicious fruit as the Washington and Bleeker Gages have been derived from so humble a parentage what may we not expect from our own (*P. Americana*). I fancy our children may yet produce the fruit as large as goose eggs, and better than the gages.

There are many other varieties of fruit that are worthy of your notice, but I will pass them by for the present and call your attention to the flowers, the loveliest of all God's gifts to fallen man. The love of them is almost universal. It seems to be a principle of the human soul to love the good and the beautiful. This love manifests itself in the child at a very early age, and ought to be encouraged and cultivated. It is in the power of man to make his home a paradise but little below that garden "in the eastward of Eden" where the Beneficent placed our first parents before the earth was cursed for their disobedience and made to bring forth "thorns and thistles." What is so attractive to the traveler as that modest, unpretending cottage where the ivy, the woodbine, and the honeysuckle twine about the piazzas like pleasing memories about the good man's life, and the rose, the queen of flowers, stands sentry upon the neatly kept lawn, and the pinks, verbenas, and violets trail or peep out along the walks, regaling each passer-by with their soul-reviving fragrance? In the back ground stands the well-trained orchard, groaning beneath its load of fruit. There are no briars or thistles crowning the fence corners. No rubbish piled in the street. No weeds upon the lawn. Good books lie upon the table within and pictures hang upon the walls. Without there is an air of comfort. Within peace, virtue and love. The owner has the respect of his fellow-man, and good angels hover about and keep his loved ones. He that is so poor or lives in a clime so ungenial that he cannot have such surroundings, merits our pity and our prayers. Such a home exalts the mind of its possessor, reveals to him that he possesses a soul, and lifts him up toward the great God who gives the fruits and makes the flowers so beautiful that "Solomon in all his glory was not arrayed like one of these."

It is the mission of this Society to encourage Floriculture and home adornment, by bringing such influences to bear upon it as shall arouse and set into action this love. It may be nearly crushed out of the majority of the householders of this age, in some by greed of gain, in others by the trials and hardships of pioneer life, but it never entirely dies, but if it did, we might teach



their sons to raise fruits and their daughters to cultivate flowers which would give them present gratification and lead them onward and upward to future happiness and let the world and "old folks" know that wheat and pork is not all that gives enjoyment in this life. To further this end, I hope our Society will hold Floral exhibitions and award premiums, not so much to remunerate the professional gardener as to encourage the sons and daughters of the farmer and mechanic.

I am not satisfied with what I have said on this subject. Had I the talents of a Clay or Webster, or had I the eloquence of a Patrick Henry, could I speak with the tongues of fire and paint in pictures of gold, I would exhaust them all in trying to persuade my fellow Minnesotians to beautify their homes. Never, never, can I forget the expression of joy that I have seen light up the eyes of the toil-worn, almost broken-hearted, wives of farmers at the sight of a rose-bud or geranium leaf, and then, what sadness came over them when the husband was asked to purchase a little plant for them, and replied by asking what they wanted with such trash. I would be most happy if I could influence their husbands and sons to raise a few flowers or at least furnish them for their wives and sisters to cultivate. I do not hope to transform our whole State in one generation. There are men whom we cannot reach by any direct means. They do not subscribe for any Agricultural or Horticultural papers, or read any books upon these subjects. They cannot see any beauty in the row of shade trees along the roadside, or any utility in the flower-bed, and think the doorway is the finest kind of a place for pasturing the calves. They know just what their fathers did and no more. They will not become members of this Society because they do not see the dollar's worth in it, and will never have any fruit except what they purchase or is given to them, and there will be such a dreary, repelling air about their bleak homesteads that their children will desert them and leave them to spend their declining years alone, because there is no memory of pleasant associations and happy days clustering about the old home.

I will now conclude with a few suggestions: First, we should secure a hall or room in some town that is easy of access, and commence making a collection of Horticultural books, papers, magazines, &c. We should adopt measures to secure the annual reports of all the State Societies in the Union. We should gather a collection of one or more specimens of every variety of fruit that originates in the State, to be preserved in wax or by colored plates, accompanied with the name, place of origin, history, and name of originator. We should also get up a museum of Ornithological and Entomological specimens, accompanied with the history of the habits of each individual specimen. Such a museum would prove an interesting feature in our future exhibitions. To secure this we must have money, and I recommend that we memorialize the present Legislature to appropriate for our use \$1,000 per year. This is certainly a very modest sum to ask for, when we consider the vast amount of money that would be saved to the State if we can raise our own fruit.

I would recommend for your consideration the establishment of one or more specimen orchards in the State, in which every new variety of fruits can be tested before they are offered for sale, and where a system of experiments could be carried

on in the way of originating new varieties by the artificial hybridizing of the seeds. I am aware that this is a tedious and uncertain work, but we may reasonably expect more from it than if we trust to the winds and bees.

I think that it would be of great benefit to this Society and the State at large to be represented at the next meeting of the American Pomological Society, and therefore I suggest that before we adjourn this annual meeting we appoint a delegate who will represent us and exhibit of our fruits, and ask the State to defray the expense.

I notice that the practice of warranting trees to live is becoming very prevalent among nurserymen. I think this practice is very unwise and a disadvantage to the honest purchaser. It gives the tree peddler who hails from unknown parts and never expects to sell in the same locality the second time, an advantage over the honest nurseryman who is striving to build up and maintain his reputation by selling only hardy and perfect stock, because this peddler's trash can be furnished for less than half of the cost of raising and marketing such trees as are wanted in this State, consequently the nurseryman is compelled to raise cheaper stock and the purchaser is tempted to neglect giving the proper care in planting and cultivation because he expects to get a new tree next year for every one that dies. I know of one man that has his row of dead trees, keeping them as carefully as others do the living, and will not purchase any more because he expects the agent to come around and give him some live ones. I think those dry branches will bud, blossom and bring forth fruit long before that agent comes back and makes the warrant good; also, if the nurseryman is compelled to make good the losses of the careless planter, he must make up for the loss by charging a higher price to the careful, which, to say the least, is unjust. I do not know that we can take any direct action upon this, but it is worthy of our notice.

Gentlemen: We have accomplished something. Let us continue untiring in our work until every home in our State becomes a second Eden, until our beautiful prairies become dotted over with orchards, gardens, and groves of deciduous and evergreen trees, and the beautiful landscapes that border the great Father of Waters are crowned with residences that rival those upon the Hudson.

I now retire from the office of presiding over your meetings, wishing that we may enjoy many such in the future, and that in all our meetings there may be no envy, no jealousy, and that all of our discussions may be profitable to ourselves and useful to others, that all members may have a desire to receive and a willingness to impart information, and if at any time any member is more successful than we in the pursuit of Horticulture, let us rejoice with him and learn of him.

On motion of Col Stevens, the thanks of the Society were tendered to President Harris for his very able and instructive address, and it was requested for publication.

Mr Harkness, from the committee on Topics, reported as follows concerning fruit trees.

Your committee would recommend that each variety in the list be taken up separately and its merits discussed, and that the vote be taken either to recommend it for general cultivation, or for trial, or to strike from the list.

The report was accepted. Mr Darrt moved that no member speak

more than two minutes and but once upon any one variety. Adopted.

The several varieties recommended were then taken up and adopted without opposition, with the following exceptions:

Mr. Jewell moved to pass over the ash leaved maple or box alder as an ornamental tree. Lost.

Gen Nutting said it was a good sugar-producing tree, and grew extensively near Fort Abercrombie. Had seen it two or three feet in diameter. Mr Jewell said it had been decided not profitable as a sugar-producing tree in Illinois. Mr Harkness said it was highly recommended for that purpose by the Ill. Horticultural Society.

It was placed on the list.

Mr Harkness moved to strike out the Lombardy poplar. Carried.

A motion was made to strike out the chestnut. Messrs Nutting, Stevens and Jewell mentioned that the tree had proved a success in various places, though they had killed back for the first one or two years. Mr Elliott had failed both with the young trees and the seed. Motion to strike out carried.

Motion made to strike white oak from the list. Tree defended by Mott, Howe and Harkness. Lost.

Mr Harkness inquired about American larch. It had not made half the growth of the European with him. Thought it would not succeed on high and dry land.

Mr Elliott had pulled trees out of the swamp and planted them on dry sandy prairie with success. Some were now five inches through.

Mr Jewell favored the European larch. It was a fast grower and would last as long as the red cedar, while the American would not last as long as the white cedar.

Motion to adopt the American larch was lost, and Convention voted to strike it from the list.

On the suggestion of members other trees were added to the list, which, as finally adopted for general cultivation stands as follows:

European larch, blue and white ash, cottonwood, soft maple, ash leaved maple, black walnut, white or rock elm, sugar maple, Scotch pine, white pine, butternut, white oak, red oak, American spruce, Norway spruce, basswood or linden.

On motion, the same committee was directed to report a list of ornamental trees for general cultivation.

The committee submitted a list which was read by the secretary.

A motion was made to strike soft maple from the list. Mr Harkness thought it a good tree. The frequent splitting of the limbs arose from the practice of cutting off the natural top in transplanting, leaving only a pole. Gen Nutting didn't believe a healthy tree of a foot through could be found in the woods or out of it. The bark became diseased. Mr Hoffman thought the trouble might arise from the common practice of bending trees down, or twisting them to get them out of the ground when taken up. Mr Darrt thought the greatest objection was its liability to be affected by borers.

The motion to strike out was lost. Bird Cherry and Balm of Gilead were stricken off.

Mr Cook moved to add the Buckeye or Horse Chestnut to the list. Lost.

The list was adopted, complete, as follows: Norway Spruce, Scotch Pine, European Larch, Siberian Arbor Vite, Hackberry, Dwarf Pine, Ash-leaved Maple, American Hop tree or Iron wood, Balsam Fir, American Spruce, American Strawberry tree or Wahoo, Soft Maple, Rock Elm, Mountain Ash, Black Cherry, Black Walnut, Sugar Maple, Austrian Pine, Butternut,

White Birch, High-bush Cranberry, Red Cedar, Kentucky Coffee tree.

On motion of Mr. Jewell, the 8th topic was made the special order for the evening.

Mr Harkness moved the appointment of a committee of three to nominate standing committees, and designate subjects for their consideration. Adopted.

The president appointed L Nutting, J. W. Harkness and P. A. Jewell.

WEDNESDAY EVENING, JAN. 18.

Convention called to order by the president.

The treasurer's report was read and adopted. The balance in the treasury was \$64.17.

Mr Darrt offered the following resolution:

Resolved, That no variety of fruit should be recommended for cultivation by this society until its value is fully known, and the stock is sufficiently increased so that the demand can be supplied at reasonable rates.

After considerable discussion was laid on the table.

The report of the committee on Topics for standing committees not being ready to report the convention proceeded to discuss the 8th topic:

The value of the different varieties of apples, pears, cherries, plums and prunes—their hardiness, productiveness, quality and season.

Col Stevens inquired if the Winona Chief, Nonpareil, Lucy and Utter's Red were not the same variety.

Mr Jewell had seen and examined the trees and fruit and believed them to be identical. Other members were of the same opinion.

Mr Harkness presented a list of apples, and the convention proceeded to discuss the different varieties separately.

The Haas was first taken up.

Col Stevens said it is becoming much cultivated. It is very hardy, as much so as the Duchess of Oldenburg. Does well as far north as Anoka, all through the Big Woods, and in fact in most parts of the State, and upon all kinds of soil.

Mr Waters, of Wis., stated that the fruit was originated, or at least was first brought to notice in 1804 on the present site of St. Louis. 40 years afterwards the tree was living and bore 30 barrels of fruit in one season, which would prove it a long liver and its productiveness. Trees are very thrifty. Have always proved hardy in Wis.

Mr Jordan thought it not so hardy as the Duchess of Oldenburg; tips sometimes freeze but never injures the tree. He mentioned instances of orchards dying out, the Haas alone remaining sound and healthy. No tree in Minn has given better satisfaction. It should head the list; is of red color, good size and No. 1 flavor.

Mr Hoffman said it is a very rapid grower and very thrifty, more so than the Duchess of Oldenburg; had seen many fine specimens in different parts of the State.

Mr Waters had trees bear in 4 yrs from the graft. Fruit is rather tart. Thought it would keep till Dec.

Mr Jewell had known the fruit to keep till March when picked early.

Mr Humphrey said it would keep till May. Mr Hoffman has trees 3 and 4 yrs old full of blow buds.

A motion to place on list and recommend for general cultivation carried unanimously.

Duchess of Oldenburg—On motion it was placed upon the list and recommended for general cultivation.

Tetofsky—Mr Leland calls it a first-class apple. Season from 1st to 15th of August; size about as large as the Haas. Tree rather a slow grower.

Mr Jewell thought it not so large as the Haas—about the size of the Golden Russett.

Mr Jewell said it should be carefully treated. Many poor trees had

been sold, hence the failure to do well in many cases.

Mr Elliott had bought some poor specimens three years ago. They are good trees now. Must be hardy or they would have been dead.

Mr Darrt thinks cutting off the top injures the tree; thinks it as hardy as any tree on the list; grows slowly first year; more rapidly afterwards; bears at 4 to 6 years old; would make a good dwarf; has seen 9 large apples on a tree 18 inches high.

Mr Darrt described the trees as stocky and straight; limbs curve upward; bark is of reddish color especially during the latter part of winter and in spring. Foliage unusually large.

Motion to adopt for general cultivation carried unanimously.

Fameuse—Mr Jewell thought it a good variety; would not do so well on sandy soil; On clay soil, near to water, or protected by bluffs or timber, it is a first class tree, would recommend it for favorable localities.

Motion to place on list for only the most favorable localities was carried unanimously.

Perry Russett—On motion it was recommended for favorable localities.

Red Astrachan—Recommended for cultivation in favorable localities.

Ben Davis—Mr Jewell thought it would do well; has not been tried sufficiently to recommend for general cultivation. On motion it was recommended as well worthy of further trial.

Golden Russett—After some discussion it was recommended for favorable localities.

Autumn, or Early Strawberry—(It was decided that the Autumn and Early Strawberry are different varieties.) Mr Darrt regarded the Autumn as hardy as other on the list for favorable localities.

Mr Humphrey considered it as hardy as Fameuse or Perry Russett. Motion to place on list for trial was carried; three dissenting votes.

Saxton or Fall Stripe—Mr Humphrey considered it as hardy as the Duchess of Oldenburg; is a good apple and very productive.

Mr Jewell said the Saxton is hardy, but not sufficiently so for all situations.

Mr Brand has been watching the Saxton for three years; thinks it will succeed where the Duchess of Oldenburg will. On motion it was recommended for favorable locations with two dissenting votes.

Motion to recommend the remainder of the list for good locations—the remainder of list comprising the following varieties:

Talman Sweet, Plumb's Cider, Sops of Wine, St. Lawrence, Price's Sweet, Alexander, Seek-no-farther, Rambo, Fall Orange and Wine Sap.

The list was discussed at some length and the Sops of Wine, Seek-no-farther, Rambo, and Wine Sap were struck from the list.

In answer to inquiry it was stated that the Sops of Wine and Early Washington are the same variety.

Convention adjourned to 8:30 tomorrow morning.

THURSDAY MORNING.

The Convention assembled pursuant to adjournment, the president in the chair.

The minutes of the preceding meeting were read and approved. Wyman Elliott introduced the following:

Resolved, That we recommend a more general cultivation of small fruits and flowers among the farmers of this State, and that in our opinion it will be the means of inducing the most of our boys and girls to stay at home and help develop and adorn the homes of their fathers and mothers, who, after the hardships and perils of pioneer life, need quiet and repose.

Resolution adopted.

A resolution introduced by Mr Elliott was also passed, enjoining upon members the duty of collecting varieties of apples.

Mr Leland moved that the Society recommend to every one to buy of home nurseries exclusively.

The motion was opposed by Mott, Jewell, and others.

Mr Jewell moved that it be tabled. Carried.

The subject of apples was called up. Mr Jewell moved to place the Phoenix upon the list for trial in favored localities. Adopted.

Mr Jewell presented a handsome seedling apple originating with him and requested Mr Mott to name it. It was named the "Bonnie Lassie."

Mr Jewell moved the recommendation of Utter's large red for cultivation in favored localities.

Mr Leland recommended the Lucy.

Mr Jewell thought it identical with Utter's large red, Winona apple, Cooper's and Winona Chief.

Mr Jordan said the Utter's red had been sold about Rochester and in every instance had proved a failure. Mr Waters had been disappointed in it. Thought it would do in but few localities. Mr Darrt thought it an abundant bearer, but could not be safely recommended for Minnesota.

Mr Jewell's motion was adopted.

The hour having arrived for visiting the Asylum, the Convention adjourned to 1½ P M.

THURSDAY AFTERNOON.

Convention called to order at the hour of meeting, by the president.

On motion, proceeded to election of officers:

R J Mendenhall, of Minneapolis, E H S Darrt, of Owatonna, and M W Leland, of Blue Earth, were nominated for President.

Mr Mendenhall, having received all the votes but four, was on motion, declared unanimously elected.

The following officers were also elected by a unanimous vote:

1st Vice President, E H S Darrt, of Owatonna; 2d Vice President, M W Leland, of Blue Earth; Corresponding Secretary, J W Harkness, of Faribault; Recording Secretary, A W McKinstry, of Faribault; Assistant do., C D McKellip, of Faribault; Treasurer, Wyman Elliott, of Minneapolis.

Mr Mott moved that the officers elect constitute an Executive Committee, and have the general interests of the Society in their charge. Carried.

President Harris, on resigning the Chair, made a few well-chosen remarks, expressive of his thanks for the good will manifested toward him by the Society during his Presidency, and his hearty wishes for its prosperity.

In the absence of the newly elected President, the 1st Vice President, Mr Darrt, assumed the Chair.

Mr Jewell moved that the thanks of the Society be tendered to the late President for the able and efficient manner in which he had discharged the duties of his office.—Unanimously adopted.

Mr Jewell moved a vote of thanks to the officers and teachers of the Institute for the Deaf and Dumb and the Blind, for the courtesy extended to them in the invitation to visit the Institution, and their treatment while there. He accompanied it by some remarks eulogistic of the objects of the Institution, and setting forth its claims upon the public. Unanimously adopted.

Col Stevens offered the following resolution:

Resolved, That the State Horticultural Society, in convention assembled, do hereby tender our best thanks to the people of Faribault, for the warm manner in which they have extended the hospitalities of their beautiful and enterprising city to the



members of this convention, assuring them that we feel grateful for these attentions. Unanimously adopted.

On motion of Mr. Leland, convention proceeded to the discussion of small fruits.

Mr. Nutting moved that each member be allowed to take up such variety of small fruits as he chose, and speak upon it ten minutes.—Passed, with an amendment limiting the time to five minutes.

Mr. Howe moved to recommend the early Richmond cherry for general trial.

Mr. Cook moved to amend by substituting general culture.

Mr. Leland's experience was that it was vain to attempt to cultivate tame cherries.

Mr. Cook knew it to be perfectly hardy, and a good bearer.

Mr. Nutting had had two trees; one was killed, the other grew six or seven feet high, but never bore a cherry, and had sprouted all over his yard.

Mr. Jewell said the tree was probably not early Richmond, as that never sprouted unless budded on some other stock. Believed the tree only adapted for favorable locations. Would amend that it be recommended for favorable locations.

Mr. Harkness thought it hardy when propagated on Morello stocks.

Mr. Jewell's amendment was lost, and the original motion carried.

Mr. Harris moved to recommend the Concord grape for general cultivation. He thought of all the grapes it was best adapted for general introduction. There were better grapes; he could make more money from the Delaware or Iona, but they required a care in cultivation that the great majority of farmers would not give; recommended the Delaware to every person who is willing to take the proper care of it; it is a slow grower, and is from four to six years in coming into bearing. Gave his system of training, as follows:—would buy one year old No 1 vines, in the Fall; prune back to three or four buds; cut roots back one half, and plant in Spring, 8x8 feet apart, and deeper than they grow in the nursery. After the vine commences growing fill up around it till the top bud is just above the ground; prune down in November to three or four buds; next Spring allow two buds to produce branches; in the Fall cut one down to three eyes, leaving the other to produce fruit; the following Spring let one bud sprout from the lower spur, and make it grow all that it will, to serve as a fruit-producing cane the next year, while the cane produced the previous year is allowed to bear; in the Fall cut down the cane that has fruited to two or three buds, and thus alternate yearly thereafter.—The grape grower must in pruning invariably make calculation for one year ahead; must not suffer too much foliage, but it will not do to strip it off in summer; clusters must be produced in the shade; the sun ruins them; pinches off laterals, but not the ends of the vines. It is useless to plant in springy ground; cultivation must be clean in the fore part of the season.

Mr. Leland raised Concord; laid them down in fall and covered with dirt; cautioned against uncovering too early in Spring.

Mr. Jewell said the Delaware often failed by reason of the manner in which it had been propagated; if one wants strong healthy plants they must always get an old wood layer; he preferred Rogers' Hybrids to the Concord. Recommended Nos. 3, 4, 15 and 19.

Mr. Harris' resolution concerning the Concord was adopted.

Mr. Harris moved that layered vines of the Delaware be recommended for general trial. Carried.

Mr. Jewell moved that Rogers' hybrids, Nos. 3, 4, 15 and 19 be also recommended for general trial.

Adopted. Mr. Harris thought the Iona was doing well; much better than when Dr. Grant sent it out. Moved it be recommended for general trial when propagated by layering the old wood.

Mr. H. stated in answer to inquiry that he had fruited it three years. Motion lost.

Mr. Jordan moved to recommend the Clinton for general cultivation. Lost.

Mr. Harris spoke in favor of the more general cultivation of currants. Mr. Mott had been very successful with the currant. Recommended it highly. Mulched his with chip dirt.

Mr. Leland condemned the Cherry currant. It was a poor bearer and not very hardy. Moved that the Red and White Dutch and White Grape be recommended for general cultivation. Adopted.

Mr. Leland moved to recommend Doolittle's Black Cap Raspberry for general cultivation.

Mr. Jordan moved to amend by recommending Philadelphia Clark and Doolittle.

Mr. Harkness moved to amend by substituting Philadelphia Miami and Doolittle. Lost.

Mr. Mott spoke highly of a native Black Cap he had procured in the woods; was better than the Doolittle. Had fruited it eight years. Moved to amend by placing best native varieties of Black Cap at head of list. Lost.

Mr. Jordan moved to amend by adding Purple Cane. Lost.

Mr. Elliott moved to add Seneca Black Cap to list. Lost.

The question was then put on Mr. Jordan's first amendment and lost.

Mr. Jewell moved to amend by placing Philadelphia at the head of the list. Carried.

Mr. Leland's motion as amended was then adopted.

Mr. Harris moved that Mr. Hoag's Black Cap, a native Minnesota variety, be recommended for general trial.

A motion to amend by naming it the Harkness Black Cap Raspberry carried, and the original motion as amended, was adopted.

The following strawberries were then, on motion of various gentlemen, recommended for general cultivation:

Wilson's Albany, Downer's Prolific, Brooklyn Scarlet, and Green Prolific.

Mr. Harkness moved to recommend Russell's Prolific. Lost.

Mr. Brand moved to recommend the Flemish Beauty Pear for cultivation in favorable locations.

Messrs. Cook, Jewell, Waters and Harris all testified to its hardiness. Thought it as successful as the apple, and a delicious fruit.

Mr. Cook moved to amend by substituting "for general cultivation." Adopted, and motion carried as amended.

Adjourned to 7 o'clock in the evening.

THURSDAY EVENING, JAN. 19th. Convention called to order by Vice President, Dartt.

On motion the subject of Plums was taken up.

A motion was made to place the Lombard Plum on the list for general cultivation, which was lost. This plum was considered by several members as the best English or tame variety, but is not hardy enough for our climate.

Mr. Elliott presented the Harrison Peach Plum, and exhibited some specimens of fruit which were very fine. It was brought to notice by Mr. William Harrison of Minneapolis. Its origin is not known—probably a native plum. Bears much resemblance to the peach.

On motion the Harrison Peach Plum was recommended for general cultivation.

Mr. Elliott also introduced the Newton

Egg Plum, and moved to place on the list. It is a fine variety of the native plum. The question being discussed the motion was withdrawn, as many objections were made to recommending any variety of the wild plum when there are so many good varieties in almost all parts of the State that would prove worthy of cultivation if only brought to notice. The following resolution was passed:

Resolved, That this Society recommend for general cultivation and improvement the best varieties of the native plum.

Mr. Elliott proposed making a list of the names of persons having choice varieties of plums and placing it on the records of the Society. A motion to this effect was carried, and the list was made out as far as possible, as follows:

LIST OF PERSONS HAVING CHOICE PLUMS.  
S. Kenworthy, Garden City, Minn., large red.  
H. W. Mendenhall, Garden City, Minn., large yellow.

C. P. Cook, Garden City, Minn., large purple.  
Nathan Fisher, Beaver, Winona Co., Minn., choice variety.

E. B. Jordan, Rochester, Minn., Seedlings.  
Ira Walden, Rochester, Minn., Golden Drop.  
A. W. Sias, Rochester, Minn., nice variety.  
Chas. Hoag, Richfield, Minn., 2 varieties.

St. Anthony, Woodcock.  
Mr. Peck, St. Anthony, extra variety.  
E. B. Rice, ———, purple variety.

Dr. Wright, Rosemount.  
Wm. Harrison, Minneapolis, Peach, Big Red, Apricot—No. 1 and 2, and Long Yellow.

Mr. Grover, Richfield.  
Peter M. Gideon, Excelsior, Minn., Excelsior plum.

Charles Waters, Springville, Wis., large red.  
The Committee on Standing Committees and Topics presented their report which was accepted, and adopted, with slight amendment, and Committees appointed as follows:

Mr. President and Gentlemen:—Your committee beg leave to recommend the appointment of the following Standing Committees: 1st—A Committee on fruit lists, whose duty shall be to prepare a list for the consideration of the Society, of all fruits they deem worthy of cultivation.

Wyman Elliott, P. A. Jewell and J. S. Harris were appointed such committee.

2d—A Committee to present a list of useful and ornamental trees and shrubs, whose duty shall be the same as that of the first named.

C. P. Cook, M. W. Leland, and Hoffman were appointed committee.

3d—A committee to prepare a premium list on fruits flowers and plants, to be presented to the State Agricultural Society for their consideration.

Wyman Elliott, R. J. Mendenhall, and N. Washburne appointed such committee.

4th—A committee of arrangements to superintend the annual exhibition.

J. W. Harkness, P. A. Jewell, and E. H. S. Dart appointed such committee.

The subject of warranting trees by nurserymen was brought up and discussed fully.

The practice of warranting trees is thought to produce bad results, both to purchaser and seller, inasmuch as higher prices must be charged for stock, in order that the nurseryman may save himself in making good the losses from carelessness on the part of the planter. The purchaser will not be as careful if his trees are warranted as if he had to stand the loss in case of neglect. If higher prices are asked by home nurserymen, agents from other States or distant parts will come in and undersell, warranting their stock, which warrants they never fulfill. The planters should purchase of none but well known and responsible men, which would tend to make all tree dealers more honest; and if trees were not warranted the planter would become more careful.

The following resolution, offered by Mr. Jewell and adopted by unanimous vote, embodies the sentiment of the Convention:

Resolved, That in the estimation of this Society, the practice of warranting trees, further than to be of good quality, true to name, and in good condition at the time of delivery, is highly injurious to the purchasing public, being calculated to encourage carelessness in planting and after care.

On motion, two delegates were appointed to apply for admission to the State Agricultural Society, to represent this Society in the next meeting of that body. J. W. Harkness and Wyman Elliott were appointed.

On motion the Secretary was instructed to purchase one hundred and fifty copies of the Faribault REPUBLICAN, containing the proceedings of the convention, to be distributed among the members of the Society, and sent to certain other persons and societies.

On motion of Mr. Harris, the Executive Committee were instructed to call a meeting of the Society in the month of July next, if deemed expedient.

The Convention then adjourned, to meet again at such time and place as the Executive Committee may designate.

E. H. S. DARTT, Vice Pres't.  
A. W. McKINSTRY, Rec. Sec'y.  
STATE HORTICULTURAL SOCIETY

FIRST DAY.

MINNEAPOLIS, Jan. 9th, 1872.

The annual winter meeting of the State Horticultural Society convened at Kelly's Hall, Minneapolis, at 10 o'clock, A. M.

The meeting was called to order by the President, R. J. Mendenhall. At his suggestion the exercises were opened with prayer, by Rev. Mr. Fuller, of Lake City. Col. J. H. Stevens, of Hennepin county was appointed Secretary pro tem.

On behalf of the citizens of Minneapolis, Col. Stevens delivered the following address of welcome to the delegates:

Gentlemen of the State Horticultural Society: In behalf of the citizens of Minneapolis I bid you a most cordial welcome. They feel highly honored and gratified that your society, in its wisdom, selected this city to hold your annual meeting. They will endeavor to make your sojourn pleasant. They ask you to gather around their firesides as valuable guests. They fully appreciate and recognize the great worth of your labor, not only to the present but to the future generations.

Judge D. A. J. Baker, of Ramsey county, moved that Messrs. Elliott, of Hennepin county, Hart & Burd, of Winona and Brimhall, of Ramsey be appointed a committee to bring forward topics for discussion during the session of the society. After a discussion upon the subject of appointing a committee on nomenclature, in which Messrs. Jewell, Elliott, and Judge Baker took part, the society adjourned till 2 P. M., the subject under discussion being laid over till to-morrow.

AFTERNOON SESSION.

Owing to the time consumed in arranging specimens of fruit, the meeting was not called to order until 3 o'clock, Mr. Mendenhall in the chair.

The matter of making some change in the committee on nomenclature was brought up, and some changes suggested, but the matter was again laid over until to-morrow, to await a further attendance.

The committee on order of business reported the following

PROGRAMME:

TOPICS FOR DISCUSSION.

1st. Apples (including seedlings). Relative value of different varieties, embracing the question of hardiness, productiveness, quality and keeping.

2d. Site for orchard; manner of planting, mulching; time and method of pruning.

3d. Top-working, grafting, budding.

4th. Insects; injuries to trees and fruits.

5th. Pears; varieties; standard or dwarf.

6th. Cherries; varieties for cultivation.

7th. Plums; varieties; native and cultivated.

8th. Small fruits—raspberries, blackberries, strawberries, grapes, currants and gooseberries.

The committee recommended that each speaker be limited to five minutes on each question, unless by unanimous consent of the convention more time be given. Adopted.

On motion the following resolution was adopted:

Resolved, That D. A. J. Baker, of Ramsey county and Norman Buck, of Winona county, be and are hereby appointed a committee to present a memorial to the Legislature and solicit their favorable action thereon.

The following memorial was prepared by the committee and accepted by the convention:

To the Honorable, the Legislature of the State of Minnesota:

The memorial of the State Horticultural Society in convention assembled would respectfully represent to your honorable body that the State Horticultural Society is now holding its annual meeting in the city of

Minneapolis, and they petition your honorable body to visit the Society while in session, on Wednesday, the 10th, or Thursday, the 11th inst., for examining the fruit on exhibition.

The Society deem it important to add that the fruit on exhibition is all raised within this State, and as an emigrant document the Society is persuaded that it cannot fail to exert a powerful influence in inducing emigrants to make our State their future home.

If the public business is such that the members of the Legislature cannot visit the Society in a body, it is hoped that a joint committee may be appointed for that purpose. And your petitioners will ever pray.

R. J. MENDENHALL,  
President State Horticultural Society.

CHAS. D. MCKELLIP, Sec.

The first topic for discussion was taken up, viz: Apples, different varieties, &c., as per programme.

Red Astrachan.—Mr. Jewell, of Lake City, said: The tree is a moderate grower, very hardy, late in coming into bearing. Does not bear largely every year. Would recommend every man to plant a few trees.

Mr. P. M. Gideon, of Excelsior, had some experience with the variety. Considers it rather inferior; late bearer; fruit not perfect; would not recommend planting.

Mr. Brimhall, of Ramsey county, had grafted on Soudard, here in four years quite hardy; as hardy as Fameuse.

Mr. Buck, of Winona county, has some trees; would not recommend planting largely.

Mr. Hart, Winona county, has a few trees; if setting an orchard would not plant as largely as of some other varieties. Thinks it is a very good apple, however.

Mr. Grimes says it is late in coming into bearing; fine looking apples; quality second class. Hardy as Fameuse in many locations as far north as Minneapolis; would plant sparingly.

Mr. Bates, of Rollingstone, Winona county, has a tree set same time as some Perry Russels and Tamouse, but did not bear as well as the latter.

Saps of Wine.—Mr. Freeman, Smith has a few trees of this variety. Does not consider them first-class.

Mr. Gideon—Tree hardy as the Red Astrachan. Fruit perfect. Would recommend planting.

Mr. Hoffman of Hennepin county—Tree appears perfectly hardy. Thinks it a good bearer.

Mr. Latham, spoke in favor of this variety.

Mr. Jewell, says there are a few bearing trees in southern Minnesota. Thinks the fruit better for eating than the Red Astrachan, but not so good for cooking purposes.

Mr. Truman Smith thinks it not so sprightly in flavor as the Red Astrachan.

Tetofsky.—Mr. Latham believes in the Tetofsky.

Rev. Fuller said, in Wisconsin people are very enthusiastic over this variety where it has been in bearing.

Mr. Smith has some trees; fruit good but very tart. Tree hardy as Duchess of Oldenburg.

Mr. Hoffman considers it as hardy as any of the crabs.

Col. Stevens has trees that have borne for three years; hardy and good fruit; prolific bearer; the earliest apple.

In answer to a question, Mr. T. Smith said he has a variety he bought for early strawberry that is earlier than the Tetofsky, which has ripened as early as July 15th.

Mr. Jewell said, in his experience, the

too slow a grower to be a popular variety in nurseryman's hands, liable to be dropped in growth for trans-planting, but being perfectly hardy, an early bearer, and maturing its fruit the last of July or first of August. Should have a place in every man's orchard.



Mr. Bates, of Stockton, had top-grafted on a seedling tree; rapid growth was made and some fruit had been borne.

Mr. Jewell—Season, last of July or 1st of August.

Mr. Cook, of Blue Earth county, thought best to recommend or discard varieties as their qualities were brought out by discussion; would recommend the Tetofsky for general cultivation.

Mr. Gideon objected to recommending any variety, for various reasons, especially on account of foreign tree agents palming off other varieties for those recommended.

Several similar objections were made.

Golden Pippin—Mr. Gideon thinks it a good apple.

Mr. Cook says it is good; ripens early; hardy as the Duchess.

Q. Is golden pippin and Grimes' golden pippin the same variety. Mr. Gideon said they are distinct varieties. Mr. Jewell knows but one tree in bearing in the State, which is in the grounds of Mr. Harris at La Crescent.

Full Stripe—Mr. Brimhall has 10 trees of this variety set 10 years ago; have fruited three years; fruit sells well.

Mr. Gideon—It is a good apple; succeeds well, especially on clay soil; has not done so well with it on loamy soil.

Mr. Jewell—The full stripe or Saxton is a very satisfactory tree for either nursery or orchard. When trees become old fruit is small on account of excessive bearing when young. Very decidedly in favor of full stripe; safe and profitable.

Perry Russet—Mr. Brimhall has trees that have been set 10 years; killed back first and second years; have borne three years; most valuable winter apple.

Mr. Goodyear, of Blue Earth county, has trees in bearing; bear large crops, nice trees and hardy.

Mr. Gideon—Profitable to grow on clay soil. Not successful with him.

Mr. Hoffman said trees at Mr. near Minneapolis, were doing well.

Mr. Bates—No fruit has values more highly. His orchard is on northern exposure; soil loam, with clay subsoil; keeps until January; late bearers.

Mr. Bates has one tree 15 years old that produced 13 bushels of fruit, sold for \$2 per bushel in Winona. Would recommend it.

Full Orange—Mr. Truman Smith has a tree that bore so heavily that it broke down. Mr. Brimhall considers it one of the best varieties in the State.

Duchess of Oldenburg—This acknowledged hardy variety was discussed at considerable length. Its objectionable features are that it is too sour; will not keep; dealers do not like to buy much of a stock at a time. It was thought best not to reject it just yet.

Ben Davis—Mr. Smith—A good apple; one of the best; bears in four years from the graft; good keeper.

Convention adjourned till 7 o'clock.

#### EVENING SESSION

Called to order at 7 o'clock.

Discussion of the Ben. Davis was continued.

Mr. Jewell—A good variety; does not grow as large with us as it does further south; quality second good; keeps until April and May, and even till June; would recommend for planting largely bears early.

Mr. T. Smith does not mulch or protect any way in winter; clean cultivation as good as mulching.

Mr. Bates—Had apples in four years from graft; valuable winter apple; raised largely in Winona county.

Golden Russet—Mr. Latham—Trees seven and eight years old in Excelsior have the past season never killed down.

Mr. Brimhall does not consider it as hardy as Fameuse or red astrachan.

It has not done as well with Mr. Truman Smith as some other varieties.

Mr. Jewell thinks there are 500 trees of English Golden Russetts in Minnesota. Thinks it as hardy as any tree we have; no fruit that keeps better; as good quality as the Ben. Davis. It is sometimes confounded with American Golden Russet; subject to blight, especially in southern Minnesota and in northern Iowa it is discarded almost entirely. Aside from blight it is an indispensable variety.

Fameuse—Mr. Truman Smith has trees twelve years old; borne crop five years; fit to eat in October; can be kept till April. If confined to one variety would choose the Fameuse; no apple retails so well in St. Paul.

*And it was decided not to recommend any variety, but let the discussion go for their worth of Golden Pippin*

*Apt to overbear*

*Blaisdell he*

*which*

*m*

*in*

*borne*

*9*

Vendome—Was called up, but no one present knew anything about it.

Summer Pearmain—Mr. Hart thinks it one of the very best apples.

Mr. Stubbs has a tree that bore heavily, but quite a different apple from Mr. Hart's specimen.

Mr. Bates—Quite hardy; as much so as any variety he has in his nursery.

Early Red—Mr. Smith—Medium size; spreading tree; dark wood.

Blue Pearmain—Mr. Gideon has trees ten years old; hardy as Duchess; does not grow as rapidly or bear as early, but bears profusely; good keeper; will keep till spring; no apple safe to plant; bore fruit for him at seven years old.

Mr. Buck says it is very hardy; bears heavily; good keeper; would recommend planting largely.

Westfield Seed-No further—Mr. Smith thinks it a good apple.

Mr. Leland says it is his favorite fruit; trees tender when young; apt to blight; will do well along the Mississippi, among the bluffs.

Mr. Bates has had good success with it in nursery; should be planted in sheltered locations.

Haas—Mr. Smith has sold the Haas fruit grown in Minnesota, and has trees growing; second rate desert apple, but first-class for cooking; sells well.

Mr. Brimhall had trees bearing at seven years; valuable variety for this climate.

Mr. Latham knows of many Haas trees; will kill back a little of the last year's year's growth but not enough to injure the tree.

Mr. Jewell says it is a strong grower; points of limbs stiff, but does no injury to the tree, as is the case with some other varieties; bears early; second grade in quality; showy; markets as good fruit as Ben. Davis; no winter variety any better.

Mr. Jewell said the Haas and the Horse apples are entirely different.

Northern Spy—Large and handsome specimens were presented by Mr. Truman Smith.

Mr. Leland says it is not as hardy as Haas or Duchess, but more so than the Tallman Sweet. Very late bearer; his trees were planted 14 to 16 years before they bore much; would not recommend for all parts of this State; tall grower; not suitable for the prairies; should be planted in sheltered locations, where they would be protected from the wind.

Mr. Leland said they bore heavily; considered them good fruit. There was a difficulty in gathering the fruit, and they were poor for shipping, on account of bruising easily.

Mr. Latham wanted to hear about the Plum cider apple.

W. E. Brimhall said that he had trees 10 years old that had fruited 3 years—fair eating apple—a good tart. The specimens shown were large. One tree he gathered 8 bushels from. His soil was heavy clay, with a south-east exposure.

Mr. Latham said he considered them the most hardy of any standard apple grown in his section. The Dutchess had been badly injured standing by them. They bore well. They rarely rot, and healed over from hail bruises. Better eating than the Dutchess, and as good cooking. Advised that they be raised.

Mr. Bates inquired what age before bearing.

Mr. Latham named a gentleman whose trees were 10 years old and had fruited four years.

Mr. Gideon had some trees that bore at about the same age. The fruit with him was inferior.

Mr. Brimhall reports that his experience showed them very good cooking.

Mr. Harris wanted to know what the characteristics were of a good cooking apple. He thought a good one was one that cooked tender and that had as good flavor after cooking as one eaten out of hand.

Mr. Smith wanted to hear from the Tallman sweet. He found that by combining crab with the Tallman they made good sauce. One of his trees had borne four years and was ten years old. They were not an entirely hardy tree. The fruit kept well, and he thought the tree worthy of cultivation.

Mr. Gideon had never fruited any; he had some, but did not speak highly of them.

Mr. Hoffman reports very favorably on this apple.

Mr. Harris' wife could not keep house without them. He raised 40 barrels last year. Three years ago he thought them the hardest he had. Two years ago the

*as*

*Harris of La Crescent*

*In seasons of late growth the tips of the limbs will back slightly well;*

*old commenced bearing*

*set out*

*for*

*The Soudard*

bark split, but he lost none. He saved them by earthing them up as far as frozen, and they made a good growth the same year. It is a profuse bearer, and is as good as anything the farmer could plant. Thought that every farmer should plant them. Was strongly in favor of it. He had another that looked like it, which he thought sweeter and richer, and would keep till July.

Mr. Bates did not take any stock in the Tallman sweet. He had lost many trees and thought that soon they would all be gone.

Mr. Jewell thought its record not good. In northern Iowa many trees were killed by bark rust. It however meets with some success. Thought there was a better sweet apple.

Mr. Stubbs had six trees and three of them lived and three did not; he thought them very good, but what he called the winter sweet he thought better.

Mr. Cook thought in some localities they would do well. Thought them slow in coming to maturity; thought them not a success in all localities.

Mr. Hart wanted to hear from the yellow belle flower.

Mr. Dart spoke favorably of it.

Mr. Jewell thought on rich soils it was one of the best trees grown, but could not recommend it for general cultivation.

It was concluded that Utter's Red, the Lucy and the Winona Chief were identical. Some claimed otherwise.

Mr. Bates was glad the question was brought up. He was not so certain about their being the same. Lucy and Winona Chief are not the same he thought. He wanted the matter sifted.

Mr. N. Harris had been on a committee to investigate the subject. He said you will see great difference in apples that grow on the same tree. Localities affected the same apple. He was persuaded that the tree were the Utter's Red. The trees were not perfectly hardy, but were a good tree.

Mr. Jewell felt no doubt about their identity. Had been of that opinion for two years. He cited many cases that went to prove them the same. They were identical probably with the Cooper.

One gentleman desired to know the distinction between species and varieties. The question being one that would call out considerable discussion it was thought proper to defer consideration on the subject until a future time.

On motion of Mr. Harris that part of the former action, which made 10 A. M. and 2 P. M. the hours of meeting, was rescinded and 9 A. M. and 1 P. M. named in place of those hours. On motion it was resolved that an invitation to be present at the meeting to-morrow be extended to the citizens of Minneapolis.

The meeting then adjourned till 9 o'clock Wednesday morning.

#### SECOND DAY.

JANUARY 10th, 1872.

Convention called to order at 10 o'clock by the President.

The President then proceeded to deliver the annual address.

Gentlemen of the State Horticultural Society:

When that worthy old veteran in horticulture, and one who has at heart the best interest of Minnesota—Col. John H. Stevens I mean—made the announcement, through the morning papers, that I would address you at this time, I felt then, and still feel, that some one else might better fill the place. But from his years and long service in the field, it seemed that it was his to command, my business to obey. And now, in doing so, I shall endeavor to be as brief as the occasion and object of our meeting will permit.

Since your last meeting another year, with its sunshine and shadows, has passed away—a year joyous and happy to many, and of grief and sorrow to some. Yet to most of those engaged in horticulture in this, the North Star State, the past year has been one of bright promise. Let us render unto God, the giver of every good and perfect gift, heartfelt gratitude for this, as well as for all other blessings he has so bountifully bestowed upon us.

Your labors during the past year have been crowned with more than ordinary success, even greater for your most sanguine hopes have been more than realized. You have seen the blossoms

*will not do well on sandy soil*

*Mr. Stevens thinks it will grow on sandy soil, and cited instances bearing*

*immature tree for nurseryman.*

*on clay soil it would do well; not extra hardy; tardy bearer on rich soils.*

*Distinction between Varieties?*

*ad*

of May ripen into golden russet and red-cheeked fruit in autumn. Allow me to congratulate you on the favorable auspices under which we have met, gathered as we now are, from the different sections of the State to hold this our annual and at the same time, our winter meeting. The season of the year is very opportune. The storm-king winter reigns without. It is a fit time for us to meet and compare notes, exchange experiences, relate to each other the failures as well as the successes that have attended our labors, to impart the *modus operandi* of our work in our chosen field. Doubtless many subjects will be presented for discussion about which there will be various opinions, and while I would recommend earnestness in the expression of our views, it behooves us to let our frankness be tempered with that charity that is not puffed up.

In our discussions we should take into consideration the various qualities of soil which surround our respective homes, and report our progress in the various matters so interesting and so necessary in the propagation of fruit and trees. Nor can we afford to neglect, in our deliberations, to discuss the best methods of cultivations of the most beautiful gift of heaven, the flowers and the plants which bear them, the absence of which, around our dwellings, gives our homes a dreary, cheerless and uninviting appearance.

Horticulturists are more dependent upon their associates who are engaged in the noble calling, than almost any other class of people. Theirs is a progressive life. New discoveries in the horticultural world are of daily occurrence; experiment upon experiment is constantly being made; new things and new theories are constantly coming to the surface. What a boundless field opens before the devoted and enterprising student in horticulture. Nor should our light be hid under a bushel, for what we know and what we have learned by hard and costly experience, we have no right, as good citizens of this great and growing State, to keep within our own breasts, but we should herald it forth with tongue and pen, and let our homes, our surroundings, our orchards, shade trees, flowers, and our lawns, blaze forth so brightly that any passer-by may know that no sordid selfishness reigns within.

Gentlemen of the State Horticultural Society, you should feel proud of your past years' efforts and success. The darkness that surrounded, and the heavy clouds that hung over your earlier efforts, have been dispelled.

Perhaps it would be premature to say that it is an established fact that Minnesota will be a great fruit-growing State yet. We are warranted from the experience of the past three years, in declaring that such is our belief, at least, in regard to the apple and small fruits. The experience of the past ten years is a sufficient guarantee. We have accomplished much. We have much yet to overcome; perhaps, however, not more than all new countries have had to contend with, although, in some respects it seems that ours is a peculiar soil, climate and exposure, and will require a cultivation peculiar to our State.

In what part of the world do we find such soil, such extremes of heat and cold, such winds, and where such droughts as we most always have pending the flowering and fruiting of that most delicate of all fruits, the strawberry? These subjects and the best method to overcome the difficulties, should claim your closest attention. No New England mode of managing fruit trees will answer here, nor can we adopt the Middle State method, nor yet that of Ohio or Indiana. We stand almost alone, though Western Wisconsin and Northern Iowa, perhaps, have similar difficulties to contend with. And, indeed, I think I would recommend the organization of a Northwestern Fruitgrowers' Association, to include Minnesota, Iowa and Wisconsin. I present this because I have had



some correspondence with the Wisconsin State Horticultural Society on the subject.

There are many subjects that should receive your best attention at this meeting. Such as are immediately connected with the propagation of fruit trees and flowers will of course be considered in their proper place, without my calling especial attention to them. You will also revise the list of apples, which you will recommend to the people of this State as worthy of cultivation; and while on this subject, allow me to suggest that you do not make the list too long. Be careful and let the world know that it is fruit you are desirous of giving them, and not simply their money you want.

Another subject presses itself upon my mind, and I hardly know how to introduce it. We should have a committee on Nomenclature, a large and intelligent one. And then at our fairs, all fruits entered for competition should be named. If there are seedlings, and the originator does not wish to give them names, he must submit them to the committee on Nomenclature, and a description of the fruit with its name should be recorded in a book kept for this purpose by the committee.

It is high time that our work in the field and hall should be systematized. Thus far it has had the characteristic only of the conglomerate. It should have that of the bright and pointed crystal, and I invite your undivided attention to the necessity of bringing things into line. We also require a full code of laws to govern us at our annual and other fairs, and while they are laws, let them be firmly administered; if wrong, make them right at your next annual meeting. If any one has anything that he thinks is particularly nice and better than any one else, and wishes to enter the arena, it is his own fault if he is beaten, simply because he is ignorant of what was required by the Society. We must smart for our ignorance with these laws. We must post ourselves up on what is necessary to enter and contend for the prize, and if we do not conform to these very just requirements let us hear no whining. While I am a strong advocate of mercy, I think it should be accompanied by its twin sister, justice. I have dwelt at length on this subject, for the reason that we so frequently hear complaints after fairs, such as this: "Why, if I had only known that, I could have got the premium on my grapes, or Duchess, or beets," or "I do not think the committee were fair."

And there is another thing that I want, most especially, to call your attention to, and in the language or the mother of Solomon, "don't say me nay." How often do you hear of the failure of fruit trees. They die, they freeze, they thaw, the dry weather affects them. In the language of President Hobbs, of the Wisconsin State Horticultural Society, "I have thought much of the remedy." He says further, "My own opinion is that a radical change might be made in this respect with great profit to all concerned, the legitimate sellers and buyers of fruit trees. And I would suggest this, the planting of such trees only as we know will grow an edible fruit in any and all the settled parts of this State. It is in vain to try the indiscriminate purchasing and planting of trees now everywhere observable in this Northwest by any less radical means. Tree peddlers and agents, and eastern horticultural and agricultural journals are doing more damage to our horticultural interest than can easily be believed, except by those acquainted with the case."

Our climate has to bear a great deal of blame for the mischief to our orchards, gardens, and vineyards, which in reality is solely attributable to the misdirections of outside writers and the cupidity and dishonesty of outside nurserymen for if the nurserymen did not

send out these borers and bark lice gentlemen, it would certainly be impossible for them to invade us.

Our own people, I mean the masses who want to grow fruit for their own use, do not to a sufficient extent, subscribe for and read our own agricultural and horticultural journals. If they would there might be fewer dupes of these foreign tree hucksters, who generally sell what they have to sell regardless of name or nature.

And let me here say a word about our journals. I think the time fully at hand when they should speak out in unmistakable language and brand with infamy any one, be he agent or principal, who attempts to palm off any tree, shrub, or flower, that he knows will bring to the purchaser nothing but disappointment and chagrin.

You, gentlemen of the State Horticultural Society, are looked upon as a noble band of men, and deservedly so. Men who are trying to give to the people of this young and growing State an apple juicy and mellow. You will do it. You are now in the bud and bloom, and many of you, long before you are borne from work to reward, will pluck the ripened fruit. I am very desirous that you who have borne the heat and burden of the day should reap the reward of your labor, and my belief is, that if you will make a united effort, our own people may be supplied with trees by our own nurserymen, and this will be the best weapon that can be used against these unscrupulous bark lice gentlemen that periodically infest our State. You may say I am too severe. I say I mean to be severe. And while I acknowledge that there are many noble and honest horticulturists that visit our State—many of their faces are familiar to us all—yet I cannot but in a measure, hold them responsible for a portion of the imposition our honest and unsuspecting people are subjected to, for if they did their duty they would see that their own State societies frowned down the exportation of trees into any State, the adaptability of which might be questionable.

Let us educate the people. Let us give them fruit. If a crab, let it so be understood. You can guarantee that it will live. Then if the Duchess, Femeuse, Red Astrachan, Wealthy, Bates, Woodward, Perkins, or anybody's else seedling has or does prove worthy of cultivation, you can recommend to your customers to buy these, and if you have not deceived them before, they will buy again, and, in the language of Dr. Warder, "We will educate our people in horticulture. Give them such fruit as you know will grow, and they soon will want more and better fruit."

I shall not recommend any particular course to be followed in the discussion of the various subjects that will of necessity present themselves. Do this in your own good order and time. It is quite true that the proceedings of this Society should be spread broadcast over the land, so that the people may know the progress made in our particular line. In view of this I would recommend that a petition be presented to our Legislature now in session, for a small annual appropriation to be used in the printing of our proceedings in pamphlet form. Also, for the establishment and maintenance of experimental gardens, in different parts of the State. I doubt not but the land would be freely donated in the different sections. We also want the appropriation to cover an amount that we could offer annually as premiums on the best fruit grown in the State. I think the State can do no less than make the appropriation. What has the State done for agriculture? It should certainly do the same,

if not more, for its better-half, horticulture. Their interests are the same. The State Agricultural Society receives annually over \$1,000 from the State. There is no good reason why our Society should not receive State aid. As

an inducement for emigration, the fact of the successful production of fruit is almost, if not quite, equal to that of our whole combined agricultural resources. Especially this is so in regard to those who are seeking new homes from the fruit-growing parts of the continent.

The society was ably represented at the recent American Pomological Society, held at Richmond, Virginia, by its delegate, P. A. Jewell, Esq., of Lake City. The fruits selected by him from different sections of the State attracted much attention, and the commendations bestowed from the members of the National Society, as well as the press, must be extremely gratifying to every Minnesotan. His report will form an interesting part of the records of this meeting. The Treasurer's report shows a small balance in hands.

We cannot easily estimate the good already accomplished. There is a large field for its continued usefulness. During the past few years much attention has been given to the vineyard. Grapes of very many varieties, some of a semi-hardy character, have been introduced with the most flattering results.

There is a growing appreciation by our people for choice plants, rare flowers, and ornamental shrubbery. It is with pleasure that we notice a fondness for evergreens.

It is your duty and business to cultivate this appreciation; and you will soon find that you cannot supply the demand, unless you add greatly to your nursery stock.

It is to be regretted that some system has not been adopted by State authority, or that some premium list has not been offered, to encourage the planting of trees in the prairie districts of the State.

It is only a question of time when tree planting will be encouraged by law. Our elder sister, Iowa, has such a law, which is simply this: Every acre of forest trees planted releases taxation for ten years on one hundred dollars' valuation, and for each acre of fruit trees planted tax is exempted on fifty dollars' valuation for five years—and in proportion for shade trees and hedges along the public highways. There is now in that State maple forests from which sugar is made, where fifteen years ago there was nothing but prairie grass and hazel bushes.

Let us reap advantages from the experience of our Iowa friends. Many of us are looking forward to the time when each school-house will have its gardener, and also to the time when some of the branches of horticulture will be taught in our public institutions of learning. Many of the Western States are full of experiments. This is one which will sooner or later be made, and if ours should lead off in the movement, it will not be the first time we have inaugurated, in advance of other States, improvements of a judicious character.

What the Society should have most at heart is the best interest of the people of the State. Our efforts in horticulture are being acknowledged all through the country. We see it in the formation of country societies, the crowds that attend our fairs, the eagerness with which people listen to any discussion on the subject of fruit-growing. Now let the Legislature lend us a helping hand. Let it make an annual appropriation of a small amount, to publish our transactions, carry on our experimental gardens, and offer liberal premiums.

Nor would this be giving us more than our just deserts. Hundreds of thousands of dollars are annually sent out of the State for fruits. If the Legislature will lend us the asked for aid, we will in a few years put a stop to the drain, and in due time pay it back to the State in increased valuation of property for taxation.

One more subject, and I am through. Scarcely anywhere in my acquaintance North, South or East, is the interest of

the Horticulturist so preyed upon by insects as in Minnesota. Plant, flower and fruit have each their entomological enemy. Vegetable, shrub and tree is trimmed, cut and bored by individuals of the many myriads of insects that away on till winter sets in. And with a view that our people may have some knowledge of what they have to contend with—that they may know their friends from their enemies—I would suggest that you also look toward the appointment of a State entomologist at an early day. And this also should receive legislative aid.

And now gentlemen, in concluding my remarks, it is my painful duty to allude to the loss the Society has met with in the death of its late Corresponding Secretary, J. W. Harkness, of Fairbault. He was one of our most active members. He labored faithfully and earnestly in the good work. Taken from us as he was, in the prime of manhood, cut off from a life of usefulness in this world of sorrow, his friends and associates will cherish his memory, and his name will long be remembered in connection with the earlier history of fruit-growing in Minnesota.

From the first dawn of horticulture as a science, men of all classes and grades have engaged in it. As a general thing their standard of morality has been equal to that of those following other callings. But shall we not here pause and ask ourselves the question, Is this sufficient? Does it not become those who make a profession of developing the beautiful of the vegetable world, to possess higher and aim at nobler ideas than those who have to do only with inanimate things.

We are placed in close contact with Nature's sweetest smiles, and it is our privilege to reach toward the great heart of Nature and be assured she has fields beyond our vision adorned with animation and beauty equal to those through which we take our daily rambles.

But when the microscope fails us, and we commence to retrace our steps, we admire the beauty of the mosses and ferns, thence we come up to the more useful grasses and plants, entitling the herbaceous and shrubby plants, and still on until now we have reached the trees, and standing under the monarch of the forest, the giant sequoia, we are astounded at its magnificence.

Ought not all these things, given to us in divine wisdom, to bring out and develop the best and highest attributes of our nature?

A resolution of thanks was voted to the President for his able and intelligent address.

The discussion of the varieties of apples was continued.

*Sweet Pear*—Mr. Cook, of Blue Earth county, said it is a hardy and valuable tree; never knew it to kill; fruit not large but good.

Mr. T. M. Smith has seen the fruit grown in one State and has sold it; it sells well.

Mr. Harris, of La Crescent, has no bearing trees, although he has them ten years old. Thrifty grower and appear very hardy.

Mr. Jewell says it is a profuse bearer on clay soil; on prairie soil in Wisconsin it does not do very well. Bark bursts around the crown. There are many trees in Minnesota; they are subject to fire-blight; has known it in bearing in Minnesota for five years.

On motion of T. M. Smith the following resolution was adopted:

That we extend an invitation to the Presidents of the different railroads of Minnesota to visit this meeting and examine the fruits on exhibition, and see whether they are not worthy to be considered good immigration arguments.

Mr. P. A. Jewell, of committee on resolutions, respecting the death of Jas. W. Harkness, presented the following, which were adopted:

WHEREAS, It has pleased our Heavenly Father, since our last annual winter session, to remove from the scenes of this life,

our late fellow member, the Corresponding Secretary of this society, James W. Harkness.

Resolved, That we deplore the departure from our midst, while in the prime of life and usefulness, of one who was endeared to us as an earnest, zealous and efficient member of our organization; and that we esteem it a melancholy privilege to bear tribute to his many virtues.

Resolved, That in the career of our deceased friend were developed those elements of strong self-reliance, of earnest and enthusiastic devotion, of a patient and determined willingness "to labor and to wait", in the face of all discouragements, for the accomplishment of a great end, which challenge our warmest admiration and respect.

Resolved, That the death of one who was thus devoted to the cause of fruit-growing in Minnesota, while in its infancy, and who was one of the earliest and most indefatigable members of this organization, is an event that may well be recognized as a public loss by all who cherish the interests of horticulture in our State.

Resolved, That in testimony of the respect in which we hold the memory of Mr. Harkness, these resolutions be entered upon the journal of the proceedings of this Association, and that the Corresponding Secretary be directed to transmit a copy to the widow of the deceased.

The Alexander apple was next taken up.

Mr. Brimhall said it is a hardy tree; fruit coarse; not a good keeper; apt to drop from the tree; sells well, on account of its size.

Mr. Gideon—has young trees that appear perfectly hardy; does well in Wisconsin; limbs tough and not apt to break when heavily loaded with fruit; fruit sells well. Does better in Northern Wisconsin than in the south part of that State or Northern Illinois.

Mr. T. Smith has one tree planted 10 years; not as hardy as Talman Sweet or Fameuse; has just come into bearing; fruit rather coarse, large; showy.

Mr. Harris thinks it is a valuable apple for this State. Saw samples at State Fair raised north of Minneapolis. Knows of trees 19 years old, hardy as Duchess of Oldenburg; longer lived; quality not No. 1; good for drying, and for sauce; tree can be pruned into any shape; good for prairies, as it can be headed low; would rather have one Alexander than a dozen Tetofsky; but thinks the latter is good.

Mr. Jewell says it is not as hardy as the Duchess; is not an early bearer; took specimens from Lake City to the American Pomological Society at Richmond, Va.; no fruit there of the same class equal to his specimens in size or appearance; season continues about 6 weeks, while that of the Duchess is only 2 weeks; its size and beauty make it sell well.

St. Lawrence—Mr. Stubbs says, as a fall apple it is about equal to any variety he knows of in our State, better than Duchess; and as large size; tree hardy, slow grower; bears young—in 4 or 5 years.

Mr. Hart considers it good.

Mr. Harris, thinks it is not a slow grower on all kinds of soil; with him it grows the most rapidly of any variety except the Northern Spy; says it is good; has raised about 30 bushels the past season; sells very readily; not good for shipping—bruises too easily; good for cooking; as hardy as any except 3 or 4 of the "iron-clads."

Pewaukee—Mr. Grimes says it is a hardy tree; heavy fruit.

Mr. Gideon has seen original Pewaukee tree in Wisconsin; very hardy; has no bearing trees of his own, but his young trees are doing well; less subject to blight than any other out of 50 varieties.

Mr. Jewell has a dozen trees saved from 50 purchased in Wisconsin; thinks it will prove hardy with us; wood is late in maturing in the fall; would not compare it with the Duchess; quality second rate. Mr. Hoffman spoke of some seedlings that have been before the society for two or three years and have not been named. Mr. T. M. Smith moved that all varieties to be named be placed in the hands of the committee on nomenclature. Carried.

The following committee on nomenclature was appointed:

P. A. Jewell, Lake City.  
J. S. Harris, La Crescent.  
P. M. Gideon, Excelsior.  
E. H. S. Dart, Owatonna.  
Truman M. Smith, St. Paul.  
The committee to be continued *ad interim*.  
Adjourned till 12 m.

AFTERNOON SESSION  
called to order at 1:30.

The second topic was taken up, viz:

Site for orchard, planting, mulching, time and method of pruning.

Mr. Jewell would select a high location, whatever the subsoil, the vicissitudes of temperature are less than on low land. On the latter the days are hotter and the nights are colder. Trees always injure most on low land; 50 or 100 feet may decide whether a man's orchard is a success or a failure. Would select clayey or gravelly clay subsoil; sandy land not objectionable if properly treated; should be mulched not only under and close to the tree but for some distance around it in order to prevent drying out. When land dries out around the roots of a tree the fruit grows small and is liable to drop off. Southern exposure is not objectionable if the ground is high so as to secure a circulation of air, but trees should be protected. If compelled to set trees in a valley would not choose such an exposure, but would choose the highest land. Northern slope no object except that the snow lies on the ground deeper and acts as a mulching; would protect an orchard by planting willows or evergreens around it, prefers evergreens. With proper care and precaution as to mulching and protection, trees will succeed almost as well on sandy as on clay soil.

The committee on memorializing the Legislature to visit the society while in session, and inspect its fruit on exhibition, here reported that they had been successful, and that a joint committee from both houses, with the Governor and heads of departments, will visit the society to-morrow at noon.

Mr. Dart said there was no doubt that

an elevated location is best for an orchard, but it is difficult to obtain on every man's farm. Where land is all low it should be underdrained, and where this cannot be done the ground should be ridged, or the trees planted shallow and the earth plowed up to the trees. Clay subsoil that holds water like a dish is objectionable unless it be drained. On land with deep and subsoil large holes should be made and clay filled in before setting trees. Has had experience in this manner of planting and succeeded well.

Mr. Truman Smith prefers high land with northern exposure. Judges from observation of forest trees, which are invariably larger and thrifter on northern slope, and this is a true in his experience with fruit trees.

Mr. Gideon's trees do equally well on all sorts of exposures; southwest slopes as good as any in his opinion, the only objection being on account of sunburn, which he would prevent by heading low, and protect from wind by close planting.

Mr. Harris thinks the matter of exposure is not as important as most people think. His best trees are on a southern slope. There is, however, a difficulty from sunburn and bursting of bark when the trees are young, which can be obviated by mulching and other protection until large enough to furnish their own protection by shading of limbs and fallen leaves. Would not select high knolls for orchard on account of hard winds and lack of moisture. In his opinion forest trees are more thrifty on northern slopes because not so much run over by trees. Apples will grow any place where the water does stand within two feet of the surface.

Mr. L. M. Ford could not endorse what Mr. Harris said except, with the crabs.

Mr. Brand had always heard that northern slope was best for fruit trees, but has yet to see an orchard with such exposure equal to those planted on land that inclines to the south or southeast. Prefers high land and dry soil.

Mr. Ford had not seen anything but crab apples grown on sandy land.

Mr. Jewell cited a case where large quantities of Duchess, Golden Russett and other large apples are grown on very sandy soil, and presented specimens.

Mr. Nutting thinks the benefits of north exposure are moisture and the protection afforded by snow, the place of which can be supplied by mulching well.

Mr. Stubbs would prepare the ground for planting by digging holes a year before, and would put top soil in the bottom of the holes and clay on top.

Mr. Hart thinks his fruit is most handsome that grows on southern slope.

The third topic—top-working, grafting and budding—was taken up.

Mr. Dart thinks that some varieties of fruit may be successfully top-worked on the crab stocks; would not recommend digging up crabs until it had been tried. Mr. Jewell says the advantage of top-working lies in grafting semi-hardy varieties on hardy stocks, and by so doing fruit can be



successfully raised that could not be grown by the ordinary method of root-grafting; he would whip-graft or bud. Budding is best to change the form of the head of a tree. Baldwin and Wagner apples, which are tender on their own roots, have done well when top-worked. We may hope to largely increase our varieties by this method. Mr. Brimhall had a Red Astrachan, which is a late bearer produce fruit the second year after top-grafting.

Mr. Bates had fine success with Baldwin and Early Harvest grafted on the top of a hardy seedling tree.

Mr. Brimhall endorses Mr. Jewell's views; had grafted several kinds on Soudard stocks four years ago, with clones taken from bearing trees; fruited second year. Does not think Soudard as desirable to bud on as Fameuse and some other varieties.

Question—Is a cion made harder by grafting on a hardy stock?

Brimhall—It is.

Gideon—Hardest trees mature wood earliest, and if tender kinds are worked on they mature sooner on account of stoppage of the flow of sap. Prefers Soudard to any other crab for stock for top-working.

Dartt—Some kinds bear better when top-worked, and by turning the sap to fruit buds prevents rapid and excessive growth and increased hardiness. Has known crabs to be injured by bursting of bark, but otherwise thinks the stock valuable for top-working.

Harris endorses Jewell's remarks; would not have tree planters buy crab stock to top work.

4th topic—Insects, Injuries to Trees and Fruit.

Jewell has been much annoyed by a large gray beetle on Duchess trees, which sometimes entirely girdle the new growth; they disappear about the 1st of June; knows no way of destroying but by catching; makes its appearance mostly on oak ground.

Mr. Kenworthy has had trouble in getting rid of leaf lice; has syringed with a decoction of tobacco, which did not do the work perfectly.

Dartt thought the beetles could only be prevented by hunting cut and destroying. There is an apple tree borer which works in the limbs which it takes great pains to cut out.

Mr. Jewell had used \$40 worth of fine cut tobacco for leaf lice. Followed Kenworthy's course.

Brimhall says that a wash made of three pounds of sal soda to a pailful of rain water will kill leaf lice; apply with a rag. Col. Stevens had no success with sal soda cure. Grimes thinks much depends upon the season of applying these remedies; two years ago he found great numbers of lice on his willows; he cut down the willows and washed his infected fruit trees with soap suds, and has not been troubled since.

Howe thinks whale oil soap is an effective remedy for leaf lice; apply on first indications of their presence; he used three ounces of whale oil soap to a pailful of water.

Harris has found whale oil soap effective; says carbolic acid, if strong, kills trees.

Gideon thinks hornets and yellow-jackets eat leaf lice; his treatment for borers is to bind ashes around the parts affected.

Mendenhall says there are 1600 kinds of leaf lice and 400 kinds of curculio. Ants do not eat lice, as is supposed by some.

Jewell described a moth trap which he had seen, and thought it a good thing. It is made of three or four shingles, which are cut out in the middle in crescent form on both sides, and fastened together by a screw, which also serves to fasten the trap to the tree. The moth hide in the crevices of the trap, and are killed by rubbing the shingles together.

Dartt—Bands of hay are often fastened around trees to trap moths.

The next topic—Pears was taken up.

This subject was pretty thoroughly discussed by members from all parts of the State, and the prevailing opinion with all, except Mr. Ford, that pears can be grown successfully in our State. Several varieties are already doing well. The Flemish Beauty appears to be doing the best of any variety thus far.

At the conclusion of the discussion of pears Mr. D. A. J. Baker moved that a committee, consisting of Truman M. Smith, Wyman Elliott, and Norman Buck, collect the statistics of apples imported into the State, and amount paid for the same, and report at this meeting.

Adjourned till 7 P. M.

#### EVENING SESSION.

Mr. Harris stated that at the last session of the society a committee was appointed to select varieties of fruits for recommendation to growers of this State.

*He then presented the following report which was accepted*

Your committee on fruits beg leave to make the following report which they deem worthy of cultivation, for the consideration of the Society:

Apples—Duchess of Oldenburg, Red Astrachan, Haas, Saxton, St. Lawrence, Price's Sweet, Alexander, Ben Davis and Fameuse.

Crabs—Soudard, Siberian Apples, Transcendent and Aiken's Winter.

Pears—Flemish Beauty and Buffum.

Pumpkins—German Prince and best native.

Cherries—Early Richmond and Morello.

Grapes—Concord, Delaware, Salem, Iona, Isabella and Ontario.

Currants—Red Dutch and White Dutch.

Raspberries—Doolittle, Miami, Philadelphia and Purple Cane.

Strawberries—Wilson and Downer's Profite.

*It was moved that that varieties named in the list be taken up in their order and discussed and a recommendation be given of all varieties worthy of general cultivation. Mr. Harris thought the business of the meeting would be incomplete unless we decided on and recommended some varieties for culture, if not*

more than three, so that new comers in the State could know where to begin.

Mr. Gideon objected to the society recommending any varieties.

Mr. Baker also objected because the imputation would be cast upon the society of partiality.

Other members discussed the propriety of recommendation for and against, and the society finally laid the report upon the table by a unanimous vote.

Mr. Harris personally explained that he did not sell trees—he was a market gardener and florist, and he desired it understood that he would not reap a dollar's benefit from the recommendation of one or another variety.

*Mr. Harris offered the following:*

Resolved, That every member of this Society be requested to make a written statement in brief of his experience in fruit growing in Minnesota, with the names of the varieties that have proved the best in his locality, and forward the same to the Recording Secretary to be filed for the use of the Society.

This resolution elicited some discussion, and the resolution was adopted after being amended by striking out "experiences" and making the report to consist of the success of each with different varieties.

Mr. Edward Ely, of Winona county, then read an essay on the first efforts at fruit-growing in his locality.

*as follows:*

Being appointed by the fall meeting of the State Horticultural Society to write a sketch of the fruit growing of Winona county, I submit the following as a very brief outline of a subject which is of no little importance to the future of Minnesota.

I believe that it is generally conceded that up to the present time Winona county has raised a larger quantity, if not a better quality of fruit than any county in the State. Mr. John Shaw has the honor of planting the first ap-

ple seeds in Winona county or southern Minnesota. In the fall of 1851 Mr. Shaw of Exeter, Penobscot county, Maine, determined to remove to the west. Before leaving he gave out word to his neighbors that he wished to take with him a quantity of apple seeds. As the result of this notice he obtained 10 or 12 quarts of clear seed, made up in small quantities from his many neighbors. Mr. Shaw first stopped in Galeana, Ill., to spend the winter. At this place he became acquainted with some of the members of the Town and Village Association, whose destination was Minnesota City at the mouth of the Rollingstone, 6 miles above the present city of Winona.

Mr. Shaw joined the Association and was among the first of the main body to reach the place of destination. After finding the ground which was assigned him by a drawing which had been made in the city of New York, the head quarters of the Association, his first work was to plant the apple seeds. This he did by selecting a place in the timber and breaking the sod with a spade, he planted seed, then cut away the timber to give them the full light and heat of the sun. It is perhaps a historical fact worth noting that these seeds were the first seeds of any kind ever planted in Southern Minnesota if we except what was done by some Indian trader. Mr. Shaw also brought with him sixty grafts of the choicest varieties of apples. These of course he could not use. He only lived to see the seed come up. In about sixty days he died from exposure incident to a new country. He was buried among the victims of that season of mortality. While dying he by a verbal will requested that the little growing trees be divided among the members of the Association, and a committee was appointed to see that his last request was carried out.

This was the beginning of fruit growing in Winona county. The little spot where the seed was planted was surrounded by a rude fence and the trees grew up for several years without much care. When large enough they were transplanted to nearly all the farms in the neighborhood. They have now been bearing fruit for several years, each year increasing in quantity, so that many families have hundreds of bushels of apples to sell or to convert into cider. Some of the best trees are bearing from 15 to 20 bushels each. Those in the orchard of Mrs. Mary E. Campbell produce on an average eight bushels to each tree. Among these are several most valuable seedling varieties; one which I think was named the Old Settler is very large. Grafts from many of these trees are much sought for wherever known. The apples taken together are preferred, for cooking and for general family use, to any that can be found in our markets. It would be impossible to estimate with any degree of certainty the number of bushels raised from all the seedling trees, from the nursery of Mr. Shaw, in the year 1871. Some of the largest single orchards are bearing from 400 to 600 bushels each. The aggregate number of bushels cannot be less than five or six thousand. The trees are found on nearly every farm in the Valley of the Rollingstone, and on many farms far out on the prairies. In all cases the trees are bearing very much in proportion to the intelligent care they receive. One of the most valuable results coming from the pioneer labor of Mr. Shaw is that it easily settled the fruit question, proving beyond controversy, by actual sight, that apples would grow in great abundance in Minnesota. Many a man, after looking at the orchards in the Valley of the Rollingstone and being convinced by his own eye sight, went back to his farm determined to make a second trial, and adding works to his faith he is now receiving the reward of his labor. The above brief sketch is but a single branch of the fruit question in Winona county.

Very early the pioneer farmer was visited by the almost innumerable agents

of nurseries from other States, and there is scarcely a farmer that did not purchase a liberal supply of foreign trees, and in many instances he was sadly disappointed, and this disappointment arose from many causes. First, the trees delivered were from a distant State, and were dead before he received them. Then not even the soil or climate of Minnesota could restore them to life. Again, if they were alive they were set out in the cornfield where they were exposed to the stock which ranged without restraint during the winter, or perhaps they were not cared for and left to struggle against these many enemies as best they could. The roots were eaten by the gopher or the tree was scalded by the burning sun without protection. Again, there is no question but the wild, unsubdued nature of the virgin soil is unfavorable and the growth of trees which are transplanted from a distant State. Again, many of our farmers sow all to wheat. They have wheat on the brain. They have no room for poultry or fruit trees. They must have wheat from the division line to the door sill and if they, perchance, should be persuaded by the agent to try a few fruit trees, they will put them where they will be disturbed by the plow two or three times a year and where they must be dwarfed and stunted by growing among the grain. Many times the farmer with all these conditions and many more against even the probabilities of success, proclaims the apple tree a failure.

But there is a better side to the picture. Many, very many have succeeded in growing apples in great abundance in Minnesota. We have seen many orchards loaded with fruit in the valleys, on the sides and tops of the bluffs and indeed far out on the bleak and cold prairies. If one farmer can produce a fine orchard, another following the same conditions can do likewise, and so on to the end of the whole list of towns of our state. It may not be out of place to give a few of the names of the early settlers of Winona county who have made the nursery of apples a splendid success. It would make a long list to name those whose orchards yielded more than a hundred bushels each in the year 1871, and those raising from 10 to a hundred would go far up into the hundreds.

The first man to raise grafted fruit in Winona county, and perhaps in the State, was Rev. Benjamin Evans, Rector of the Episcopal Church at the little village of Stockton, in the Rollingstone Valley. Mr. Evans was one of the early settlers. He was a man of fine taste and culture and his early efforts gave great encouragement to the fruit grower of Winona county. We learn that Mr. Evans is now in feeble health and will soon pass away and the friends of horticulture of Minnesota, deem it due to him that his name in this connection, should be placed on the records of our Society.

The best, though not the largest orchard in Winona county is one planted and cared for by Robert Cully now dead. Ten years ago he obtained by accident 100 trees from the city of Rochester, marked extra. These he set out with great care in one of the small valleys near the city of Winona. The apples proved what the trees were marked extra, the very best and most approved varieties and they were much improved in size and flavor and shape by the soil and climate of Minnesota. The bearing capacity of this orchard has increased from year to year till last year they gathered 300 bushels of apples worth \$2.00 a bushel, on ground but little more than an acre. This is only one of the many young orchards in the immediate vicinity of Winona. As a marker of reference and for the truth of these statements I refer the reader to the Hon. G. F. Buck, who gathered from a few trees 200 bushels, several of the trees filled five barrels each. Norman Buck, Esq., 200; George W. Clark, 250; Orin Clark, 200; Mrs. Mary A. Campbell, 600; Wm. R. Stewart, 400; Loran Thomas, 600;

These two last named live 9 miles from Winona, one on the ridge and one in the valley. M. K. Drew, 200 bushels in the city of Winona on the sand. H. D. Huff had a large show of the best fruit. Mr. S. Bates, 300 bushels, who also has one of the largest young nurseries in the State, where he has all the approved varieties of the last trees. Last, though not least, John Hart, whose premiums at the Minneapolis fair and at the State fair, amounted to more than 100 dollars.

I shall be pardoned in this connection if I relate a little incident concerning Mr. Hart which exhibits his early devotion to fruit growing. Some thirteen years ago on the day that he voted to give the Railroad 5,000,000 loan. A friend called on him to go and vote after the voting was done. The friend asked him to go and take a glass of beer. Mr. Hart refused the beer, in place of it he took a couple of apples and like a good man he took them home to eat in the evening with his wife. This done they planted the seeds from the cores, from these seeds he raised eight fine apple trees, five of which are still living, and from these trees he obtained the same premiums of this last year.

I have said that some men have failed to make the trees live. There is a man by the name of Eldridge living near Winona who paid in all \$200 for trees. They all died but one, so that he said a single tree cost him \$200. This same man has now 3,000 living trees he set out in one orchard and he has prospectively one of the largest and best orchards in the State. This same man raised strawberries sufficient to employ 20 men, women and children all the picking season and made strawberry and Black Top Raspberries pay.

In conclusion I would say that Winona county is no lacker for fruit of all kinds than other counties in the State of Minnesota. We have had a little more time and perhaps have taken a little more pains. Go and do likewise. It is time to cease saying that apples will not grow in Minnesota. If a lone woman, without the help of husband or children, can set out and care for an orchard that will produce each year six hundred bushels of choice fruit, what may not be done when every farmer shall give to the subject of growing fruit that place which it ought to hold in our domestic economy. A proper regard to the coming generation should induce us to plant fruit trees and to plant them at our earliest opportunity, and if the trees die plant again and again till we shall finally succeed.

An acre of land which is worth from ten to fifteen dollars in its native state, is worth one thousand dollars when covered with a good growing orchard. I may say before closing that pears of the choicest varieties are grown in abundance wherever the trees have been set out and properly care for.

At the conclusion a vote of thanks was rendered to Mr. Ely, and the essay ordered printed with the proceedings of the society.

On motion, Messrs. Loring, Buck, Smith, Mendenhall and Baker, were appointed to meet the committee from the Legislature to come up to the Society today.

Mr. Gideon was then called upon, and read an essay

*which was directed against fast horses at horse racing in general, and against horse racing in particular. The essay was placed in the hands of the Publishing Committee on publication, to be used by them as they deem best.*



The President suggested the subject of districting the State, which subject was not with some discussion and was finally laid upon the table.

Cherries—This subject was next brought up.

Mr. Cook stated that a Mr. Myers, near St. Peter, had brought cherry trees from Germany which are doing well and are in bearing. The fruit is of a dark color, fine flavor, with a small pit.

Mr. Stevens—In Minneapolis there are Morello Early Richmond and Carnation Cherries, which are all doing well.

The election of officers next took place, resulting as follows:

President—R. J. Mendenhall, Minneapolis.  
Vice Presidents—E. H. S. Dartt, Owatonna; M. W. Lealand, Rochester.  
Cor. Secretary—J. S. Harris, La Crosse, *pro tem*.  
Rec. Secretary—A. W. McKinstry, La Crosse.  
Ass't Secretary—J. D. McKellip, La Crosse.  
Treasurer—Wyman Elliott, Minneapolis.  
The Society then adjourned until 9 o'clock Thursday morning.

JANUARY 11th, 1872.

Called to order at 9:30. Opened with prayer by Rev. G. W. Fuller.

A committee consisting of Messrs. Jewell, Mendenhall and Stevens were appointed to draft a new constitution and by-laws.

Thanks were voted to Mr. Gideon for his essay, read last evening, and the committee on publication were instructed to have it published or such portions of it as they may deem proper.

Thanks were voted to the Minnesota State Agricultural Society for \$50 given to this Society for premiums awarded for best varieties of fruit exhibited at the State Fair.

Mr. Jewell was called upon to make a report as delegate from this Society to the American Pomological Society at Richmond, Va., last September. Mr. Jewell said that owing to ill health and pressure of other matters that he was unable to prepare a full report in writing, but would do so at his earliest convenience. On motion time was granted him.

[It is proper to state here that Mr. Jewell took to the American Pomological Society of Minnesota, grown fruit of both grafted varieties and seedlings, some sixty different kinds of

*Apples and several varieties of Pears.*

It was there remarked by all who examined the specimens that there was no fruit on exhibition equal to it in beauty, soundness, quality and flavor.]

Mr. Wyman Elliott, the Treasurer, made his report, which was as follows:

Receipts, including the amount on hand at the beginning of the year	\$185.17
Disbursements	130.85

Balance in Treasury 54.32

At the suggestion of Mr. Hart the subject of crab apples was taken up.

Mr. Brimhall inquired whether cider can be made of transcendent crabs; he says they are good for drying and for sauce.

Mr. Elliott made ten gallons of cider, but it was not good; soured too soon, and has the crab apple taste; would not recommend raising for cider.

Mr. Gideon would throw away all crabs except the Soudard, and one or two others of the best winter varieties.

Mr. Howe thought the Society should pay more attention to the seedlings; he had seen 250 to 300 different kinds at the State Fair, and some 25 varieties were as good, in his opinion, as any of the named varieties there exhibited.

Committee on publication made their report:

We recommend that a committee of seven be appointed by this Society to visit the Legislature and procure the publishing, in book form, of all the proceedings of the Society, from its organization to the present time.

We also recommend the appointment of J. H. Stevens to compile the same.

The report was adopted, and a committee appointed, as follows: D. A. J. Baker, Chas. Hoag, Nooman Buck, Levi Nutting, C. M. Loring, Truman Smith and Horace J. Brainard.

It was voted to send specimens of the fruit on exhibition to the capitol at St. Paul, to be there placed on exhibition.

Discussion of crabs was again taken up. Mr. Jewell thinks the Transcendent a very good variety. The Hislop, though a "thing of beauty" is certainly not "a joy forever," as it is so mealy and dry, and will

not keep any length of time; would plant very sparingly. The Soudard will "keep forever," but is not good as a desert apple, but makes good sauce cooked with Talman Sweet; would plant few where standard apples will grow. Transcendent is not a cider crab, but makes fair champagne cider if put up in bottles and kept for a year. In his opinion the Orange crab is the best.

Mr. Harris said, every one should plant a few crabs. Has not had good success in making cider from Transcendents; his favorites are Aiken's Winter and Quaker Beauty; condemns Hislops, but would plant a few where Standards will not succeed well.

All the use Mr. Kenworthy has for crabs is for stocks for top-working, for which they are well adapted.

Truman Smith would not advocate planting largely; the reason good cider cannot be made from Transcendents is because the

weather is too warm in their season. Good vinegar can be made from the cider, such vinegar made by him brought the highest price in market.

Mr. Harris says it requires two years to make vinegar, and cannot be done successfully with a factory.

Mr. Brand thinks that crabs should be planted to some extent in the frontier settlements and in localities where apples do not succeed. They bear early and profusely. In setting an orchard he would plant one crab tree in every twenty-five, and would plant Transcendents along the roadside, outside of his orchard if he could afford it. They make a good protection for an orchard.

Orange crabs stand first as a dessert apple, and are profitable for marketing; Meader's Russet and Meader's winter are also good—better than Transcendent and Hislop.

On motion the discussion of small fruits and grapes was dispensed with.

On motion Mr. Truman Smith was appointed to prepare an essay on grapes, to be published with these proceedings.

At 11:30 the Legislative committee arrived and after a short address of welcome by the President the committee appointed last year visited the orchards in various parts of the State made a report, which report set forth that the committee had not been able to make their tour of observation as extended as they wish, but had been able to obtain the following facts:

There are 89 varieties of grafted fruit of which the names are known, and about 30 varieties that the names are not known, besides hundreds of seedlings, some of which are of superior quality. The trees are generally healthy and bearing finely.

A number of varieties of pears are growing, and some of them doing remarkably well; one or two very good seedlings of this fruit were found.

The report was adopted.

A resolution was passed asking the Legislature to appropriate \$1,000 annually for the benefit of the Society to enable it to carry on its operations successfully.

Adjourned at 12:30, and the Legislative committee proceeded to examine the specimens of fruit on exhibition.

Refreshments were served in the hall, and the convention was again called to order at 1:30, and adjourned at 2:30, till 7 o'clock this evening.

#### EVENING SESSION.

Mr. Harris, from the committee on nomenclature, submitted quite a lengthy report on names and brief description of various seedlings.

Considerable discussion followed in regard to the propriety of affixing names to the numerous seedling varieties originated in the State.

The report was referred back to the committee with instructions to give names to choice seedlings, and report at some future meeting.

Mr. Buck took the floor and spoke of the fifteen years experience of Mr. Hart, a fruit grower of Winona county, returning to Minneapolis and Hennepin county his thanks for the first recognition of his services by the generous premium awarded to him by the Agricultural and Mechanical Fair held here last fall.

On motion the chair appointed a committee of three consisting of Messrs. Harris, Dartt and Hoag, with instructions to report an order of business for next meeting, such order of business to be made known within sixty days through the Farmer's Union.

Col. Stevens moved that the next meeting of this Society be in Minneapolis, and that it be the last of June or first of July next.

Gen. Nutting hoped the motion would prevail, as he thought there was not so good a place on the round globe as this for such a meeting.

It was determined to hold the summer meeting in this city and the fixing of the day was left to a committee consisting of Messrs. Baker, Loring, Bates, Nutting and Elliot.

A committee appointed to ascertain the amount of fruit imported into the State during the year 1871, made a partial report, which gave the amount of green apples imported at 100,000 barrels, at an average cost to the consumers of \$4 per barrel, making a total cost of \$400,000. Further time was given the committee to make a complete report, embracing all kinds of fruit, both green and dried.

The subject of shade trees and evergreens was discussed at some length.

In the matter of shade trees the prevailing sentiment seemed to be in favor of hard maple and Rock elm, the only objection to the former being on account of its slow growth. It was said that if set in the fall it makes a much more rapid growth.

Rock elm makes a handsome tree, and grows rapidly if properly planted and cared for. Box alder is subject to borers, but is a handsome tree and can be trimmed into any shape. Soft maple has its admirers on account of its very rapid growth, besides being a handsome tree, but is very much troubled with borers and with the splitting of the limbs. Hackberry was well spoken of by one or two persons. Mr. Brand has seen the American Chestnut 15 years old and bearing, and is of the opinion that it will do well with us. Others also spoke well of this tree. Black walnut is a good tree and bears in six years.

The best time to set deciduous trees is in the fall or early spring. The tops of trees should not be cut off, as it makes them unhealthy. People mistake in setting large trees. A small, thrifty tree will soon overtake one that is so large that it must have the top cut off when it is set, and the former will grow into the handsomest and most healthy tree.

With care evergreens can be set almost any time of year. Very early in the spring is as good as any time, if not the best. August is a good time, and in May, also, when the buds begin to burst. The roots should be carefully kept from exposure. The ground should be mulched immediately after setting. Norway Spruce is probably the best evergreen for shade, the Arbor Vitae for a hedge. As a timber tree the Larch is valuable.

At the close this discussion some resolutions of thanks were voted, and another meeting of the Society appointed to be held in Minneapolis the last of June or early in July. Mr. Brand presented a list of topics for discussion at the next meeting, which were adopted:

as follows:

- 1st—Forest Tree Culture, and the varieties to be planted.
- 2nd—Evergreens. The best varieties for timber, shelter, hedging and ornament. Their culture &c.
- 3rd—Hedging. What to use and culture.
- 4th—Orchard Cultivation, Pruning &c.
- 5th—Orcharding for profit.
- 6th—The Raspberry. Cultivation, Marketing, Varieties to plant &c.
- 7th—The Strawberry. Varieties, Cultivation, marketing &c.
- 8th—Insects injurious to fruit, their habits, How to destroy, &c.
- 9th—Pears—Culture, soil, varieties.
- 10th—Cherries.
- 11th—To beautify our homes, horticulturally considered.

On motion the President was instructed to appoint persons to write



Essays on each of the above topics. — one person to each topic.

Mr. Buck offered a resolution of thanks to the citizens of Minneapolis. Adopted.  
President Mendenhall returned thanks to the members of the Society for their courtesy and kindness.  
Mr. Hoag offered a resolution of thanks to the officers for the able discharge of their duties.  
Society adjourned sine die.

\* Art. 2. The object of the Society shall be, to collect, condense and collate information relative to all varieties of fruit, and dispense the same among the people. Any person interested may become a member by forwarding to the Treasurer or Secretary the annual fee of one dollar.

## Constitution of the Minnesota State Horticultural Society adopted at the Annual Meeting January 15. 1873.

Article 1. This Society shall be known as the Minnesota State Horticultural Society.

\* See Art. 2, on opposite page.

Art. 3. — Its officers shall consist of a President, one Vice President from each Congressional District, a Secretary, Treasurer and Executive Committee of three.

Art. 4. — The President shall preside at and conduct all meetings of the Society and deliver an annual address, and in his absence the Vice Presidents in their order shall perform the same duties.

Art. 5. — The Secretary shall record all the doings of the Society, collate and prepare all communications &c for the public press, and pay over all money received from members or otherwise, to the Treasurer, on his receipt; shall receive and answer all communications addressed to the Society; establish and maintain correspondence with all Local, County, District and State Horticultural Societies and secure by exchange their transactions as far as possible; to aid the President as an executive officer in the despatch of business relating to meetings of the Society, and notices of Horticultural and similar meetings of general interest, and report to the annual meeting of the Society an abstract of the matter that has come into



his possession, which with its approval, shall become part of its transactions for the current year.

Art. 6. The Treasurer shall collect and hold all funds of the Society, and pay out the same only on the order of the Secretary countersigned by the President.

Art. 7. The officers shall be elected separately and annually by a ballot vote, and hold their office until their successors are elected.

Art. 8. Every member shall be entitled to two copies of the transactions of the Society, as often as the same shall be published.

Art. 9. The President, Secretary and Executive Committee may call a meeting of the Society at any time and place they may consider advisable, by a notice of thirty days in the public press.

Art. 10. The President, at each annual meeting of the Society shall appoint a General Fruit Committee, consisting of one member from each Senatorial District in the State, and it shall be the duty of each member to report upon the Fruit Crop in his respective district, and it shall be the duty of said committee to report annually a limited list of fruits best adapted to general cultivation in the State at large.

Art. 11. The Society shall hold annual sessions on the third Tuesday in January, and other meetings at such time and place as the Society may direct.

Art. 12. By-Laws and alterations in the Constitution, for the purpose of governing further wants of the Society may be enacted by two-thirds of the members present at any regular meeting.





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