

## Reports of the Kansas State Board of Agriculture

### Section 16, Pages 451 - 480

These reports by the State Board of Agriculture include the proceedings of the board, reports for the previous year, maps of counties, abstracts of counties, miscellaneous articles, and reports of agricultural societies, the state fair, state and county statistics, agricultural industries and products, the agricultural college, and the Kansas Academy of Science. The annual reports began in 1872 and were succeeded by biennial reports beginning in 1877-78. Volume numbers were discontinued with the 1953-1956 report; the last being volume 44. From 1953 to 1976 the reports drop "biennial" from the title. Annual reports begin again from 1976 to 1984, except 1982-1983 which is biennial. The dates for each report reflects the reporting year and not the publication date, which was usually a year later. The title of each report reflects the form given on the title page. Only volumes 1 (1872), 2 (1873), 3 (1874), 4 (1875), the centennial edition (1875), 5 (1876), 6 (1877-1878), 7 (1879-1880), 10 (1885-1886), 11 (1887-1888), 13 (1891-1892), and 14 (1893-1894) are currently available.

Creator: Kansas State Board of Agriculture

Date: Bulk 1872-1984

Callnumber: SP 630.6 K13

KSHS Identifier: DaRT ID: 210899

Item Identifier: 210899

[www.kansasmemory.org/item/210899](http://www.kansasmemory.org/item/210899)

KANSAS  
HISTORICAL  
SOCIETY

## Reports of the Kansas State Board of Agriculture

12

### TRANSACTIONS OF THE

President Howsley responded. Returned thanks for the cordial reception given the Society. The hall, so beautifully decorated, was ample evidence of the heartfelt sympathy of the citizens with the mission of the Society, that the semi-annual meetings of the Society were designed to offer inducements and encourage a large attendance of the ladies at the place in which they are held. Their presence was very desirable, and very appropriate on such occasions, and he hoped a large number would be present. Again, he thanked the mayor for the welcome.

The following essay on Forest Tree Culture and Shelter Belts, was delivered by Professor E. Gale, of Manhattan :



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

13

### FOREST TREE CULTURE.

BY E. GALE.

READ BEFORE THE KANSAS STATE HORTICULTURAL SOCIETY, MANHATTAN, DECEMBER 7, 1873.

Sylvaculture has forced itself upon the attention of thinking men, both in Europe and America, as one of the great practical questions of the age. It is not only a subject of interest to the tiller of the soil, but it demands the consideration of the statesman and the physical geographer. And, assembling as we do to-day upon the eastern border of this vast, almost treeless plain, stretching to the Rocky Mountains on the west, and for a thousand miles from north to south, what more appropriate subject can demand our thought. When we take into consideration the vastness of this field, the peculiar natural fertility of the soil, almost unrivaled, and especially its capacity to resist climatic changes, and that this whole region is, to a very large degree, destitute of forests, which, if duly supplied, would make it the home of millions, we cannot fail to recognize the fact that we are standing in the very gateway of one of the widest and most promising fields of physio-geographical experiment and observation which can be found any where in the wide world. We are to realize that through the earnest prosecution of Sylvaculture for this vast region, it may be made the home of millions of happy and prosperous agriculturists, thereby adding untold treasures to the wealth of the nation, and by its dense population making this great central basin the nation's very heart, or by a neglect of this culture we leave it only to be the transient home of a few thousand cattle herders, an almost dreary waste forever, and hence the weakest portion of our great national domain.

In considering the claims of forest culture we are to remember that vast regions of the old world once covered by dense forests and loaded with luxurious vegetation, are now utterly desolate. We can see in the torrent-swept sides of the Apennines, the desolate spurs of the Pyrenees and the Alps, the barren plains and hills of Asia Minor, and the broken sand ridges of Northern Africa, what man's wasting hand has done. When we take into account certain great physical facts, we are made to feel that a like ruin may be ours. Forest culture is with us a question, not of mere theory, but one of imperative necessity. The geologist tells us that we are to find coal only on the eastern line of this vast region. Then we are to look to the planting of forests for fuel, as the first step towards a permanent and dense settlement.



## Reports of the Kansas State Board of Agriculture

The supply of timber in the older portions of our country is rapidly wasting away. And while the sources of supply are all being exhausted, the demand is constantly increasing. No adequate plans have yet been devised to renew this supply. If this is a matter of grave moment to the whole country, it is especially so to us who, from the very beginning of our settlements, draw all our supplies of timber from distant and rapidly diminishing sources. We may, indeed, be sure that in these questions of fuel and timber are involved the future interests of all this western country. In the consideration of this grave question, shall this vast region be made the home for millions of rich and happy people, gathering about them all the comforts of home, and becoming the great pulsating heart of the nation, or shall we leave it to become the herding grounds of a few thousand cattlemen? We hear it asserted sometimes, that Kansas is to be the great stock raising State. While this, to a certain extent, may be true, it should be the ambition of every Kansan to make something more than this of his adopted State. While there are few soils, if any, better adapted to the cereals, it is certain that the vine will thrive better here than in many portions of the east. And the conviction may be thoroughly established in the mind of every horticulturist, that this is to be the home of the apple, pear and the peach as well as the vine. Enough has already been accomplished to give promise of a future proud preeminence in the production of all varieties of fruit. We have only just begun to study the capabilities of Kansas for fruit culture. The western half of the State has scarcely had its capacities tested. It is possible that a few years may teach us some very important lessons in regard to fruit culture, and especially the culture of the pear in western Kansas. But the great thought introductory to all this, and without which fruit culture must fail, is the furnishing of fuel, timber and protection. The first idea with the horticulturist is a *home*. The man who begins to plant fruit trees has begun to fasten himself to the soil. Though he may be a man of the broadest culture, yet all the energies of his being will be concentrated upon comparatively a small field. But this planting and concentration will never be secured without fuel and timber. It should also be noted that the land all through this region, which promises in every respect to be the best fruit soil, is always totally destitute of timber. Fruit men in Kansas must become, from necessity, sylviculturists. To succeed in fruit raising without the planting of forests, is probably out of the question.

But we can scarcely have homes without protection for ourselves, our stock, our fruit trees and gardens. It is an act of cruelty to animal life, to dwell on the high prairie without the sheltering protection of trees. It is only at a vast consumption of animal life and food that men live and rear their herds unprotected upon the prairie. The comfort,



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

15

quiet, and sometimes even the safety of our homes, will depend upon the surroundings of forest. We have all observed the contrast between the still air of the wood and the chilling breeze of the prairie. While there is a real difference of temperature in favor of the forest, the sensible difference is far greater. Even the steam engine indicates in its loud call for more fuel, the changed condition between the forest and the prairie, how much more will man and beast detect and realize the difference. What is demanded for man and beast, is also required for fruit trees. The severe winds of both winter and summer, should be kept off. The finer and tenderer varieties of fruit *must* be protected. It is also certain that nearly all varieties are the better for some protection. If we can succeed in winter in keeping the temperature only one or two degrees above that of the surrounding atmosphere, we shall sometimes thereby save a crop of fruit. The summer winds, also, often do much harm, in scalding the trees; in making the trees grow unshapely; in shaking off the fruit; and hence a southern protection is desirable, as well as a northern one. A protection upon the south, especially, if it be made of evergreens, will often delay vegetation in the spring much to the advantage of the horticulturist. Hence the culture of fruit and forests cannot be separated.

But the thought which rises highest, and is really the directing and leading consideration, is the modifying influence which sylvaculture is to have upon the climate at large; and hence, the influence which it is to exert upon the ultimate condition of the soil, and upon the standard of civilization which is to be found in this vast region in coming ages. The great questions of material, social and moral prosperity are here involved. Are we to rise to the demands of the age and of the nation, or shall we fall short of it? Are the devastating influences which are already at work, to be stayed. The turbid waters of the Missouri as they flow on to the gulf, suggest to every thoughtful beholder many important questions. The silt, which is only another name for the wealth of these great plains, is moving on in one unceasing current to the ocean, varying only from month to month in the relative rapidity of its flow. But why this constant flow of mud? We find the soil, and often the subsoil to a great depth, scarcely heavier, specifically than water, in a state of exceedingly minute division. We find every rain bearing away a portion of this soil, not to come back like the water in genial showers but to fill up the bayous, raise the bed of the Lower Mississippi, and extend the coast line of the gulf. The more this soil is thriftlessly exposed, the more destructive will be the flow of silt to the ocean. The very capability of our soil only renders it the more perishable. The almost unparalleled minute division of the soil, its porosity rendering it capable of absorbing water until it becomes like flowing quicksands, subject to be swept away by every torrent. The general



## Reports of the Kansas State Board of Agriculture

16

### TRANSACTIONS OF THE

destitution of forests, and the difficulty of renewing the sod when the wild grapes are once destroyed, all suggest the thought that wisdom and peculiar caution are required in dealing with this whole region. We have a land which in real agricultural wealth may be made to rival the plains of Lombardy; but close feeding and unwise culture may make millions of its acres in a comparatively short time, utterly waste and past reclaiming. There are many ways in which forests act in correcting or staying the evils which we contemplate. We find that forests protect the soil from the driving winds. They facilitate absorption by supplying a vegetable mould which will retain twice its own weight of water. They also keep the soil in a condition to absorb water readily. They serve, by their roots, to retain the soil in place. They modify the climate by making the summer's cooler and the winter's warmer. It is also worthy of note, that forests will serve to check these floods, which in open countries, are always to be dreaded, and which in the Old World, as well as our own, have proved so destructive. They would secure the almost entire absorption of ordinary showers, and also serve to check the too rapid and often dangerous concentration of the water from which torrents originate.

How many thousands are anxiously toiling to provide for the demands of old age, or for the future wants of their families, who, after all, are really accumulating but little. If they would only quietly plant a few acres of timber on such portions of their farms, as could be, after a time, sold without detriment to the whole, they would find in the time of need, ten or fifteen years hence, an accumulated fortune, which had required very little thought or care, and proportioned to the wisdom with which the varieties of timber had been selected and attention given to their planting and early cultivation. This is no mere vision of the enthusiast.

We are led to believe then, that the present and future interests of this vast country, lies in the extensive planting of forests. Let trees spring up everywhere; especially let this be the case on lands which cannot be easily tilled. There are millions of acres which should neither be tilled nor closely pastured. A flock of sheep would soon leave such lands without grass or soil. And being too rough and steep for continued cultivation, they should be covered with forests. There are on almost every farm these rough and unsightly spots—blemishes upon the beauty of the landscape, which, if planted to forests, would add greatly to the attraction of home, and millions to the wealth of the land. This remark only indicates the point where this work of improvement may begin, not where it should stop.

The great rapidity with which trees grow, is a special encouragement in sylvaculture. Instead of waiting many years for any available results, as many very naturally suppose, very material advantages will



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

17

acres in four or five years at the longest. In that time, several of the more rapidly growing trees may be thinned out to advantage if they have been planted thickly with this design. From a few acres of this close planted forest, the farmer may supply himself with wood, and also with much material which will be of great service to him about the farm. The impression obtains to a large degree that he who plants forests, plants for his children. While this is literally true, it is also true that the planter may derive almost immediate advantages from his work, provided he enters upon it with a proper degree of intelligence and care. An investment in trees, judiciously planted, will add many times their cost to the saleable value of any Kansas farm. Indeed it may well be questioned, whether there is anywhere a more desirable and certain investment against the contingencies of the future than may be found in a judiciously laid out and carefully planted forest. It may be regarded as certain, that land, which to-day is not worth more than five dollars per acre, if wisely planted to forest, will, fifteen years hence, realize the owner from two hundred to five hundred dollars per acre. A gentleman, whose statement should be good authority upon a point like this, realized in the comparatively wooded State of Ohio, as the result of only fifteen years growth, \$800 per acre; and it is not at all improbable that as good results may be realized here, by such persons as may be shrewd enough to read the signs of the times. Every tree planted is so much money invested, sure to bring ample returns. And he who plants at all, will act wisely, if while planting for himself, he shall also plant for his more improvident neighbors. It is too much to hope that every farmer will engage in sylvaculture. Thousands on thousands, who have homes in this State to-day, to say nothing of the thousands who are coming, will purchase their wood and timber fifteen years hence. Fence posts, railroad ties, vineyard stakes by the million, timber of every kind will be always in demand. We may be sure here is a market which can never be overstocked.

It is perhaps needless to mention the bounty offered by our State government. While the law has some excellent features and may serve a good purpose to stimulate tree planting, the suggestion contained in the law that it will be sufficient to plant trees one rod apart, if followed by the inexperienced tree planter, will certainly do more harm than the bounty can do good. When the interdicting of the black locust probably under the misconception that the species of borers which is frequently so destructive upon the locust would infest our finest trees, is believed by some a grave mistake. But this and other matters pertaining to the practical working of the law all aside, it should be known and felt by every sylvaculturist that the real profit in his work is not to be found in a bounty, but in the intrinsic value of the forest growing under his care.



## Reports of the Kansas State Board of Agriculture

18

### TRANSACTIONS OF THE

It is possible at this time to remark only very briefly in relation to the mode of planting. It is of the first importance to secure young trees for forest planting. The first cost will be far less. The expense of planting much less, and the subsequent growth far more uniform and satisfactory.

There are also many considerations which favor *close* planting. We are to keep distinctly in mind the two objects to be reached in the growth of the orchard and the forest. In the one case we look for fruit and in the other for timber. While the spreading branches and broad top in the orchard is desirable nothing could be more unfortunate than to raise the forest in the same manner. Unfortunately for sylvaculture as well as themselves, many persist in doing this very thing. They will proceed somewhat in this manner: Selecting large trees so as to make a display at once, they will, at much expense of time and effort, plant them far enough apart to just cover the letter of the law, say 16 feet. These trees being large will be seriously checked in their growth, and feeling the full power of the summer's sun, will suffer much from the borers; and though these trees may not die they will not by any means make a vigorous and healthy growth. On the other hand, if the trees are small they are scarcely checked at all in their growth, and if planted thickly they soon begin to shade the ground and protect each other, and from these two causes combined the borers do little or no damage. Again, if the trees are far apart much labor is required in keeping the ground clear of weeds, while with thickly planted trees they will cause far less trouble. When trees are far apart we cannot secure length of body even by the most careful training; but if planted thickly nature will do her own work, securing smooth and straight trunks with little artificial training.

Though much has been said for the few past years in relation to forest culture, yet very little has actually been done. A few pieces of forest have been planted at a trifling cost which look well; and the small cost at which this work has been done should encourage others to go and do likewise. Probably three dollars per acre would be a fair estimate of expense for labor of man and team in planting ten or twenty acres of forest with 1,250 trees per acre; and the expense would be much less than this if we plant the black walnut by dropping the seed in the furrow. Then surely there is no good reason why every farmer should not plant one or more acres of forest each year. If every farmer settling upon the high prairies would each year put out only a small piece of thickly planted forest, even if it were only cottonwoods, the whole face of the country would soon undergo a wonderful change, and we might hope that at no very distant day the climate of the whole country would be materially modified.

The President considered the subject of the essay one of importance, and hoped it would be fully discussed.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

19

Mr. Gale, in answer to a question, said he would not object to using the common Soft Maple—was a very hardy and rapid grower—did object to the Yellow Locust on account of destructive insects.

Dr. J. Stayman said that the amount of rain has increased within the past few years, although timber had been destroyed. Did not believe forest trees influenced the amount of rain-fall.

Mr. E. Gale claimed that trees did throw off a heavy amount of water by evaporation, and this moisture must condition the atmosphere, and have more or less effect on rain-fall.

Dr. Stayman believed the Locust tree could be grown in masses, and the shade would prevent the working of insects.

William Maxwell, Lanesfield, entertained the same opinion of the Locust tree, and believed forests did increase the humidity of the atmosphere.

S. W. Latimer, Mound City, stated that he had found the Locust tree growing in masses, entirely ruined by the borer.

Mr. A. G. Seaman, Twin Springs, did not believe in Dr. Stayman's system of growing in the shade, and from his experience it would fail.

Mr. Ives asked if Chestnut tress would succeed in Kansas.

Dr Stayman: I believe they would with rather poor soil. He would recommend planting some varieties of willows. There was a native variety which was worthy of cultivation.

Mr. Kingsbury, Humboldt, had noticed, while in the employ of Railroad Companies as engineer, that rains seem to follow streams and belts of timber.

Henry Smith, Humboldt: That where he lived on the Missouri river, before settling in Kansas, there was generally plenty of rain, and he raised fine crops in timber land, while both failed in the open land.

Dr. Stayman claimed that the character of soil was more adapted to the growth of vegetation in timber sections. Would admit it did not dry out as rapidly as where timber did not grow.

The President hoped Mr. Gale's essay would be printed and scattered obroad over the country for the general good. He believed timber did encourage the fall of rain, and cited to several localities where its effect was too apparent to leave a doubt in his mind—alluded to California.

Dr. Stayman remarked that rain fell in California during the season when the trees were defoliated.

Mr. Gage: Burning prairies should be prohibited, to encourage the development of areas of timber.

Mr. Kingsbury, of Humboldt, in the Salt Lake City irrigation, formerly, was practiced, now it is not essential to the growth of vegetation. Rain-fall had very greatly increased during the past four or five years. Rain would follow the opening up and improving of the surface of the earth.



## Reports of the Kansas State Board of Agriculture

20

### TRANSACTIONS OF THE

Dr. Stayman could not be satisfied that timber encouraged the fall of rain.

Mr. Kingsbury, Humboldt: I hold that both trees and improvements caused rainfalls.

The meetings adjourned until half past 1 o'clock p. m.

### TUESDAY AFTERNOON.

At half past 1 o'clock the Society was called to order by the President.

Discussion of Mr. Gale's essay resumed.

J. W. Latimer: I have seen it stated, that Evergreens exert no influence on the atmosphere, I wish to know if such is a fact. (A member:) They certainly do.

Mr. McClellan: Mr. President, I am not a citizen, but a sojourner in the land. I am very much interested in the subject of this essay. I do not fully understand the causes of rain. Mountains controlled rain-fall and clouds by their altitude, and rain-fall diminishes as distance from mountainous districts increase, and the same as distance increases in departure from large bodies of water.

Mr. Howsly: Nothing said thus far, or principles offered, can apply to the case under consideration. The vast mountain's surface swells the streams. It is the electricity in the atmosphere that condenses the moisture produced by evaporation from various sources.

Heavy snows fall upon the mountain's top during the winter. The warm south wind and heat of the sun, in early spring, melts and evaporate those snows. Hence, the atmosphere becomes heavily laden with humidity, and must fall in the form of rain.

Mr. Gage: I have noticed that generally, when the wind blows from the south from twenty-four to thirty-six hours, we have rain-fall. Sometimes it fails, as when a north wind springs up, it seems to drive the humid stratas back.

Dr. Stayman: The signal service shows that all heavy rains approach from the northwest.

On motion of the President, the subject was dropped, and the question, "what was the cause of fruit dropping during the last spring," was discussed.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

21

Dr. Stayman: Trees bloomed very full. I find that trees in rapid growing bloom but do not set their fruit, because there is not the necessary amount of fertilizing element present.

Mr. Maxwell: The buds were not well matured; hence, their failure.

George Weir, Bourbon county: The strong easterly winds, with a low temperature and humid condition of the atmosphere, at the time of bloom is the cause. Kansas has taken a very bold stand. Leader of all the States. We are hardly out of the woods; therefore, should not commence hallooing.

Dr. Stayman: I have two orchards, one on high and one on low ground. On the high lands I realize good crops, and on low lands a failure. On the low lands, the Concord and Norton Virginia grape vine buds were killed. The past winter has not been severe in Kansas. In the Eastern States, the damages of the winter have been severe—millions of evergreens were killed.

President: Trees made a very heavy growth of wood during the past year. The early part of autumn was very dry and the latter part very wet. Growth was kept up until severe cold weather suddenly set in, and the wood could not mature, and the leaves did not drop. A lack of vitality will cause fruit to drop.

Prof. E. Gale: I believe we would have had a good crop of fruit this season, if we had have checked the growth of the vigor of the trees the past year in time to have matured the wood. Trees will develop fruit buds even if lightly damaged, and the same with poor seed. One of his trees was severely root-pruned by a gopher. The buds matured, bloomed and is carrying fruit.

J. W. Latimer: I noticed leaves slipped easily from nursery trees last fall. A warm rain followed and seemed to set them again on some varieties.

George Weir: I wish to be understood as friendly to Kansas. She did produce finer fruit than Illinois. But still, trees were more constant in bearing in Illinois than in Kansas.

The President spent sometime in giving a history of the fruit exhibitions at Philadelphia, Pennsylvania and Richmond, Virginia, and claimed that the awards made Kansas, on each occasion, were not accidental, but her geographical position, made her one of the best fruit-growing States in the Union.

A. G. Seaman: Mr. President, I move we now take up the subject of root-pruning and girdling trees to produce fruitfulness. I have root-pruned with no favorable results.

S. W. Pearson, Lawrence: Dr. E. S. Hall, of Alton, Illinois, root-prunes in spring with fine results. His trees are induced to overload with fruit by such treatment.



## Reports of the Kansas State Board of Agriculture

22

### TRANSACTIONS OF THE

Dr. Stayman read an extract from the *Country Gentleman*, comparing Dr. Hull's fruit trees, cultivated and root-pruned, with Mr. Starr's fruit trees, which had no care and were doing equally as well.

President: Root-pruning will kill a tree sooner or later. Dr. Hull's system is perfectly ridiculous.

Dr. Stayman: I would recommend planting close, and force alternate trees into bearing, and when they interfere I would cut them out.

The President announced the Committee on Forest Tree Culture: Prof. E. Gale, Manhattan, Kans.; R. S. Elliott, Kirkwood, Mo.; Wm. Maxwell, Lanesfield, Kans.

On motion the Society adjourned until half past 7 o'clock p. m.

### TUESDAY EVENING.

At 7½ o'clock the meeting was called to order by President Howsley. The Vice President was called to the chair.

Committee on Forest Tree Culture reported the following resolutions, through R. S. Elliott, which were adopted:

The Committee on Forest Culture beg leave to report the following resolutions:

*Resolved, 1,* That the rapid increase of population in the United States, the extension of settlements, and the multiplication of industries, all requiring an immense consumption of timber, foretell the exhaustion of the forests within a comparatively brief period.

*Resolved, 2,* That the State of Kansas, having about five per cent. of her area in woods, and exposed in her extended surface to the sweeping winds of elevated plains, has a peculiar interest in the subject of forest tree culture, in groves and wind-breaks, not only for the supply of fuel and timber, but also for amelioration of climate.

*Resolved, 3,* That our Senators and Representatives in the Congress of the United States, be respectfully requested to bring before those bodies the importance of some appropriate action to encourage the growth of forest trees on the western plains.

*Resolved, 4,* That we respectfully call the attention of the farmers of Kansas to the fact that the deciduous trees native to the State, are not only of species valuable on the farm and in the arts, but are of easy propagation by seeds and cuttings; and we recommend that the seeds be gathered and cuttings made and planted, as the cheapest mode by which large tracts can be set in timber.

*Resolved, 5,* That in order to extend the planting of coniferous and evergreen trees in shelter belts and in forests for the protection of tim-



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

23

ber, we recommend that action be taken by the Legislature of Kansas to provide special encouragement by premiums, by exemption from taxation, or by the establishment of State nurseries for free distribution of such trees to farmers desiring to plant the same.

Report adopted.

H. E. Van Deman, Geneva: Mr. President, I wish to be informed what is the best strawberry box?

S. W. Pearson, Lawrence: I consider the square box the best. Strawberries should not be pulled, but carefully picked by the stem.

R. S. Elliott, Kirkwood, Missouri: I believe there will be a heavy demand for fruit west of Kansas, which should be supplied by Kansas rather than Colorado.

On motion, the Society adjourned until 9 o'clock A. M., the following day.

### WEDNESDAY MORNING.

The Society met pursuant to adjournment and was opened with prayer by Rev. E. Gale, of Manhattan.

Mr. M. W. Poor, Neodesha: Mr. President, I desire to be posted in the best method of cultivating, pruning and training of the Grape.

Dr. Stayman: Mr. A. S. Fuller, New York, prunes and trains two canes the first year and three or four the second year. This system will cost \$200 per acre. This is too expensive. I train in the following manner: Set a substantial post at each end of the row, and stretch two wires, on which I tie the canes. I plow my vines late in spring. Employ boys to tie up canes and pinch back shoots. Cut off bearing shoots close to the bearing joint.

I have produced most of the following varieties with strength, as follows: Concord, 105; Norton, 140; Ives, 106 to 109. I have had wine in my cellar too strong for beverage uses; also, wine with the juice reduced one-half with water of sufficient strength for a pleasant drink. The Concord cannot be grown in perfection only on high lands.

Mr. Eagle: What formation is the best for grapes?

Dr. Stayman: Limestone, with stiff clay sub-soil preferred; red soil for grapes and apples. The Catawba will succeed on the stiffest



## Reports of the Kansas State Board of Agriculture

24

### TRANSACTIONS OF THE

clay soil on high land. There is no profit in grapes planted in low lands.

J. W. Latimer: Have varieties of grapes on all kinds of soil; black, yellow and white clay; all well drained. The Catawba, Clinton and Isabella froze out on white soil.

J. S. Irwin: I would ask Dr. Stayman if he would mulch vines planted in stiff clay.

Dr. Stayman: Would not; until I had tried without, then I would try it. Some of my Concords are killed on black and red soil—are not on white clay. It is only vexation of spirit to attempt to grow any other varieties than Concord and Ives.

Mr. Latimer: I consider the Delaware valuable. Do not like to hear Dr. Stayman condemn it.

Dr. Stayman: I believe the Delaware a good grape, but cannot recommend it. Mr. Labriere, near Baldwin City, planted \$1,200 worth of Delaware and Iona grapes. They succeeded the first year and then failed; finally planted Concords.

J. G. Vincent, Lecompton: Planted Delawares in 1858. They have done nothing compared with Concords. I doubt the profitableness in spending time in discussing varieties, as most men will plant all varieties until convinced by actual experience of their comparative worthlessness.

S. W. Pearson: The Concord and Ives are the main varieties succeeding in Indiana.

Dr. Stayman: The Dracut Amber will do with those loving the smell of it. We must have a white grape for white wine. Churches want white wine. Hybrids are disposed to debility owing to diseased condition of the parents. European varieties debilitate in this country.

J. C. Vincent: I cannot sustain Dr. Stayman's objection to the Dracut Amber, on the grounds of its peculiar fragrance.

Mr. Seamen: I dug up all my Dracut Amber vines, as I could find no one who would eat the fruit.

President: Hybridization is a delusion. The act of crossing leads to original condition and a tendency to run out.

Dr. Stayman: Asa Gray gives five varieties of grapes, and questions very much if there is more than one. If this be true, then there are no hybrids, but crosses.

On motion, the Grape Question was laid on the table.

The President appointed S. W. Pearson, J. C. Kelso, B. L. Kingsbury a Committee on Flowers, etc., exhibited on the tables. After an examination the Committee reported.



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

25

### REPORT OF COMMITTEE ON FLOWERS, FRUIT AND OTHER VEGETABLES, EXHIBITED AT THE SECOND SEMI-ANNUAL MEETING.

GENTLEMEN: Your Committee have examined the articles on exhibition, and would beg leave to report that we find a good collection of pot plants, consisting of over fifty varieties. Their vigor and fine bloom show good culture and careful attention. We also find a large number of bouquets, (in which the wild flowers of the prairies have been plentifully used) most tastefully arranged, showing a love for the beautiful that would do credit to any community. These, with the general decorations and arrangements, fine engravings on the walls, nicely arranged hanging baskets and cages of birds, whose songs give an enlivening influence to all, does just credit to the ladies and gentlemen of this young and growing city.

In fruit we find good specimens of cherries, raspberries, currants and gooseberries; also, quite a number of apples, peaches and nectarines, (on small limbs cut from the tree) indicating by their size, smooth and healthy appearance an abundant crop of nice fruit in this vicinity.

We would not overlook the fine collection of vegetables on exhibition, prominent among which are very fine specimens of Irish potatoes. In conclusion, we would call the particular attention of the Society to some jars of peaches, being a seedling exhibited by E. Strosnider. Their very large size and fine appearance indicate a valuable addition to our list of fine fruits. Also some splendid specimens of late keeping apples on exhibition by Dr. Stayman, as follows: Ben Davis, Newtown Pippin, Lawver, Ella Park, Willowtwig, Limbertwig, Gilpin and Abram, all in fine condition, except the last two.

All of which is respectfully submitted.

SETH W. PEARSON,  
B. L. KINGSBURY,  
J. C. KELSO.

*Committee.*

On motion, the Society considered the location for orchards.

Wm. Maxwell: Fruit trees do best on high lands with a western or northwestern presentation.



## Reports of the Kansas State Board of Agriculture

26

### TRANSACTIONS OF THE

W. S. Irwin, of New Chicago: I prefer a high northwestern slope.

Dr. Stayman: All depends upon the location and the varieties. I can see no use in planting such apples as the Rawle's Genet. The Ben Davis is far better.

President: The Genet is the best paying of all apples. The Ben Davis, which the Dr. seems to appreciate, is only good for fools and darkies. Reuben Ragan, Indiana's eminent Pomologist, after years of trial, yielded to the good qualities of the Genet. Highlands are always preferable. Plant on the most favorable site you have. You want fruit.

The Society adjourned until 2 o'clock p. m.

### WEDNESDAY AFTERNOON.

The Society re-assembled at 2 o'clock, with President Howsley in the chair.

Mr. Maxwell called for discussions concerning the Strawberry and its culture, and said that the Wilson was a very poor berry when slovenly cared for; lost its color more than the Downer in same length of time. Jucunda produced a few fine berries; winter-killed.

Mr. Brackett called for. Had experimented with some forty varieties. Could find none more profitable than the Wilson, nor more satisfactory for all uses. It could be made both an early and late berry. Could be easily handled for the market, and as to size was equal to any. The plant is most hardy, and will remunerate the cultivator for kind treatment and care heavier than any of the old or new varieties. Protected during the winter with a covering of prairie hay a couple of inches deep, and removed the same in early spring, immediately over the hill in part, the leaves and fruit-stalks would shoot up through the portion left, and it formed a bed on which the berries would ripen free from dirt and filth liable to attach to berries which are allowed to remain on the bare ground. The strawberry is a paying investment when properly grown and carefully handled.

Mr. B. L. Kingsbury: Mr. Brackett's statements are substantially correct, and his method of culture safe.

Mr. Seamen: My experience corroborates Mr. Brackett's statements.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

27

Mr. Van Dernan: I have planted for experiment, and hope to be able to give the world some facts from my section.

Mr. B. L. Kingsbury: The White Grub has ruined many plants.

Mr. Latimer: I would like to have Society discuss the Raspberry. The Philadelphia and Clarke, winter-kill with me. I cannot admit of the identity of the Miama and Mammoth Cluster.

Mr. Freeman, of Iola, supported his Raspberry canes with frames.

Mr. Latimer: The Raspberry is profitable to grow.

Dr. Stayman: The Miama is the only berry of any account for market. Golden Cap is fine for home use.

Mr. Maxwell: I know of no variety of the upright growers doing well. I am well pleased with the Miama and Doolittle's improved caps.

Mr. Bishop: I cut back the canes to keep the winds from breaking them down.

President: Philadelphia had not winter-killed until present year. It fruited well; I cut the canes back; I also cut my Lawton Blackberry in same manner.

Mr. Vincent: Would treat the Philadelphia Raspberry the same as the Lawton Blackberry. Dig them up entirely.

Mr. Kingsbury, of Burlington: Have succeeded very well with the Philadelphia. Cannot sell a White Raspberry in the market.

Mr. Pearson: The Raspberry is a pet with me. I believe the high lands in Kansas will grow it in perfection, even the Philadelphia. I consider the Doolittle's Improved the most profitable.

Mr. Freeman moved the consideration of the Blackberry. He had considered the Lawton the finest, but had been supplanted by the Kittinny.

Mr. Bishop: The Kittinny is the only variety worthy. Wilson's Early is a failure in Kansas.

Mr. Maxwell: Cannot do without the Lawton. It continued with him through six weeks from time of first ripening. Missouri Mammoth tolerably fair; Western Triumph promises well; Wilson's Early insipid and worthless. Lawton had only failed with him two seasons since 1859.

Mr. Vincent: I think the Lawton has changed, and the tail wags the dog, instead of the dog wagging the tail, as the Lawton had failed every year with him, with two exceptions. The difference of season is too great.

Dr. Stayman: I have lived in Kansas twelve years, and have never seen the Lawton in the market.

On motion, the Gooseberry was discussed.

Mr. Bishop: The Houghton succeeds with me; had realized more profits from this berry than the strawberry, having received \$2.25 from a single bush.



## Reports of the Kansas State Board of Agriculture

28

### TRANSACTIONS OF THE

Mr. Freeman: The Houghton is not productive.

Dr. Stayman: The Mt. Seedling is worse than a humbug.

President: Have succeeded with the gooseberry.

Mr. Vincent: As it has been stated by Dr. Stayman that 200 quarts of strawberries will glut the Leavenworth market, I conclude it must be a good market for gooseberries.

### PEARS.

Mr. H. Newman, of Osawatomie: I have had flattering results from Pear culture. Have planted about seventy-five trees, and twenty-two varieties have fruited. Most varieties are on Quince roots. Have no Flemish Beauty on Pear roots.

Mr. Latimer: I have seen pear grafted on apple, doing well.

Mr. Bishop: From experience, I believe pears can be grown as safely and extensively as apples. Apples had blighted more than pears. Dr. Stayman would do well to move to Miami county and grow pears.

Dr. Stayman: Mr. Bishop is not the only man I have met, sanguine in pear culture. There were several in the vicinity of Leavenworth, and their orchards had been ruined by blight in a single season. Dr. Howsley's and Francois Godard's were the only ones which had escaped, and they would yet get it. It was sure to come. It is caused by excessive rains. It commenced about twelve years ago. Trees three, four and six years old have blighted with me.

President: Human beings are made of Carbon, Oxygen, Hydrogen and Nitrogen. Plants are composed of the same elements; are sometimes called Air solidified. Blight cannot always be cured, nor can it always be prevented. There is no pear blight in California, Italy or in some portions of Long Island. The Glout Morcean is first to blight; Vicar of Wakefield next. The best prevention is to mature the wood. It appears generally between the tenth of May and the tenth of June. Does not show until the terminal buds are formed, and sap ceases to extend to the limbs. As the sap returns, it mingles with the damaged layers, made so by the extreme cold during the previous winter; all becomes putrid, and the poison extending into the general circulation, kills as far as it goes. As a remedy, I would sow among the trees cereals of some kind, to exhaust the plant food and impoverish the soil, to prevent stimulating the trees. Pinch off the ends of growing limbs to check vitality and mature the wood. Should always select a location well under-drained.

Dr. Stayman: I have known the Keswick Codlin Apple Tree to blight, and it is considered the most hardy. I understand there has been no blight at Manhattan. Trees die from two causes. One is winter killing, the other is by blight. Trees will freeze so hard as to die outright from the effects.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

29

President: Trees cannot evaporate excess of water in a humid atmosphere.

Mr. Freeman: I have received seedling pear stocks from Europe, planted them, and many of them blighted.

On motion, the Society adjourned until 7 o'clock, p. m.

### WEDNESDAY EVENING.

The Society met as adjourned.

President called the meeting to order, and invited the Vice President to the Chair.

The discussions on pear culture were continued.

Mr. Bishop: I would recommend for general culture, Bartlett, Buffum and Duchesse de Argouleme.

Mr. Newman: I am experimenting with many varieties, Bartlett, Beurre Clairgou, Flemish Beauty. I find the Rosteizer the best early variety. White Doyenne (dwarf) does well. Osband's Summer becomes mealy very soon after plucked from the tree. Beurre Clairgou is the best single variety on my ground. Soil, a hard pan clay—can hardly penetrate it.

W. E. Barnes, Vinland: Have planted mostly, the Bartlett, Dwarf Howell, White Doyenne, and standard Flemish Beauty. The last is the most promising at present, both in tree and fruit.

Mr. Brackett: Have succeeded finely with standard Bartlett, Dwarf White Doyenne, Belle Lucretive, Louise Bon de Jersey and Glout Morceau. The Bartlett is the most profitable for general culture.

The society offered the following resolutions, which were unanimously adopted:

*Resolved*, That the thanks of this society are due and hereby tendered to the citizens of Humboldt, for the generous manner in which they have extended their hospitality during our session, and to the Ladies of Humboldt, our grateful thanks are especially tendered for the tasteful and appropriate manner in which they have decorated the hall for our deliberations. Also,

*Resolved*, That the thanks of this Society are hereby tendered to the Kansas Pacific R. R., the L. L. & G. R. R., and the M. K. & T. R. R., for a reduction of fare to members attending the meeting of this Society.

Dr. Stayman offered a resolution that three delegates be appointed to collect and exhibit Kansas fruits next fall at Philadelphia.



## Reports of the Kansas State Board of Agriculture

30

### TRANSACTIONS OF THE

On motion, the resolutions were adopted.

On motion, the President was authorized to appoint the delegates. This motion was withdrawn, and the Chair, J. C. Vincent, was instructed to appoint the Chairman of the delegation, and Dr. Wm. M. Howsley was thus selected. The Chairman thus selected was instructed to select the second member, and Dr. J. Stayman was chosen the second member of the committee. The second member was then instructed to select the third member, and J. C. Vincent was the result of such selection.

#### ROSE CHAFFER.

This pest was found in immense numbers, devastating vegetation in and around Humboldt, and many were the queries concerning it.

Almost every gardener in the city had suffered from its works. Fruit trees were defoliated, and left as naked as in mid-winter. They were found by your Secretary, in the open prairies, feeding upon various plants indigenous to that section.

On motion, the President appointed H. E. VanDeman, a committee, to whom the "bug" was referred, with instructions to investigate, and report at the next annual meeting.

The Rose Chaffer being disposed of, the deliberations of the Society were turned to rabbits, which have proven themselves, in this section, a nuisance of the highest order. The recklessness with which they laid waste the productions of Horticulturists and Nursery men was most vehemently denounced.

Mr. Maxwell: All washes, even the application of Coons' Grease, failed in two or three days, and then they seemed to eat more voraciously than before, the trees and grease combined.

President: An application of soft soap, lime and flour compounded, and put on with a brush, will stop their workings.

On motion, the Society adjourned.

#### REMARKS.

The reception given the Society by the mayor and citizens of Humboldt, was a most cordial welcome. Everywhere was manifest the kindest and most hospitable feelings.

The hall provided for this meeting was in full keeping with the reception. Spacious and amply furnished with comfortable conveniences. It was most tastefully decorated with beautiful designs. Over the Speaker's stand, in large gilt letters, the word "welcome" greeted the eye of the visitor, and immediately under that, in gilt, the motto, "Let brotherly love continue."

The walls were hung with pictures of beautiful landscapes in nature.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

81

The ceiling was festooned with boughs of living from the adjoining forests. The center table was covered with blooming plants of the rarest kinds from the green house and garden, and the sides were filled with specimens of fruit and vegetables. In full, the room presented a sight full of inspiration, and impressed the beholder with feelings of admiration and respect for a people so manifestly devoted to the best interests of the Society and the elevation of mankind.

Long will this meeting at Humboldt be remembered by those whose fortune it was to be present.

*Secretary.*





## Reports of the Kansas State Board of Agriculture

32

TRANSACTIONS OF THE

### PROCEEDINGS OF THE SIXTH ANNUAL MEETING HELD AT TOPEKA DECEMBER 10TH, 11TH AND 12TH.

Pursuant to adjournment, and in response to the following call of the President, the Kansas State Horticultural Society met in the Senate Chamber at the city of Topeka, December 10, A. D. 1872, at 10 o'clock A. M.:

#### CALL.

SECRETARY'S OFFICE, KANSAS STATE HORTICULTURAL  
SOCIETY, LAWRENCE, November 6, 1872.

The Sixth Annual Meeting of the State Horticultural Society will be held at Topeka, Tuesday, Wednesday and Thursday, December 10th, 11th and 12th, 1872, commencing Tuesday at 9 o'clock A. M.

The different railways will grant the usual reduction of fare, viz: Excursion tickets, which must be called for at place of departure.

A Committee will receive at the depots and provide for the comforts of attendants from abroad.

WM. M. HOWSLEY, *President.*

G. C. BRACKETT, *Secretary.*

The Meeting was called to order by President Howsley, and opened with prayer by Rev. Mr. Taylor, of Topeka.

Hon. John Guthrie, of Topeka, delivered the address of welcome in the following words;

MR. PRESIDENT:—I am delegated by the municipal authorities and the Horticultural Society of this county, my neighbors, to extend to the members of your Society a heart-felt welcome to the hospitalities of this city. In performing this office it is, I trust, no idle ceremony, but the generous expression of those for whom I undertake to speak.

I may be pardoned for alluding to the fact that the public fully appreciate the great trust confided to your Society; for to your hands is confided, to a very great extent, the horticultural interests of this State.

As a commonwealth we are now entering the threshold of material, commercial and agricultural greatness, and our natural advantages are second to no State in the Union—with a rich and fruitful soil; a climate that has characterized our State as the Switzerland of America, and more than one-half million of men and women, the bravest and most select from every section of our common country. It is but a few years now past that Kansas was the home alone of the wild Indian. Almost



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

33

within a single decade this State has been peopled. They have built in these short ten years, 2,500 miles of railroad; 1,537 school houses, valued at \$2,845,262, and have more than 165,000 school children to educate. There is published in this State more than 100 newspapers and periodicals, ably conducted and faithful exponents of the convictions, needs and wants of our people. But while we may challenge the annal of civilization to produce a parallel in our triumphs and victories, we must not forget there lie beyond other triumphs and victories greater than that already achieved.

Horticulture is defined to be "The most perfect method of tilling the earth so as to produce the best results in the form of fruits and objects of beauty from the vegetable kingdom." Intimately connected with this might be classed the planting and cultivation of forest trees. The field is varied enough to engage the best minds of the country. Much of the future depends on the wisdom and foresight of your Society.

There is to be, west of us, a vast region of treeless country. The soil is adapted to the best condition of Agriculture and Horticulture. The climate is the finest, perhaps, in the world, but it is treeless. The great problem is, how shall this vast country, rich in everything but timber, be peopled with our race? It is a subject worthy of the best intellects of the land. I know of no plan that will do more for the plains, than for Congress to adopt some plan to induce the planting and cultivation of forests of timber, and I suggest that your Society cannot do a greater service for the country than to memorialize Congress on this subject.

I trust that the next legislature will not forget the needs of your Society. The Horticulturists of Kansas have already won golden victories at home and abroad. We cannot afford to pause now, amid the victories won and triumphs within our grasp.

Mr. President and gentlemen, I know you will pardon this digression from the real duty I am here to perform. I have taken this occasion to make these suggestions, for the reason that my engagements will not permit me to attend your meetings. I know your councils will be guided by wisdom. I trust that your stay with the citizens of this city will be equally pleasant.

I again extend to you a cordial welcome; that welcome so characteristic of western civilization.

To which the President responded in appropriate remarks, and tendered the thanks of the Society for the very cordial welcome, and the meeting opened with a goodly number in attendance.



### OPENING ADDRESS OF THE PRESIDENT.

Dr. Wm. M. Howsley, President of the Society, spoke as follows:

*Gentlemen of the Kansas State Horticultural Society:*

I have not prepared a written address for this occasion. I concluded it was not necessary. I hope and trust we have come together at this time for a determined and prompt consideration of the wants of Horticulture in this State. I am in full constitution a man of business. I have reached three-fourths of a century in age, and have devoted much of my time in the pursuit of Horticulture. While Agriculture has done much for our country, Horticulture has been the refining element. It should be the aim of every one to co-operate with all institutions whose purposes are the elevation of society and State to a high position in the world. I don't wish to speak in vain glory of Kansas fruits. It has been said that our victory at Philadelphia was a spasmodic one. Such is not true. At Richmond, Virginia, we met nineteen states and won the highest expressions. At New York City in October last we met many of the states in exhibition at the American Institute, and received the credit of the finest display ever made in that city.

Gentlemen, the Sixth Annual Session of the Kansas State Horticultural Society is now open for business and your deliberations.

The President announced that Professor John H. Tice, of St. Louis, would be present and address the Society on the subject of Meteorology, at the evening session.

R. S. Elliott, Industrial Agent of the K. P. R. R., offered the following resolution, and recommended its adoption:

WHEREAS, It appears to be the case that storms covering very large areas, sometimes originate or first manifest themselves in the open plains east of the Rocky Mountains and north of the Rio Grande, extending to unknown limits northwardly, and progressing eastwardly or northeastwardly over the Mississippi Valley, sometimes accompanied by a lowering of temperature; and

WHEREAS, The United States Signal Service Bureau has been so carefully and successfully managed that about seventy-five per cent. of its forecasts of the weather during the past year, have been proved by the event, to have been correct; therefore,

Resolved, That we respectfully invite the attention of the Chief Signal Officer to the necessity and importance of establishing signal stations in the plains of western Kansas, and in the region southward and southwestward; and that in our opinion, Congress will subserve the public interest by such appropriations as may be required to ensure the fullest vigor and efficiency of the Signal Service Bureau. Adopted.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

35

The resolution was laid on the table until the morning session of the second day. He also offered a resolution for the preservation and planting of forest trees as follows:

WHEREAS, A recommendation has been made by the Commissioner of Agriculture of the United States, that in future disposals of the public lands, conditions be made to preserve one-tenth in forest where it exists, and where it does not exist, to offer inducements for planting such proportion; and

WHEREAS, The President of the United States in his annual message, has expressed his approval of this recommendation; therefore,

*Resolved*, That the Kansas State Horticultural Society respectfully invites the attention of the Senators and Representatives in Congress from this State to the proposed legislation as promising to be of much interest and benefit to Kansas in attracting immigration and inducing the planting of timber trees in districts where none now exist, and as an important aid in the extension of settlements over the western portions of the State.

Mr. Elliott requested to lay on the table until afternoon session.

• Rev. C. H. Lovejoy, of Baldwin City, spoke with much earnestness in support of the resolution; said he hoped something would be done to awaken an interest in the planting in the western sections of the State where the impression exists to an alarming extent, that trees cannot be grown.

President Howsly said he believed that if the scope of country between the foot of the Rocky Mountains and Kansas was covered with trees, the drouths to which that country is so subject would be tempered, and the violence of wind storms broken.

The Committee appointed at the second semi-annual meeting to make a display of Kansas fruits at the exhibition of the American Institute, New York City, submitted the following report through the Chairman, Dr. Wm. M. Howsley:

#### REPORT OF COMMITTEE.

Your Committee appointed in June last, for the purpose of exhibiting Kansas-grown fruits at Philadelphia, beg leave to submit the following report:

At the semi-annual meeting of this Society, held at Humboldt in June last, it was resolved to send a committee of three to Philadelphia to make a second exhibition of Kansas-grown fruits, partly for the purpose of proving to the world that our success there in 1869 was not accidental, but was what the climate, the soil and the people of Kansas were not only able to do, almost any time, but when the seasons were propitious could greatly excel.

The Committee thus appointed, consisted of Wm. M. Howsley, J. C. Vincent and Dr. J. Stayman.

In pursuance of the objects of this appointment, the chairman of this Committee issued, in July, a circular addressed to the fruit-growers



## Reports of the Kansas State Board of Agriculture

36

### TRANSACTIONS OF THE

of Kansas, setting forth the above facts, and soliciting them to contribute of their best fruits for the accomplishment of objects for which the Committee was appointed.

It was ascertained, however, before the usual time for exhibition at Philadelphia, that the show would be postponed to some indefinite time in October. It was, therefore, agreed by our executive board, that the objects of the resolution appointing the Committee should be so changed as to allow them to make said exhibition at any one or more of the eastern cities, which, in their judgment, would most conduce to the advantages of our State. The board, at the same time, set apart out of the appropriation made last winter by the Legislature, the sum of \$500 to defray the expenses of the exhibition.

Thus were things going on smoothly, and every effort of the Committee directed to the objects of their appointment, when, on the thirtieth day of August, the State Horticultural Society of Missouri sent forth a circular broadcast over their State, setting forth that they would enter the Missouri-grown fruit for the \$100 premium offered by the Kansas State Board of Agriculture, at the State Fair to be held at Topeka, September 16th to 20th.

The declarations sent forth in this circular of the Missouri State Society, the people of Kansas could look upon in no other light, than as a challenge for the fruit-growing championship over Kansas. This course of the Missouri Society was, in effect, saying "you have triumphed over all the States with whom you have competed. With Missouri, however, you have never been brought in competition. If, therefore, we are successful over you, we can, with propriety, claim to have triumphed over all those States whom you have beaten." That the Missouri Society resolved to succeed in this effort, is evident from the lateness of the day they sent forth their circular—only some seventeen days before the Kansas Fair commenced at Topeka. Not only the lateness of the day, but the rapidity with which they sent them broadcast over the land, coupled with this, the array of working force, put into their service for the first day of the Fair, all prove they intended and expected to conquer. By this stroke of strategy, they expected to take Kansas by surprise. In this expectation, however, they were very much mistaken. Kansas was on the lookout all the time, and was, so far as her collection of fruits and working force were concerned, fully prepared for the contest, and as in other contests of this kind, was completely victorious.

Whatever unpleasant feelings may have arisen during this contest, the citizens of Kansas are in no wise responsible for. The whole affair was of Missouri's own seeking. We heartily regret that anything unpleasant should have grown out of this fruit show; yet Kansas was placed in a position, and that too, by Missouri, that she had either to make the



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

37

best fight possible, or acknowledge herself beaten. This she could not do with any kind of honor, after having triumphed on so many other fields.

Mr. President, we have said this much upon the contest between Kansas and Missouri, which might not, at first glance, seem to be a necessary part of our report; but when it is remembered that the show at Topeka interfered prejudicially with the objects of our appointment, (our show at New York,) it will be readily seen that our report could not be full and complete without this seeming digression.

The fruits displayed at Topeka were originally, the greater part of them, intended for New York, but were, as already explained, diverted from their proper channel.

Your Committee had arranged to make their show at New York from the 4th to the 9th of October. The Fair at Topeka, having not closed till the twentieth of September, left us but one week, in which to re-arrange, re-ship and re-pack, and ship a third time, our fruits for New York. Hence, we were compelled to take such, and only such fruits, out of the collection shown at Topeka, to in part make up our collection for the Eastern show. Having, as before stated, but one week to make preparation for New York, we were compelled to appear at the American Institute with not more than half the fruits originally intended to be taken there. We were thus compelled to make our New York show with but seven barrels and four small boxes of apples and pears.

We left Leavenworth October first, at four o'clock, P. M., arriving in New York on the 4th, at nine o'clock, A. M. Our fruits arrived on the same train with ourselves. On the 5th, we unpacked and displayed our fruits, which opened up in the finest condition, such had been the skill used in packing. Your Committee remained in New York with their fruits from the 4th to the 17th, answering all the questions in regard to Kansas fruits, Kansas soil, and Kansas people.

The attendance at the Institute Fair, during our stay, was from six to seven thousand per day, making for the thirteen days, 84,500 persons. Thus a larger number of persons saw our fruits, by many thousands, than ever saw them before. At Philadelphia in 1869, and at Richmond in 1871, there were but three days at each in which our fruits could be seen, and then by not more than from two to three thousand per day. Added to the thirteen days as above, the officers kept our fruits on their tables, perhaps as long as they were in condition to show. On the second day of November, fourteen days after we left, the President of the Board of Managers of the Fair informed us that up to that date our fruits still filled one of the large tables and half of another, being about half the quantity first put on exhibition.

It was almost universally conceded by the many thousands, who



## Reports of the Kansas State Board of Agriculture

38

### TRANSACTIONS OF THE

saw and admired our fruits, that they were decidedly the finest on exhibition.

Now sir, let me say that the fruit display thus made in New York will do more for filling our State with the better class of immigrants than any or all of those heretofore made.

Expense of exhibition at New York City.....	\$ 519 85
Expense of exhibition at Topeka State Fair.....	356 00

Total expenses of the two .....	\$ 875 85
---------------------------------	-----------

Respectfully submitted,

DR. WM. M. HOWSLEY,  
DR. J. STAYMAN,  
J. C. VINCENT,

*Committee.*

On motion, the report was accepted, and thanks of the Society tendered the Committee.

Mr. Wellhouse offered a resolution giving the Executive Board to fix the time for the next meeting. Adopted.

Mr. Lovejoy moved that a committee of three be appointed to report during the meeting, the expediency of making Topeka, or some other city, a permanent place of holding the annual meeting.

Dr. Howsley considered this an important matter. The Society should have permanent rooms for depositing books, papers, awards, etc. The motion prevailed, and the President asked until evening session to select a committee, which was granted.

The prospect of a crop of fruit and condition of trees were reported as follows:

S. T. Kelsey: Wood seems to be well ripened, although the leaves seemed to hold on, but not as much as last year. Prospect of a crop of fruit the coming season, good.

Mr. Vincent: Had noticed that the leaves held on more than last year. If that was a bad indication, then trees were in a bad condition.

Dr. Howsley: There never was so fine a prospect for an abundant crop.

Prof. Gale: Apple trees, generally, are in a good condition, and have dropped their leaves. Pear trees ripened their wood, and afterwards made a second growth.

On motion the Society adjourned until 2 o'clock, P. M.



## Reports of the Kansas State Board of Agriculture

KANSAS STATE HORTICULTURAL SOCIETY.

39

### TUESDAY AFTERNOON.

At 2 o'clock the meeting was called to order by the President. Neither of the essayists, as announced in the programme, being present, the Society commenced on miscellaneous business.

On motion of Rev. C. H. Lovejoy, the President appointed Dr. Stayman, of Leavenworth, George Y. Johnson, of Lawrence, W. A. Cowan, of Grasshopper Falls, a Committee to examine and report fruits which had been brought to the meeting for identification and comparison.

Mr. R. S. Elliott's first resolution was taken from the table.

Mr. S. T. Kelsey, of Pomona, spoke at length, approving of the resolution, and furthermore said he believed it the duty of the Congress of the United States to make an appropriation to aid in planting trees on the western plains.

C. W. Murtfeldt, of St. Louis, stated that Hon. C. B. Lines, of Kansas, introduced resolutions of a similar character at the National Convention held in the City of Washington, D. C., February 15th and 16th, 1872.

S. T. Kelsey insisted that Congress should make an appropriation to enable men planting forest trees to be successful. Knowledge of varieties of trees was indispensably necessary. Men would not undertake, or should not at least, to plant any and every variety of trees. Some would succeed and others would fail. A large majority of the settlers were not able to experiment with trees to learn which were adapted to the situation, and the Government should determine these matters for them, as the results would be to increase the wealth of the nation. The European Larch had cost him nearly \$100 per acre, while some varieties of trees can be grown for much less. He believed Mr. Elliott had found tree raising on the plains more difficult than he expected when he begun.

Judge F. Wellhouse, of Leavenworth, was satisfied that tree raising was attended with more difficulties than most men were aware of, and felt sure that Messrs. Kelsey and Elliott had encountered serious difficulties. He valued the experience of the masses in Eastern Kansas for the few years past more than that of *one man* for twenty years in the Western portion, as a single man's experience would only answer for the locality in which he operated.

Rev. C. H. Lovejoy: Thought much of the objections to planting trees was attributable to the extreme selfishness of the human heart. People were not willing to plant for the future benefit of the human



## Reports of the Kansas State Board of Agriculture

40

### TRANSACTIONS OF THE

race. He believed the true principle was to plant trees even for those who should come after us.

E. A. Coleman: Approved the resolution, but was opposed to Mr. Kelsey's proposition to ask an appropriation of the Government to aid in its furtherance.

The resolution was adopted.

The second resolution of Mr. Elliott's was taken from the table and ably supported by him, setting forth the benefits arising from signal stations to foretell the approach of storms, and that it could be done in time so as to protect the farmers in sections east of the stations, as most all violent storms form in the west and northwest, and pass in an easterly course. Telegraph communications could readily announce their approach some 24 or 48 hours in advance.

Mr. Elliott stated that there were no signal stations west of us to Denver and none at all southwest. The Chief of Signal Corps had given as a reason that he had not enough men qualified for the work; but as soon as the men could be had the stations would probably be established.

Professor Tice, of St. Louis, said the route of storms and all hydro-meteors was regularly to the eastward in the temperate zone, and westward in the tropics. Hence the necessity of stations west of us, in order to foretell their approach. These observations would be just as valuable to the seaboard States as to us, because these storms often sweep across the entire continent, and even China and Japan are birth places of destructive cyclones, which pass over the Pacific without expending their force until they reach the shores of this continent.

Mr. Furman, of Siegel, considered signal stations useless to the farmer; they were only of value on the seaboard.

Mr. Kelsey: Said the practical use of meteorology was to enable the farmer to determine when to dig his potatoes, gather his apples, or secure his hay from approaching storms, etc. A few hours notice might save a good deal of money and inconvenience.

The damages of the Curculio were reported as very heavy in most sections where peaches had been abundant the past season. Most of the plum crop had been destroyed by this insect, and a general desire to know what could be done to destroy these enemies was manifest.

Mr. C. H. Cushing, of Leavenworth, had destroyed many by picking up the fallen fruit, and had saved his plums until about the time of ripening, when they all rotted; stated his variety to be the Lombard.

E. A. Coleman: Reported that his neighbor, Dr. E. G. Macy, of Clinton, yarded hogs around five of his plum trees, and the result was one bushel of very fine plums, and the hogs ruined three of the five trees.

A Member: Where does the Curculio deposit its eggs?

Mr. Cushing: In the fruit.



## Reports of the Kansas State Board of Agriculture

### KANSAS STATE HORTICULTURAL SOCIETY.

41

President Howsley announced that Professor Tice, of St. Louis, would read an essay on the subject of Meteorology at the coming session.

The Society adjourned until 7 o'clock in the evening.

### TUESDAY EVENING.

The Society met pursuant to adjournment.

The President called the meeting to order and introduced Prof. John H. Tice, of St. Louis, Missouri, who delivered the accompanying essay:

*Mr. President, and Gentlemen of the Kansas State Horticultural Society:*

I appear before you at the invitation of your President and Secretary, to address you on the subject of Meteorology. I do not claim to be a Meteorologist, yet the study of physical phenomena has been a favorite pursuit with me through life—not for the purpose of unraveling the complicated laws of Meteorology, but to solve the mysteries of the universe. My investigations, therefore, have compelled a close observation and a thorough study of the imposing phenomena of clouds, rain, hail, snow, thunder, lightning, winds, tornadoes, water-spouts; in short, all facts that form the basis of Meteorology.

The time has come when men are beginning to talk of, and want to hear something about the important branch of physical science, so intimately related to the well being and prosperity of the human family. Our discussion, then, is opportune, since it is possible only to disseminate knowledge on any subject, to the extent that an interest has been awakened in it, and to the extent the public mind has been prepared for its reception. In other words, the subject must have arrested attention and excited thought by presenting itself as a great problem demanding solution, and as claiming the undivided intellectual resources of the age to accomplish it. Whenever this is the case, the teacher is welcome, and he has an easy task because his lessons will be appreciated and readily understood. To a great extent, the observations and operations of the Signal Service Corps have prepared the public mind for effective instruction in Meteorology, by awakening in many minds an intense interest in foretelling the weather. It has done more than this. It has done an inestimable service to humanity and civilization by demonstrat-