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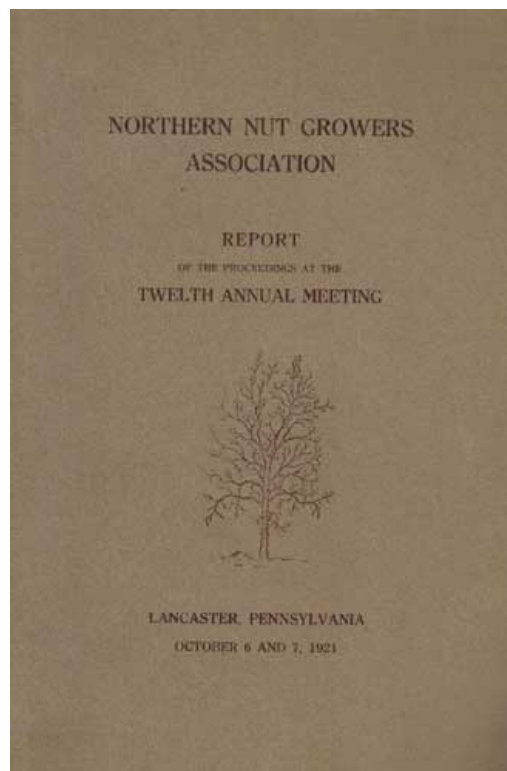
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*** START OF THE PROJECT GUTENBERG EBOOK NORTHERN NUT GROWERS ASSOCIATION REPORT OF THE PROCEEDINGS AT THE TWELFTH ANNUAL MEETING ***

DISCLAIMER

The articles published in the Annual Reports of the Northern Nut Growers Association are the findings and thoughts solely of the authors and are not to be construed as an endorsement by the Northern Nut Growers Association, its board of directors, or its members. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The laws and recommendations for pesticide application may have changed since the articles were written. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The discussion of specific nut tree cultivars and of specific techniques to grow nut trees that might have been successful in one area and at a particular time is not a guarantee that similar results will occur elsewhere.



**NORTHERN
NUT GROWERS ASSOCIATION**

REPORT
OF THE PROCEEDINGS AT THE
TWELFTH ANNUAL MEETING
LANCASTER, PENNSYLVANIA
OCTOBER 6 AND 7,
1921

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**** Honorary Member**

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CONSTITUTION

ARTICLE I

Name. This society shall be known as the NORTHERN NUT GROWERS ASSOCIATION.

ARTICLE II

Object. Its object shall be the promotion of interest in nut-bearing plants, their products and their culture.

ARTICLE III

Membership. Membership in the society shall be open to all persons who desire to further nut culture, without reference to place of residence or nationality, subject to the rules and regulations of the committee on membership.

ARTICLE IV

Officers. There shall be a president, a vice-president and a secretary-treasurer, who shall be elected by ballot at the annual meeting; and an executive committee of five persons, of which the president, two last retiring presidents, vice-president and secretary-treasurer shall be members. There shall be a state vice-president from each state, dependency or country represented in the membership of the association, who shall be appointed by the president.

ARTICLE V

Election of Officers. A committee of five members shall be elected at the annual meeting for the purpose of nominating officers for the following year.

ARTICLE VI

Meetings. The place and time of the annual meeting shall be selected by the membership in session or, in the event of no selection being made at this time, the executive committee shall choose the place and time for the holding of the annual convention. Such other meetings as may seem desirable may be called by the president and executive committee.

ARTICLE VII

Quorum. Ten members of the association shall constitute a quorum, but must include a majority of the executive committee or two of the three elected officers.

ARTICLE VIII

Amendments. This constitution may be amended by a two-thirds vote of the members present at any annual meeting, notice of such amendment having been read at the previous annual meeting, or a copy of the proposed amendment having been mailed by any member to each member thirty days before the date of the annual meeting.

BY-LAWS

ARTICLE I

Committees. The association shall appoint standing committees as follows: On membership, on finance, on programme, on press and publication, on nomenclature, on promising seedlings, on hybrids, and an auditing committee. The committee on membership may make recommendations to the association as to the discipline or expulsion of any member.

ARTICLE II

Fees. Annual members shall pay two dollars annually, or three dollars and twenty-five cents, including a year's subscription to the American Nut Journal. Contributing members shall pay five dollars annually, this membership including a year's subscription to the American Nut Journal. Life members shall make one payment of fifty dollars, and shall be exempt from further dues. Honorary members shall be exempt from dues.

ARTICLE III

Membership. All annual memberships shall begin either with the first day of the calendar quarter following the date of joining the Association, or with the first day of the calendar quarter preceding that date as may be arranged between the new member and the Treasurer.

ARTICLE IV

Amendments. By-laws may be amended by a two-thirds vote of members present at any annual meeting.

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PROCEEDINGS AT THE TWELFTH ANNUAL CONVENTION OF THE NORTHERN NUT GROWERS ASSOCIATION

LANCASTER, PA.

OCTOBER 6 AND 7, 1921

The Convention was called to order at 10 a. m. Thursday, October 6, 1921, by the President, Hon. William S. Linton, of Saginaw, Michigan, in the convention hall of the Brunswick Hotel, Lancaster, Pa.

THE PRESIDENT: It certainly is a pleasure and a privilege for us to meet in the prosperous and

historic Pennsylvania City of Lancaster. I am sure that we will have a successful meeting, and I am certain also that during the past year progress has been made in our work which when read into the records will show that we have accomplished material good. Without further preliminary remarks, and with the statement that my address or report will come later during the session, we will proceed immediately with our programme.

I have the honor to call upon the representative of the Mayor of Lancaster, Oliver S. Schaeffer, for the welcoming address.

OLIVER S. SCHAEFFER, ESQ.: Mr. President, Members of the Northern Nut Growers' Association, Friends and Guests: On behalf of the Mayor and the people of Lancaster I extend to you their greetings and bid you a most hearty and cordial welcome.

We feel honored that you have selected for the second time this city for the holding of your convention. Your esteemed president referred to Lancaster City as an historic city, and no doubt all of you know that Lancaster is frequently called the garden spot of the world.

Historically Lancaster City was the capital of Pennsylvania for thirty-three years, I think from 1779 to 1812. During the Revolutionary War when the British troops occupied Philadelphia the Continental Congress met here for a while in a building that formerly stood at Center Square where you now see the Soldiers' and Sailors' Monument.

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I was talking to your secretary a few minutes in the hotel lobby this morning and he told me that while some of you were in the nut business with a majority of you it was a hobby. That is the altruistic spirit that counts in these days when most of us look upon things in a materialistic way.

There was a time when I thought that most nuts came from Brazil, but I am glad to learn that we grow the nuts we eat here in the good old U. S. A., and some right here in Pennsylvania and in Lancaster County.

I cannot help but think of the chestnut blight that has worked havoc throughout our state and some other states. It has occasioned a big material loss. Yet I think too of another side of the loss and that is the spiritual side because our "chestnut parties" are now becoming a past memory. It is up to men like you to retrieve that loss and to bring back to our youth the chance of experiencing that innocent pleasure the gathering of chestnuts.

As I look into your faces here this morning (and while you are not numerous you make up in quality what you lack in quantity), I cannot help but congratulate you on showing the spirit that means progress. I cannot help but feel also that you are optimists, and they are what we need at the present time.

I will not trespass upon your time any longer. I again bid you a most warm welcome to our city and on behalf of the Mayor hand you the symbolic key of this city to enable you to go where you please.

THE PRESIDENT: Working with us unselfishly for the past two or three years has been a Michigan man who has had in mind the benefit of his locality, the State of Michigan and the United States. It was his privilege to introduce the first bill into a state legislature that became a law making it obligatory upon state authorities to plant useful trees along the roadside throughout the entire state that he represented so well in the Senate. I take pleasure in calling upon that member to respond to the eloquent words of the Mayor's representative. I would ask Senator Penney to reply to Mr. Schaeffer.

HON. HARVEY A. PENNEY: Mr. Chairman and Gentlemen of this Convention, and Mr. Mayor: We all appreciate this warm and hospitable greeting. Some of us are a long way from home. Mr. Linton, and I come from a town somewhat the size of this. We have about sixty-five thousand people, a large and growing city with a lot of prosperous and very wealthy men in it. We feel that in coming here we are coming to a city something like our own. We have been very much impressed with your city since we have been here. I am glad to see that colonial spirit, the spirit of '76, which permeates your people here. Up in Saginaw, of course, we do not have the same things to remind us of the past that you have. You have your monuments and those things that call your attention continually to it; but I am sure that our people are as patriotic as your people. However, I think that the spirit of '76 which still permeates the East helps to keep the whole country in line for the patriotic upholding of our governmental institutions.

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While most of the men here are interested especially in the scientific investigation and promotion of the nut industry, my friend Mr. Linton and I have been more particularly interested in roadside planting. Along with the promotion and building of good highways we fell into the idea of beautifying those highways. At the time the people in the East were having their trouble in the colonial days, the revolutionary days, our town was unheard of. It was simply way back in the forest and the wilderness and it was not until very early in this past century that Saginaw was even thought of. Mr. Linton and I talked last night about different things connected with the history of our country and we spoke of De Tocqueville, the great French traveler and explorer who came to America way back in 1831. He wished to go into the wilds of this country and see for himself what was here. He went to Buffalo and crossed the lakes to Detroit. Detroit was then a city of about two thousand inhabitants. And then he had the desire to go up into the wilds where nothing but wild animals and wild people lived; so he went up on a trail that led to what is now Pontiac perhaps thirty or forty miles northwest of Saginaw; that was about the end of the trail. There were one or two settlers who lived there. He picked up a couple of Indian guides and

started through the trackless forest, sixty or seventy miles up through the northwest to what is now Saginaw. He had his desire fully satisfied. He was eaten up by mosquitoes and rattlesnakes in the swamps and marshes; he could not sleep nor anything else; so he came back. That was away back in 1831, fifty years or more after your people were fighting and struggling for the liberty of this country.

I wish to say in closing that we all highly appreciate the welcome that has been extended to us on behalf of the Mayor of this fine city.

THE PRESIDENT: Next on the program will come the report of the secretary.

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THE SECRETARY: I regret the smallness of the secretary's accomplishment for the past year. Except for the editing of the annual report—which is much a matter of cutting out superfluous words—and the effort to get speakers for this convention, he has attempted very little.

This is not, however, for lack of things that could and should have been done. An energetic campaign for new members is the most obvious desideratum. The committee to prepare and issue a bulletin on the roadside planting of nut trees, arranged to give information for every part of the country, has been innocuous as well as useless. Perhaps this meeting will afford stimulus and material enough to get it to work.

I think that few of the members realize how the inactivity of the secretary has been more than made up for by the industry of the treasurer. Perhaps they are reciprocally cause and consequence. Not only has the treasurer discharged the usual duties of that office but he has also attended to most of the correspondence and clerical work. He has conducted the nut contests which, under his management, have developed to formidable proportions requiring immense expenditure of time and effort.

These nut contests have now become so widely known as to return us a good idea of what we may expect of the native nuts of the country. Undoubtedly we have not yet found the best nuts that this country produces, except perhaps in the case of the pecan. But Mr. Bixby's labors, continuing the work begun by Dr. Morris, have reached such results that I think he will be willing to say that we have nearly reached the limit of natural excellence in the nuts already discovered.

In fact it seems to me that we have reached the point where further improvement in nuts for cultivation is to be looked for especially from purposeful hybridizing by man. It should be another of the chief aims of this association to induce self-perpetuating institutions to get together the material necessary for such work. Such material already exists in incomplete form—incomplete, that is, especially in horticultural varieties—as in the Arnold Arboretum and in the Public Park at Rochester. The Arnold Arboretum, through our treasurer's efforts, has agreed to give more attention to nut growing and breeding. The St. Louis Botanical Garden and the Brooklyn Botanical Garden, through the efforts and generosity of Mr. Bixby and Mr. Jones, have made special plantings of horticultural varieties, and this summer the New York Botanical Garden was induced to set out a number of grafted and seedling nut trees given by Mr. Jones, Mr. Bixby, Mr. W. C. Reed, the McCoy Nut Nurseries and others.

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But unless this association can keep their interest alive it is likely that some of these institutional plantings will be neglected, especially as regards the highest development of their possibilities. In one botanical garden visited this summer the casual nut tree plantings running back thirty years have been entirely neglected and the trees are stunted almost to extinction. I hope that our members will lose no opportunity to visit these institutions and ask to see the nut tree plantings. One or two such visits in a year will help to keep our wards in the institutional mind.

We cannot expect from these gardens, at present at least, interest in breeding experiments. That is more properly a function of agricultural experiment stations. These are so short manned and short funded, so absorbed in problems offering quicker results, that it is difficult to get them even to consider nut growing. I do not recall a single experiment station in the country where any nut breeding experiments are being conducted. A few manifest a little interest in planting horticultural varieties but the only breeding experiments that I know of, or at this moment recall, are those of Dr. Morris, Dr. Van Fleet, Mr. Forkert and Mr. Jones. All of these experimenters have produced results that more than indicate great possibilities.

Therefore I think that more of the energy of this association should be expended in influencing the self-perpetuating horticultural institutions to see the importance of nut culture.

Attention should be called also to our treasurer's initiative, perseverance and industry in issuing Bulletin No. 5 on Nut Culture, in improving and reprinting our accredited list of nut nurserymen, in visiting, photographing and describing many of our important parent nut trees, in securing and distributing scions, in promoting experimental topworking of native nut trees in promising localities, in developing a varietal and experimental nut orchard which in time will be second to none in these respects, and in many other promotions of the objects of our association, unsparingly of his energy and his means.

It is curious that the biggest development in nut tree planting, for which we are responsible apparently, and practically the only considerable development of the roadside planting of nut trees, about which we have been talking so much, is on the other side of the earth, in China, where Mr. Wang, one of our members, and associated with the Kinsan Arboretum, is planting along the new model highway from Shanghai to Hangkow, a ton of black walnuts bought in this country and shipped to him through Mr. Bixby.

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Two public horticultural institutions in Canada have written me about making nut plantings.

We seem, perhaps, in this land, too busy making what we call wealth, and armaments to protect it, too busy to give attention to the food supply of the future race.

To summarise, the association may feel that its purpose as originally stated, and never changed, "The Promotion of Interest in Nut Bearing Plants, their Products and their Culture," has been furthered consistently though results are slow. For the future we should work, 1. For a greater membership. 2. To stimulate interest in horticultural institutions, especially in nut breeding. 3. To give definite information that will encourage nut tree planting for profit by individuals. 4. To promote roadside, memorial and public place planting of nut trees. 5. To discover still more of our valuable native nut trees through our prize contests.

Mr. C. A. Reed has made a suggestion which I will lay before you and which may be considered at a later hour. He suggests that it might be better to have our conventions once in two years, every other one to be held in Washington.

This is so radical a proposal that it should have prolonged consideration before adoption.

The affairs of the association are not getting from the secretary the attention they deserve and he does not foresee better attention in the future. He wishes that some more active person could be found for the place and would be very glad to have the association elect another secretary.

THE PRESIDENT: The secretary's report will be received and filed with the proceedings. Are there any remarks in connection therewith?

Personally, I wish to endorse emphatically what the secretary has said relative to Treasurer Bixby who has worked early and late and has promoted the affairs of this association to a very great degree. His work is along practical lines and brings results.

The secretary finds fault with himself. No member of the association endorses that particular phase of his paper because his work has been good, he has had the best interests of the association at heart at all times—that I personally know—and I sincerely hope that he may change his mind relative to his successor.

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We will now listen to the report of Treasurer Bixby.

NORTHERN NUT GROWERS ASSOCIATION

In account with

WILLARD G. BIXBY, TREASURER

RECEIPTS

Balance on hand Oct. 1, 1921:				
Special Hickory Prize, \$25.00; Life				
Membership, \$25.00; for Regular				
Expenses, \$25.26				\$75.26
From Annual members including joint				
subscriptions to American Nut				
Journal	\$199.50	\$423.58	\$623.08	
Reports	5.50	7.50	13.00	
Contribution for prizes	54.00	7.50	69.00	
Contribution to meet expenses		602.50	602.50	
Bulletin No. 5	12.73	60.94	73.67	
Cash discount on bills paid	.48		.48	
Postage returned		.10	.10	
Advertising in Report		5.00	5.00	
Life Membership P. W. Wang		20.00	20.00	
Funds Received for transmission to		1.00	1.00	
other parties				
Salary check returned by Secretary		50.00	50.00	
	---	---	---	
	\$272.21	\$1,185.62	\$1,457.83	\$1,457.83
Deficit October 1, 1921:				
Balance Special Hickory prize	\$ 25.00			
Life Membership	45.00			
Deficit for regular expenses ^[A]	246.07			176.07
	---			---
Net deficit				1,709.16

EXPENDITURES

American Nut Journal, their portion

of joint subscriptions	\$64.00	\$199.65	\$263.65
1920 Convention	85.00		85.00
Printing Bulletin No. 5		62.50	62.50
Stationery, Printing & Supplies	50.55	91.01	141.56
Postage, Express, etc.	36.60	75.78	112.38
Prizes 1919 Nut Contest	128.00		128.00
Advertising 1920 Nut Contest	52.08		52.08
Printing Report 10th Meeting	69.09	400.05	469.14
Printing Report 11th Meeting		341.85	341.85
Funds received for Transmission to other parties		3.00	3.00
Salary Secretary	50.00		50.00
	---	---	---
	\$535.32	\$1,173.84	\$1,709.16 \$1,709.16

[A] At the meeting on the morning of October 7th this deficit was wiped out by \$250.00 being subscribed by the members present for this purpose.

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Forty-seven new members have joined the Association since the last report, making 523 since organization, of which we have 221, making 302 who have resigned or otherwise dropped out. It will be noticed that the number of members received last year, 47, is less than the number reported a year ago, 66. This in the judgment of the Treasurer is entirely due to the less amount of energy expended for a smaller proportion of members have dropped out than a year ago. While the gaining of members is not particularly easy it can be done and the number gained to quite an extent is in proportion to the energy put on it.

The finances of the Association this year are in a more troublesome situation than any year since the undersigned had charge. Two reports each at double normal cost each is quite enough to cause it. An inspection of the Treasurer's accounts have made it evident that during no year in the history of the Association have the dues received been equal to the cost of carrying on the Association. Each year some members interested have contributed in addition to paying dues. During the year past these sums have been considerable. It is believed that with only one report a year there will be only normal difficulty in handling the finances of the Association. The orderly conduct of the finances of the Association makes it very desirable that normal receipts of dues take care of normal expenditures with a little margin for contingencies. The matter of classes of membership would seemingly help on this. The treasurer would not recommend changing the annual membership from its present figures, \$2.00, but would suggest that this meeting consider making a class of contributing members at \$5.00 per year including the American Nut Journal. This would give the Association double the income from each such member that it now gets for most members accept the combination offer of membership in the Association and subscription to the American Nut Journal at \$3.25 for both which nets the Association \$1.75 per year.

Respectfully submitted,

Sept. 30, 1921.

WILLARD G. BIXBY.

THE PRESIDENT: Mr. Bixby is certainly a first class treasurer. He makes a recommendation in his report. Do you desire to act upon it at this time? I refer to his recommendation relative to a new class of membership. It is a first class suggestion and a motion covering it would be in order.

THE SECRETARY: I move that a committee of three be appointed by the president to consider the recommendation of the treasurer relative to different classes of membership and to report at this meeting.

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MR. A. C. POMEROY: I second the motion.

The motion was carried.

THE PRESIDENT: I will appoint as that committee the treasurer, Mr. Bixby, the secretary, Dr. Deming, and Mr. R. T. Olcott.

Mr. Reed, the chairman of the committee on road-side planting, is in California, and unable to be with us at this session. If a report is to come from that committee it must necessarily come from some other member, so we will defer action on that particular report at this time.

We also regret the absence of Dr. Morris the first president of the association. He is unable to be with us at this meeting but he has forwarded a paper and unless there are objections we will receive it at this time and have it read by the secretary.

NUT TREES FOR PUBLIC PLACES

DR. ROBERT T. MORRIS, NEW YORK

The question of the planting of nut trees along highways and in parks and other public grounds falls into classification under two separate and distinct heads. First, the abstract proposition of planting useful trees upon ground which is not usefully occupied otherwise. Second, the reaction of human nature to the different phases of the proposition. The latter part is the larger part of the question, otherwise the work would already have been done.

Let us take up the smaller part of the question first. Nut trees which are indigenous to any locality, or allied species from other countries having similar soil and climatic conditions, will grow and thrive on public grounds quite as well as upon private property. They will be as beautiful and as useful upon public grounds as they are upon private property, speaking in a large way, although disposal of their products will go along different channels perhaps. Nut trees of various species will be quite as beautiful and distinctly more useful than any of the other trees that are commonly selected for planting upon public grounds. Because of the inclusion of the economic factor the question as to whether nut trees may well supplant the kinds of trees commonly selected is not a debatable question.

Let us leave this part of the subject however and take up question number two, relating to the human nature side. A little examination into this phase of the matter will disclose reasons why nut trees are not already along our highways and in parks and other public grounds. The supplying of trees on a large scale for such a purpose is commonly done by contract with nurserymen. Nurserymen find it more profitable to raise certain kinds of trees instead of other kinds. Nurserymen are prone to raise kinds which are most profitable. Public officials who are making contracts sometimes look for perquisites. These include acceptance from nurserymen of bonuses for letting the contract. Here then we have at the very outset of the problem two large obstacles to the purchase of nut trees for public places. The carrying forward of any large project of this sort means reliance upon someone with legislative resources. In my experience legislators are commonly keen to approve of any project which will render public service when they are fully convinced of that fact. If not fully convinced of that fact and reserving the feeling that private interests are being served they wait until somebody who knows how to see the legislator has seen him. Another phase of the question relates to the attitude of the people toward public property in a so-called free country. People are prone to take anything that they please from anything which is so impersonal as a country. Nut trees planted in public places would have their crops carried off by every passer by to such an extent that revenue for the upkeep of the trees would be difficult to obtain. In some of the European countries this obstacle has not been insurmountable. There are many villages in Europe in which privately owned fields are not even fenced and fruit and nut trees growing for the benefit of the village are left untouched by the passer by in this older civilization. A man would no more think of taking what belonged to the town than he would think of taking property from the storehouse of a neighbor. In this country we have not yet arrived at that point in civilization. The distinction between *meum* and *tuum* in a free country is sometimes blurred.

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What are we to do about this whole question? That is the practical point. Change human nature and educate the public. In towns belonging to our system of government there is some question if the public would ever allow nut trees to bring revenue sufficient for their upkeep and to yield a profit for the town. On the other hand, by means of education the public may come to desire the planting of nut trees along the highways and in other public places to the extent that it will submit to taxation for the purpose. The public planting of nut trees belongs to progress. If we are to remain boastful of progress in this country the question will gradually be developed in a practical way.

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THE PRESIDENT: You have heard the reading of Dr. Morris's paper. Are there any remarks thereon or any discussion?

MR. A. C. POMEROY: Some years ago there was objection raised at Los Angeles to the use of sewage water for irrigating purposes in raising tomatoes and other vegetables. The city then bought the property and set out orchards of English walnuts. I understand that they are growing and that the revenue goes to the city of Los Angeles.

As to the road-side planting of nut trees in Europe, to which Dr. Morris refers, the very first battle fought in the great world war when the Belgians were resisting the Germans was along where there were thirty miles of English walnut trees on both sides of a highway. I understood that every tree was demolished. I think our secretary or treasurer could find out about the Los Angeles park and the nut trees.

As to monument trees, about twelve or fifteen years ago, at my home, I set out a grove in our cemetery in memory of my father and it is doing fine. It seemed quite appropriate for he took such an interest in nut growing.

THE SECRETARY: I would like to speak a word in defense of our American civilization, as evidenced by something that Mr. Bixby and I saw this summer at Lockport, New York. We observed that one of the main highways leading from the town of Lockport to one of the principal lakeside resorts, was unfenced, lined with fruit trees on both sides—cherry trees which overhung the sidewalk. The sides of the road also were planted with tomatoes and other vegetables apparently unharmed. The trees certainly did not show any evidence of injury from depredations. Whether the products of the trees were taken or not I do not know but they still had fruit on them. Possibly those who live in that neighborhood—Mr. Olcott and Mr. Pomeroy—could tell us more in defense of American civilization as to depredations on road-side property.

MR. POMEROY: There are some people—what do you call them—dung hills—in this world, and I have had a little trouble with them but not much. They run around in automobiles and get out and take fruit. Dr. Deming and Mr. Olcott know how close the school house is to my home. The fact is the children walk under the nut trees when they take the cut through the private driveway, but I have very little trouble with them. I think the greatest object lesson was given last year, when two young men, who were hunting pheasants, took a half bushel of nuts and were caught at it. They did not think it amounted to anything. They came along up to the house and the nuts were taken and put upon the drying rack. While they were arguing an automobile stopped and the nuts were sold. They came to nine dollars and a few cents by the pound. One of these young men—he was in the retail tobacco business,—threw up his hands and said, "I admit it; I would not want you to walk into my store and grab nine or ten dollars' worth of goods; I admit this is all wrong."

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MR. R. T. OLCOTT: I have been very much surprised in the discussion of road-side planting, of fruit and nut trees at the prominence given to that feature of it which deals with the public taking the crop. That seems to me to be such a minor part of the proposition as to be almost negligible, and while it continues to arouse discussion I cannot see the vital importance of it. In a great many undertakings there are drawbacks but the undertakings go right on and when the difficulties arise they are met in turn. I think the thing for this association, and all others in favor of road-side tree planting to do is to go ahead with the proposition and forget the question of the crop and what is going to be done with it. As a matter of fact farmers are complaining continually of the depredations on their orchards resulting from the increase of automobile parties—perfectly respectable people going out on the road-side and helping themselves. If fine fruit and nut trees were planted along the road-sides and the crops were being picked, it seems to me that, under a general understanding that the public was to let these trees alone, and that any one caught or seen picking the crops would be reported by the one following, it would automatically police itself. The finger of ridicule would be pointed at a person who was so doing by somebody other than a uniformed officer, in other words by an ordinary citizen. I speak of that because in Rochester during the war when it was deemed necessary not to run automobiles on Sunday it was as much as his life was worth for a man to be out with his car on Sunday, not because of any police officer but because of the other fellow who was staying at home. I think that the other travelers along the road will take care of the fellow that violates the understanding about roadside fruit and nut trees.

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THE VICE-PRESIDENT: I come from Rochester, New York, and I know that in and around Rochester there are fruit-bearing trees planted along the roadside. Out on the road to Honeoye Falls there are a number of apple trees and out through the Webster section there are a number of cherry trees. I do not know what the results have been in the garnering of crops, but the appearance of the trees indicates that they are well cared for and that they are producing abundant crops of fruit. In Albany, Georgia, planted on the street side in front of the court house, are a number of pecan trees. I have seen them loaded to capacity with splendid seedling nuts. I understand that any one walking along the sidewalk under the trees has the right to pick up any nuts that are on the walk but is not permitted (at least it has been suggested that he do not) to reach up into the trees to take the nuts. I understand that the request has been very faithfully regarded and that it is very rare that the nuts are picked from the trees. Just what is done with the crop of nuts from those trees I do not know but I assume that it is harvested and marketed and the returns made to the town. The trees indicate that they are splendidly cared for and the citizens take a great deal of pride in their splendid appearance. I talked with the man who planted them, an employee of the court house, and he himself was simply delighted that he had been responsible for such a splendid monument. And property owners referred to in my home section, before whose premises these cherry trees and apple trees were planted, I feel very sure would not complain at all bitterly, if at all, about any filching that might be indulged in. So that I think, as Mr. Olcott has suggested, that maybe we are trying to cross the bridge before we get to it; that the thing to do is to urge the planting of nut trees on the roadsides and to stimulate a sense of pride in our American citizenship.

MR. OLCOTT: We all agree that trees of this kind planted along the sides of city streets would never be touched. I have been at Miami, Florida, and have seen the bearing coconut trees there. No one would think of knocking off one of those coconuts and thousands of people pass under them.

THE SECRETARY: I think it is very important to have brought out this optimistic view on the question of depredations on road-side fruit trees. I think it is only a question of time, as Mr. Olcott says, when the public will be educated to respect such products. If they have done it in other countries we can do it in this country. It is a question of the people becoming accustomed to it when we have enough of such products. When the whole country is covered with such products I think there will be no difficulty about maintaining respect for them. You know that sometimes after the loss of a very small amount of property there will be very great reaction. Some people feel that because robins take a few cherries or strawberries all robins ought to be exterminated.

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There are two other remarks in Dr. Morris's paper which should have consideration. I refer to those bearing upon nurserymen and public officials.

MR. OLCOTT: If there is any question relating to nurserymen, we are very fortunate in having one of the most prominent nurserymen in the United States at our meeting today. I refer to Mr. John Watson, of Princeton, New Jersey.

THE PRESIDENT: We certainly would be glad to hear from Mr. Watson. If I may be permitted to make

a statement from the chair I agree fully with what Mr. Olcott has had to say as to depredations. Possible depredations in connection with the trees that may be planted along the road-side, either fruit or nut, are hardly worthy of consideration. With my good wife in passing through New York State recently I drove through rows of fruit trees on either side of the roads, as did Dr. Deming and Treasurer Bixby, and we were surprised to see that they were loaded with apples. The fact that the trees were loaded with fruit of course proved that the fruit had not been stolen or taken from the trees. They had not been disturbed in any way. A number of years ago while holding the position of postmaster in Saginaw I planted a black walnut. That walnut has produced a fine walnut tree. I selected a nice place on the post office grounds at a corner where two of our prominent streets meet in the business portion of the city. Last fall for the first time that tree bore walnuts—about a bushel and a half; and the employees of the postoffice gathered those walnuts and sent them in a complimentary way to me. Now that tree being in a public place, you would naturally expect the boys to have taken the nuts from it, but they did not do it. So that I know that that particular phase of this question as Mr. Olcott has said is hardly worthy of consideration. Suppose now and then the boys do get a few fallen walnuts or apples. No harm is done. Just that much more food is produced for their benefit by this way of planting.

I now take pleasure in calling upon Mr. Watson relative to Dr. Morris's reference to the nursery business.

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MR. JOHN WATSON: I am afraid that Mr. Olcott's suggestion might possibly have given you the idea that I have something to say on this question or that I wanted to say something on it. I assure you that that is not the case. I am not a member of your association much to my regret. I am just visiting here trying to learn something from your meeting (this is the first one that I have attended) rather than to try to tell you something.

The question is whether I have any objection to make to Dr. Morris's two statements. I can say that they are both very reasonable. As a nurseryman I have no objection. Of course, I cannot speak for any other nurseryman.

I was rather surprised upon looking at the roll of those in attendance at this convention at the absence of nurserymen. I should think that those who produced the things that you people are trying to interest the country in would be the very men who would be the most interested in being here. It seems to me that you are trying to make a market for the goods that they are producing. I am rather surprised not to see at least half the attendance here made up of nurserymen.

It is entirely possible that I have not have understood those two statements made by Dr. Morris and I may be rather careless in saying that I do not object to them. They were, I believe, that nurserymen prefer, naturally, to produce the things that they can produce most easily and at least cost, and, in the second place that they produce the things that they can sell. That is what most manufacturers do. I could not find fault with either statement. The nurseryman as a manufacturer or as a merchant of course produces the things that people want to buy. He may go a certain distance in producing the things that are worth while, that are better than other things; but in the last analysis he must depend upon the buying public and the buying public is always going to get from the nurseryman just exactly what it demands.

THE SECRETARY: In regard to the presence of so few nurserymen at our meetings I would like to say that we have long tried to interest the nurserymen in nut growing. We always have had a few nurserymen with us; but I think without exception they have been those who had either previously become interested in nut growing or had become interested in it through some other influence than that of this association. It has been a great disappointment to us that we have never been able to interest the nurserymen generally. Although we have at times sent special communications to a great many nurserymen I think we have universally failed to get any response except from those who were already interested in nut growing.

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THE PRESIDENT: I do not think there is a movement in the country today that will amount to as much for the nurserymen of America as this particular movement that we have been promoting for a few years back. I know that it is becoming universal. During my short experience as your president I have found that inquiries have come from all over the United States asking how they may procure these trees and especially asking how they may procure the finest varieties. It is along that particular line that the nurserymen certainly could extend their business greatly; because as this movement of road-side planting goes along the man who has a good farm, the general farmer in his business, or any man with a small piece of ground that he can call his own, will want to plant a good nut tree thereon of a most improved variety. Now so many of these trees will be called for in the next few years (I do not think I am over-optimistic in the matter at all) that it will be impossible to supply the demand. So I am sure that any man who is regularly engaged in the nursery business will find that he will be called upon to supply a demand for the better class of trees that really cannot be filled for years to come. In this way his business will be largely benefited. Are there any further remarks on this particular phase of the question?

MR. OLCOTT: As editor of the American Nurseryman I am especially interested in this discussion. There is scarcely a catalogue of a southern nurseryman of any consequence but lists nut trees; and yet we have the Northern Nut Growers' Association convention here now, and we will have a National convention in Mobile next week right in the heart of the pecan growing section at neither of which will there be a half dozen nurserymen. I think both of these associations should have more nurserymen members. They list nut trees but do it in a perfunctory way. I do not believe nurserymen know what this northern association is doing nor how near they are to the

demand for the trees which will be wanted in the very near future. I think it is up to this association to make special efforts to acquaint them with the facts, and then I think they will come in and be active members. All persons connected with nut culture and all nurserymen ought to be most active members of such an organization as this. The subject should go before the membership committee.

MR. SAMUEL L. SMEDLEY: I have had a little experience with black walnuts and have found that they do not mix at all with farm crops nor with fruit. Possibly you folks from Michigan can solve the problem but I would not thank anybody for planting black walnuts along the road in front of my place. I am in favor of road-side planting but I do not think black walnuts would be acceptable in this part of the country, from what my experience has been.

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THE TREASURER: Let me ask why it is you think they would not be acceptable.

MR. SMEDLEY: I had a grand big walnut tree on my place at one side of the road. I tried to get apple trees to grow on the opposite side of the road but could not and it could not be accounted for by any other reason. I know other people have come to the same conclusion that certain things would not grow near a walnut tree. Some grasses will. If you go down through Lancaster County along the Lincoln Highway you will find a quantity of locust trees thriving there. Wheat and things will grow right up to the roots of those trees, but I do not think you will find that they will grow up to a black walnut.

THE TREASURER: I had a chance to observe, last summer, a black walnut tree out in the field with a crop planted right under it. It seems to me it is a question of shade. With this walnut tree with branches low down the corn seemed to be stunted where it grew a little way under the branches. On the other hand I saw another one where the branches were high up and cabbages growing almost up to the tree and about as luxuriantly as outside of its branches. It seems to me that it is a matter of shade rather than the tree getting the fertility in the ground. It may be that if the fertility in the ground is not sufficient for both tree and crop the tree will take it and let the crop suffer. But I imagine if there is enough for both, and the crop is not shaded, the crop can be grown much nearer the tree than we have any idea of.

MR. J. G. RUSH: I want to say a word about this way-side planting in our neighborhood. I do not think it is the general practice in Lancaster County where land is valued at two or three hundred dollars an acre. If you plant a walnut tree on a public thoroughfare there is temptation for children to go there to gather walnuts, endangering their lives on account of the automobiles.

One gentleman said something about a walnut tree damaging the crops. In my experience with black walnut nursery trees some have what is called a very strong top root while others have a deep root. It is the first kind, the surface rooted, that will do your crop damage but not the deep-rooted kind.

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Now another thing. Suppose one plants a cherry tree. To whom do the cherries belong? To the man who planted the tree practically on his premises. But the limbs extend out on the public highway. If I, the owner, take a ladder out there and pick cherries and an automobile comes running past and throws me down I am practically a trespasser on the public highway. I believe I would not plant along the public highway with the idea of getting any fruit from the trees. I think however when you have a railroad going through your premises it is entirely practicable to plant your nut trees alongside the railroad, especially where there is a fill. Where the roots will grow under it and thrive luxuriantly. Nearly every farmer has a small stream running through his premises. You plant your walnut trees or your filbert trees along that stream, and you will have magnificent results. I do not want to be understood as disparaging nut tree planting.

MR. D. F. CLARK: I would like to know if the planting of black walnut trees is discriminated against because of the difficulty of getting the meat out of the nut. I have made a great many experiments and have not been able to get the meat out of the nut in large pieces. Is there some kind of a machine made for that purpose? Black walnut kernels bring a splendid price and if we could get them open right it would be fine.

THE SECRETARY: That difficulty is being taken care of by the improved varieties which are being raised and which you can get on grafted trees.

I am inclined to agree with Mr. Bixby in regard to its being the shade of black walnut trees that affects the crops growing near them rather than the roots of the trees. I have seen the same thing that Mr. Bixby describes, a high-pruned black walnut tree with wheat growing clear up to the trunk. I have photographs of a number of fields in Europe where the English walnut is grown. The trees are pruned high and the wheat grows up close to the trunks of the trees.

I would like to say also that I think it is the purpose of those who advocate the road-side planting of trees not to do it forcibly nor to compel anybody to have trees planted in front of his premises if he does not want them, but to give him a voice in the selection of the kind of trees that should be planted in front of his property. I think that is a necessary thing for the success of the movement, that the co-operation of the property owners should be invited by giving them a voice in the selection of the trees that are planted in their location.

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DR. RITTENHOUSE: I feel that this matter of the injury caused by a black walnut to surrounding vegetation should be more thoroughly thrashed out. It is doubtful to my mind whether the injury that a black walnut produces on surrounding vegetation is solely due to shade. Seven years ago I planted an apple orchard and some of the young trees began to be injured by a large walnut tree

possibly seventy five feet away. The walnut tree happened to be on the line and I got the permission of my neighbor to cut the walnut tree down. The apple trees immediately began to thrive. I thought perhaps it was due to the roots demanding too much moisture from the soil because it was impossible for the shade to do any harm to those young apple trees. There is a superstitious idea among the people of our locality that the black walnut root is injurious to growing vegetation.

MR. SMEDLEY: In my case the walnut tree was on the opposite side of a public road thirty feet wide and the influence was shown to the second row of apple trees on the other side. I do not think it was the shade in that case. The limbs were pretty high too. It was a public road. I do not think there were any roots that reached the apple trees at all.

MR. MCGLENNON: Mr. Rush's reference to the ownership of the crop on trees planted on the roadside is a thought that has occupied my mind, and I have found some consolation in the belief that the ownership of land applies from the center of the roadway. I am not sure about that and I think it is a point that ought to be clarified.

MR. SMEDLEY: I think in Pennsylvania the public just have the right-of-way there; they have no claim to anything that grows.

THE PRESIDENT: In Michigan, the law applies that the ownership goes to the middle of the highway. The recent act of the legislature of our state causes the state highway commissioner to plant trees for the maintenance of the roadway. The planting of the trees he claims benefits the roadway, so that under that application he plants the trees for the maintenance of the road. The distance from the fence line varies. The state highway department of Michigan has a department for the planting of trees since the law introduced by Senator Penney some two or three years ago came into effect. The commissioner varies his planting, sometimes in groups and sometimes in a formal way, according to the stretch of road; but the basis of it all, perhaps, would be thirteen feet from the lot line on each side of the road. Our roads, or at least ninety per cent of them, are sixty-six feet in width. Thirteen feet from the lot line on each side would take twenty-six feet, and planting them forty feet apart in the other direction makes those trees forty feet apart each way. A great majority of the trees being planted in Michigan follow that particular plan, so they are thirteen feet from the property holder's fence line.

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I might say that occasionally the highway commissioner would run across an obstinate individual who would not plant trees in front of his place nor permit such trees to be planted as would conform to the other plantings. But the law passed at the last session of our legislature leaves it entirely in the control of the planting department of the highway department. The law reads that the owner of the adjacent property shall have the privilege of gathering the fruit or nuts or whatever may come from that tree. He has no better right, perhaps, than any other citizen of the State of Michigan, but he is there and can get the first ripe fruit or nuts which come from the tree. THE PRESIDENT: Are there any further remarks upon this subject? If not, I have a paper prepared by Prof. A. K. Chittendon, Professor of Forestry in the Michigan Agricultural College, which I will ask the secretary to read.

ROADSIDE PLANTING

Prof. A. K. Chittendon

The improvement and beautification of our highways is one of the best investments that can be made. Particularly in the Middle West where we do not have the panorama of hills and mountains, much of the beauty of the road depends upon the roadside trees. They frame the long vistas of farmlands, woods, lakes and rivers and lend enchantment to the road. Under recent legislation Michigan has taken a leading place in the care and planting of roadside trees. Provision has been made by the Legislature for the planting of ornamental and food-producing trees along the highways and for their protection.

The highways offer an almost limitless field for ornamental planting and they also offer opportunities for raising certain food producing trees of which at present the nut trees are the principal species used. A time may come when we can safely plant fruit trees along the roadside but until provisions can be made for their systematic care and spraying, such trees would be liable to spread disease to nearby orchards.

Roadside trees increase the value of adjacent property. They attract birds and thus assist in keeping down insect pests. They may be used to prevent erosion on steep slopes. They increase the life of certain kinds of improved highways by protecting the roadbed from the direct heat of the sun. They serve as a source of food if nut-bearing or sugar-producing trees are used. They invite tourists to travel over the highways. They may serve as a windbreak to prevent the drifting of sand.

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Roadside trees may, however, be too close together or by their shade injure crop production in adjacent fields. Some species of trees are particularly harmful if planted on the edge of a cultivated field. They send out their roots under the cultivated land and sap the moisture essential to plant growth. This can be avoided by using trees with deep or compact root systems.

The desirability of planting trees of any sort along the highways is sometimes questioned. There are places where it is urged that trees are not desirable. On stretches of road where the soil is naturally wet the heavy shade cast by certain species of trees is undoubtedly objectionable; but there are also trees whose shade is very light. Some trees make such a dense mass of foliage that they tend to prevent air currents and thus keep the moisture in the road from drying out. Along such stretches of road the method of planting may affect the matter of light and air, and species of trees can be chosen which will be practically unobjectionable. Most of the highway planting in the past has been a matter of chance and there have been few definite plans for any long stretch of roadway.

In selecting trees for planting the probable rate of growth and appearance of the tree at maturity should be borne in mind. What might seem entirely satisfactory in young trees may prove objectionable in the cost of mature ones. The size and shape of the tree at maturity should be considered as it affects the spacing of the trees. Also the amount of care which it will be possible to give the trees should influence the choice of species; for certain trees will produce good results with a small amount of attention while others require a great deal of care. The matter of interference with telephone and electric wires must also be considered. A species should be selected which is relatively free from the attacks of insects and fungi. It would be very difficult to find a tree which is entirely immune but there are some trees which are more resistant than others. The amount of shade cast by the tree is of a great deal of importance in connection with the moisture conditions; trees are often placed too close together which prevents their proper development. Where quick results are desired two species are often used, a fast growing one planted in between slower growing trees; the idea being to cut out the fast growing tree after the slower growing ones have reached good size. This is alright in theory but seldom works well in practice. The fast growing trees are seldom cut at the proper time and the result is often the stunting and injuring of the better and more durable trees. The fast growing trees usually die before many years. The result is seldom satisfactory.

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The question of litter while of importance with city street trees does not matter so much in the case of highway trees, but the cottony seed from poplars is very objectionable anywhere. The longevity of a tree is important. The desire for quick results often outweighs other considerations. Many of the trees which give results such as silver maple, box elder and Carolina poplar do not last long and the effort spent on them is wasted. More time and money is needed within a short time to remove and replace such trees. It is better to plant well in the first place. Trees do not grow at the same rate throughout their life. They usually grow slowly at first and then fairly rapidly between the tenth and thirteenth years, after which the rate of growth usually falls off gradually. If small trees, about ten feet high are used for planting they should reach the following sizes in twenty years on favorable soil:

American elm	18	inches
Basswood	15	"
Chestnut	12	"
Hard maple	11	"
Red oak	11	"
Pin oak	9	"
White ash	9	"
Black walnut	8	"
Hackberry	7	"

Certain trees such as the horse chestnut and the evergreens generally appear to better advantage alone or in groups while others like the elms, maples and box elder show to fine advantage in long rows. It is doubtful if the planting of windbreaks along the highways is advisable. Windbreaks are sometimes planted with the idea of preventing the drifting of snow but the snow will collect and form great drifts on the leeward side of a windbreak and the shade from the windbreak may prevent the snow from melting so rapidly. Hedges may be used, however, to prevent the shifting of sand or the erosion of steep slopes.

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The highways offer excellent opportunities for nut production and such trees as the black walnut and hickories may often be used to advantage. The presence of birds may be encouraged by planting hackberry and other trees or shrubs of which they are fond.

The Michigan Agricultural College was authorized by the Legislature to raise trees for roadside planting. The College is raising red oak, black walnut, oriental sycamore, sugar maple, elm, hackberry, snowdrop tree, Juneberry, hickory, European larch, Norway maple and box elder for this purpose. Other trees may be added to the list from time to time.

In addition to the planting of trees we need also the proper care of those already planted or growing naturally along the roads. The commonest source of injury is due to improper pruning for telephone lines. A great many trees are badly injured in this way. We already have a large investment in highway trees and it is only the part of wisdom to protect this investment.

Michigan has started active work in highway planting and we hope in a few years to be able to point with pride to our highways, not only because of the good roadbeds but also because of the trees and shrubs that line those roads.

THE PRESIDENT: Is there any discussion on Prof. Chittendon's paper? If not, it will be received and filed in the proceedings.

It is now near the noon hour and I think it would be well to have Mr. Jones or Mr. Rush state what program has been arranged for this afternoon.

MR. J. F. JONES: I believe the plan is to get dinner here, and then to go to our nursery at Willow Street. From there some machines will take the parties who do not have conveyances, around to other points.

THE SECRETARY: Mr. President, in accordance with Article V of the Constitution, I move that a committee of five members be elected for the purpose of nominating officers for the ensuing year.

(Motion seconded and carried.)

THE SECRETARY: Mr. President, I move that Mr. Olcott be named the chairman of that committee.

Mr. J. F. Jones, Mr. John Rick, Mr. Ernest M. Ives and Mr. C. S. Ridgeway were nominated as members of said committee.

Messrs. Olcott, Jones, Rick, Ives and Ridgeway having been nominated were on motion duly elected members of a committee to nominate officers for the ensuing year in accordance with Article V. of the Constitution.

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On motion the meeting adjourned until 8 p. m. same day.

EVENING SESSION

October 6, 1921, 8 p. m.

Hotel Brunswick

PRESIDENT LINTON: A recess was taken from the morning session until this time for the purpose of considering a roadside planting bill that might be recommended by this association to the authorities of every state in the Union. In order to bring this about we will have presented to you by Senator Penney, who was the introducer of the original bill that became a law in the Michigan legislature, a copy of the laws practically as they exist in our state today. We take a little pride in Michigan in being the first state to work along this particular line. Our agricultural college staffs, the highway department and several other branches of the Michigan government, are heartily and enthusiastically co-operating in this work. I have in my hand a notice that has been sent out by the state highway commissioner of Michigan to every highway commissioner in the state. We have about two thousand of the latter. We have in the neighborhood of two thousand townships six miles square and in each of these townships we have a supervisor, we have a highway commissioner and we have members of what is known as the township board. This notice that I have, and you will see it is quite complete and goes into a number of details, is sent by our state highway commissioner to each one of the township commissioners of north Michigan, and he closes his letter accompanying it with this:

Fourth: (President Linton reads).

You will see from that that we are well under way in connection with roadside planting in our state of Michigan. I now take pleasure in presenting to you a member of our legislature who introduced the first bill that became a law along these particular lines, Senator Harvey A. Penney of Michigan.

SENATOR PENNEY: In the legislature of Michigan several bills have been introduced by its members, but as I stated at the last convention they were not drawn up in such a way that they were fitted for our laws. As Mr. Littlepage said it takes quite a while to figure out a law that fits your own state law. These several laws were introduced but in some way or another the committees of the legislature never took kindly to them and they were not passed. But two years ago I had a bill passed. Since then we have seen some imperfections and we passed another law at the last session of the legislature which provides that the cost of planting trees and caring for them shall come out of the maintenance fund, that is, the maintenance fund that provides for the maintenance of highways. I don't know how the laws are in most of your states but in Michigan the law is that the owner of land owns not only his farm but the land to the center of the highway subject to the right of the public to have the use of it for travel. Then how are you going to plant trees on a man's land if the highway belongs to that man? They did it on the theory that the trees were necessary for the maintenance of the highway. There never has been a test case on this law but the highway department has a very able lawyer who was in the attorney general's office and since then has been elected circuit judge of the county in which Lansing is located. His idea was that the trees should be planted on the highway for the purpose of protecting the highway, and the cost of planting them and taking care of them should be taken out of the maintenance fund. So that is the theory upon which they are working under this bill.

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A BILL to provide for and regulate the planting of useful, memorial, ornamental, nut bearing and other food producing trees, shrubs, and plants along the streets, highways and other public thoroughfares and places within the State of (Michigan); and for the maintenance, protection and care of such trees and shrubs as a part of the maintenance of the roads in certain cases; and to provide a penalty for injury thereof, or for stealing the products thereof,—

The People of the State of (Michigan) enact:

1 Section 1. The (State Highway Commissioner) is hereby authorized and empowered

2 and it shall be his duty to select and plant by seeds,

3 scions or otherwise, useful, ornamental, nut bearing and other food producing trees, shrubs and plants

4 suitable for shade, maintenance and protection of the highways

5 along State trunk line and Federal aided roads and for the use and benefit of the public, and to care for and maintain all such trees, shrubs or plants.

6 The care of such trees shall be deemed a part of the road maintenance work.

7 The varieties or species

8 so planted shall be subject to the approval of the

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9 (State Department of Agriculture) and may be supplied

10 by the (State Agricultural College) or other State Institution or Department, or elsewhere acquired by the

11 (State Highway Commissioner). The (State Highway Commissioner)

12 shall make and publish rules and regulations for the

13 planting and proper placing of trees, shrubs or plants and for their proper

14 pruning, care and protection under the provisions of this act, and all

15 such planting shall belong to the State, but the owner of

16 the adjacent land shall have the right to take and use the products thereof.

17 All expenses incurred in planting or caring for such trees and shrubs along

18 trunk line and Federal aided roads of the State shall be paid in the same manner as is or may be provided

19 by law for the payment of the cost of maintaining trunk line or Federal aided roads.

1 Sec. 2. Counties, townships, cities and villages of the State are

2 hereby authorized to appropriate money for the purpose of planting,

3 caring for and protecting useful, memorial, ornamental, nut bearing and other

4 food producing trees, shrubs and plants along and within streets, highways, thoroughfares and other public places

5 other than trunk line or Federal aided

6 roads, within the respective limits of such municipalities and

7 subject to the jurisdiction thereof. The expenditure of any such fund

8 raised hereunder in a township shall be vested in the

9 (highway commissioner) of the township subject to the approval of the township board.

10 Any such fund raised by a county shall be expended by and under the

11 direction of the (board of county road commissioners;) and

12 any such fund raised in a city or village shall be expended by the highway or other proper municipal board or authority

13 thereof, in accordance with its charter laws or ordinances or under the

direction of the common council

14 or legislative body of such city or village. All such

15 appropriations made under this section by any municipality shall

16 be made in the same manner as is or may be provided by law for

17 the raising of money for highway or park maintenance purposes.

Sec. 3. Trees may be planted along the highways or other public places by proper authorities and designated as memorial trees for the purpose of commemorating important military or civic events, or in memory of any person distinguished for noteworthy acts, or for conspicuous service in behalf of the nation, the State of Michigan or any local community thereof. Suitable tablets, boulders or other markers of a permanent character may be contributed by any person, or by any civic or military association and placed in conjunction with such memorial trees subject to the approval and consent of the proper authorities in control or in direct charge of such highways or public places. that

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1 Sec. 4. The owner of any real estate in the state of (Michigan) that

2 borders upon a public highway other than a trunk line, Federal aided or

3 county road shall have the right to, plant useful, ornamental,

4 nut bearing and other food producing trees and shrubs along

5 the line of said highway adjoining said land, and within the limits thereof,

6 and shall receive annually a credit of twenty cents upon his

7 highway repair tax for each tree so planted and growing in good order: Provided, however,

8 That all such planting shall be done in accordance with the

9 rules and regulations prescribed by the (State Highway Commissioner)

10 for the planting of trees along trunk line and

11 Federal aided roads. Said trees and shrubs and the products

12 thereof shall be subject to the same incidents as to ownership and use as are

13 provided for in section 1 hereof with respects to trees planted

14 along and within trunk line highways. No bounty shall be paid

15 or deduction allowed under the provisions of this section upon any tree or trees for a longer period than five years.

16 The owner of the adjoining land shall have the care of such

17 trees and shrubs and shall have the duty and responsibility

18 for the trimming, spraying and cultivation thereof unless otherwise provided in the charter, ordinances, or other regulations of incorporated cities and villages.

19 In case any such tree or shrub should become diseased or shall in any manner

20 interfere with the public use of the highway the authorities

21 having jurisdiction over such highway may by written notice

22 require the owner of the adjoining land to cut and remove such trees or shrub.

23 If such notice is not complied with within thirty days after

24 service thereof such authorities may cut and remove such diseased

25 or obnoxious tree or shrub.

1 Sec. 5. The (State Board of Agriculture) and other State Departments having lands and facilities therefore are hereby

2 authorized to acquire and grow suitable seeds, scions, and

3 trees for planting under the provisions of this act and to

4 establish proper rules and regulations for the distribution thereof at

5 nominal cost, or otherwise, to the State, to municipalities of the State, and to

6 private citizens for the purposes hereby contemplated.

Sec. 6. It shall be unlawful to cut, destroy or otherwise injure any shade or ornamental tree or shrub growing within the limits of any public highway within

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the State of Michigan without the consent of the authorities having jurisdiction over such road. In the case of a trunk line of Federal aided road the (State Highway Commissioner) shall be deemed to have such jurisdiction in all cases. It shall also be unlawful to affix to any tree or shrub any picture, announcement, notice or advertisement, or to negligently permit any animal to break down or injure the same. Any person violating any of the provisions of this act shall be deemed to be guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not more than one hundred dollars or by imprisonment in the county jail for a period not exceeding thirty days, or by both such fine and imprisonment within the discretion of the court.

Now some of the farmers along the road say that the trees will be diseased, but I don't think that nut trees as a rule, or shade trees, are affected very much with pests. The elm trees have been troubled somewhat. In the West where we live I don't think there is any trouble of that kind. There may be with apple trees and fruit trees.

Our agricultural college at Lansing has at the present time one hundred thousand trees ready to plant under this bill. There are some that they have been raising for a long time and some they have recently planted. They hardly knew what to do with them. Now they have agreed to turn them over to the state to be planted on our highways.

One thing that we had trouble with in Michigan was the telephone and telegraph companies stringing wires along the public highway. They have cut the top of the tree right straight off and disfigured the tree and disfigured the appearance of the highway. This bill is supposed to prevent that. Our highway department has been trying to get the telephone and telegraph companies to get the right from private owners to put their poles on private land, or to put a pole and let an arm stick out through the tree without cutting the tree down. I recently came from Detroit. There the telephone companies have started to string lines and to cut trees. The highway commissioner has notified them that they must not cut the trees down or cut them off or disfigure them and he has introduced the state constabulary to enforce this ruling. Undoubtedly sooner or later there will be a test case to determine whether or not the state has this authority.

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I listened this afternoon to a discussion about walnut trees shading the highway. I have no practical experience to know whether these trees do any damage to crops on account of the shade, but supposing you raised a fine walnut tree along the highway and the tree begins to bear. Would not the products you get from that tree more than offset the damage it does to a crop close to the tree? I once had an aunt, when I was a very small boy, and it seems to me she said that she raised forty bushels of black walnuts on one tree. I saw that big hickory tree today. They claimed they raised fifteen bushels on that tree. I thought forty bushels was a lot to come off of one tree.

MR. BIXBY: That was in the husk. There have been records of that kind in the husk.

SENATOR PENNEY: This bill has been introduced and passed and Mr. Linton, who is practically the author of this bill, is desirous of having this followed up in the different states. I think it would be a good plan. What better investment could you make to beautify our highways than the planting of good trees? In the southern part of the state of Michigan there are quite a lot of good trees, black walnuts, butternuts, which not only add beauty to your highways but are useful in many ways. During the war we know that the government scoured the whole country to find walnut trees to make stocks for guns, and to use in airplanes for propeller blades. They used the shucks to make gas masks. The trees could be made of further service to man by planting them as memorial trees. And again they furnish food, not only bear leaves but food.

I would like to hear a discussion upon this bill from those who are from other states. I would like to hear what their opinion might be as to the different provisions of this bill.

PRESIDENT LINTON: The subject is now open for discussion. I am sure that there are those here who would perhaps offer amendments to that bill. They might desire to modify it some. They might desire to add other features to it. For instance, it might be well to recognize the desire at the present time to save useful bird life throughout the country. That might be stated in the title to this bill as one of the purposes of roadside planting. Certainly that would be one of the results of road side planting.

SENATOR PENNEY: The bill provides not only for planting trees, but for planting shrubs along the highway. That created quite a fight in the legislature. One fellow thought we were going to buy a whole lot of nursery stock and spend a pile of money. We are not. But here was the idea. Those shrubs are useful not only for furnishing food for birds, that are necessary to farmers, but are useful sometimes to prevent shifting sand, and also snow from covering the highways. You have often noticed that the railroad companies put up fences at different points to prevent snow from drifting on the tracks. Bushes can serve the same purpose.

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PRESIDENT LINTON: The subject is now before the body for discussion.

MR. LITTLEPAGE: To print the newspapers in the United States it requires enough wood each year to make one cord of timber from Boston clear across the American continent and across to the Hawaiian Islands and further. Most of that, perhaps half of it, comes from Canada. There is cut from the forests of the United States every year timber to make wood pulp enough to make one cord of wood from Boston to Liverpool. That is just for newspapers. That has nothing to do with furniture, with houses, with cross ties, with everything else, which are estimated to take four

times as much. Now if that be true there is cut every year from the forests of the United States enough timber to make four cords from Boston to Liverpool. That is going on every year. We met here seven years ago. In that seven years there has been enough timber cut from the forests of the United States to make twenty-eight cords of wood from Boston to Liverpool. Now when you begin to contemplate that you see what is happening.

Roadside planting furnishes one of the greatest opportunities. There are many details that will have to be worked out. The bill which the Senator and our distinguished President have given much consideration to seems to be working along the right lines. Many difficulties will come up from time to time but this is one of the things that this Association ought to get behind. Here is a great need, a fundamental need, when you think of the figures which I gave you. Here is one of the opportunities to fulfill that need. We, as an organization of tree planters, ought to get busy to help to work out the details and difficulties that cannot be all foreseen in the application of the machinery of roadside planting and the particular laws of each state. Some people think sometimes that because a fellow is a lawyer he knows all the laws. There are forty-eight different states in the Union. I know that every state in the Union has a statute of limitations. It is three years in the District of Columbia. It is six years here. The fundamentals, the machinery of laws, are different in these particular states. Now then, what are the duties and what are the opportunities? A duty and an opportunity are rather more or less synonymous after all. It is for this Association to get actively behind this proposition, and help adapt this legislation to each particular state, keeping in mind that the fundamental thing is to plant trees. We are meeting here in Lancaster, Pa., a city to which I have always turned my thoughts with great pride, because here was the home of the founder of the great common school system of America, Thaddeus Stevens. Do you suppose when he began to originate the system which has made America that he could foresee all the difficulties, that he could foresee the difficulties in Texas, in Indiana, in New York? He started with a principle, and that principle has been adopted and developed and worked out in each particular state, until we have the great forty-eight different big school systems of America. We can take this proposition and by working it out, adapting it to the particular machinery, the particular laws, and meeting the particular difficulties, we can work it out until it becomes a great monument. We must plant trees.

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MR. MCGLENNON: I want to say a word with regard to Senator Penney's reference to the importance of shrubs as a protection to the roadways from shifting sand. Mr. Volbertsen, my collaborator in my filbert enterprise in Rochester, got his early education in horticulture in Germany when a young man of twenty years of age, and he informed me the other day that along the side of the railroads' right of way, filberts were planted very extensively, in different parts of Germany, for the maintenance of the roadbed, to protect them from shifting sand. Not only that but they garnered wonderful crops of nuts.

MR. O'CONNOR: Concerning the planting of trees along the roadside, what enemies have they? I have watched this very closely since I have been connected with Mr. Littlepage's farm and I find that the walnut trees and pecan trees have very few enemies. I think that he has something like four hundred trees, and there were not three of them that were troubled with caterpillars. What better could we have along our road sides than nut trees when from the oak, the elm and other trees there are pesky worms dropping down when you go along with an automobile or carriage.

PRESIDENT LINTON: I want to say to the ladies present that the ladies of Michigan are greatly interested in this work. We recently established a state trunk line highway known as the Colgrove Highway, named for the President of our Michigan State Good Roads Association. Senator Penney was the introducer of that bill also and it became a law. That particular road runs across our state in such a way that it is about three hundred miles in length. One county that it crosses is known as Montcalm County. At a meeting we had in their court house we had a committee named in each township through which the highway passed for the purpose of properly planting trees and beautifying that highway. Upon my return home I received a letter from the county judge saying that the people of Montcalm County would not stand for planting and beautifying that one road alone but the whole county has been organized and every township in it and half of the membership of each committee is composed of women, and they want these trees and plants on every township road as well as on that state road. That is the way in which the work is going along in many sections of our state and it will soon cover it all with the same enthusiasm. So that the ladies can be of great good in this organization also. There is not a home or a residence street but desires fine shrubs and fine trees. It is especially so with the farmers. They want these beautiful things that the city people have been having for many years in their front yards. They are going to demand shrubbery and trees beyond any call that ever has been made for them in the past. So you can readily see from our work, although much of it is to be carried on in a public way by our agricultural colleges and state institutions of that kind, that they will be able to furnish only one tree or one plant in a hundred of those that will be demanded. That feature I wish especially to impress upon the minds of any nurserymen that may be present. The call in the next decade is going to be along those lines, for ornamental shrubbery and for useful trees, just as the fruit tree has been called for in the past.

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MR. FAGAN: I don't know that I have anything constructive to add to the road side planting idea. I know that our landscape gardener at the experimental station in the college has, in the past few years, been giving it serious consideration, and if I am not mistaken he has taken the question up with our forest and state highway commissioners in the state. How far it is going to go I don't know. There is a feature of the roadside planting which has been mentioned indirectly this evening that we must not overlook. Just as soon as we consider a program of roadside planting

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we must also consider a program for the control of pests. Regardless of whether they be pecan trees or hickories or walnuts we are bound to meet with these pests. Whenever we begin a systematic planting, or collection of plants, it does not make much difference whether oak trees, or catalpas or chestnuts, or what not, we can look forward to the time when we will be confronted with a pest control proposition. As to roadside planting in New England it would not make much difference whether it was a walnut or butternut or pecan. A gipsy or brown tailed moth would just as soon eat the foliage off a butternut tree as off an elm. We have here in New Jersey at the present time the Japanese iris beetle and it will eat anything in sight. As soon as we turn nature upside down, as we have nearly done in many sections of the country, we are bound to bring in these pests. It would be well in any law—and I know in this state we would consider a law, and an experimental station could have charge of work connected therewith—that one of the provisions we would insist on being put in the law would be one to control the pests which may come. Right in our district today the tent caterpillar is playing havoc with our walnuts; the oyster shell scale is going through our timber in Center County; and I can take you into the mountains five miles from any residence and I can show you oyster shell scale on half a dozen of our native species. It is nice to kid ourselves along to think our butternuts and our hickories would never be subject to these pests, but they will be. When the Northwest started to plant apple orchards they said they had no codling moths up there. There were some orchards that didn't but sooner or later they came. The time to nip those things is in the bud, and not let them spread. Lack of foresight has cost New England millions and millions of dollars just because they would not take the advice of one man when he told them that the gipsy moth and brown tail moth had gotten away from him. They laughed at him.

I wonder whether this association could not get our federal road department back of this idea of roadside planting. I know that back of the federal aid movement there is an important point of contact in roadside planting.

SENATOR PENNEY: Our bill provides that the highway department shall care for and maintain the trees. I think the bill is broad enough to cover that subject. I think we all realize that we cannot stop planting trees for fear of some pest that might come, but we have got to provide the means of fighting it if it does come. Our highway department in Michigan has employed a man, a graduate of Yale College who is an expert in horticulture and all this work of planting and caring for the trees is to be turned over to him.

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DR. CANADAY: In many parts of Germany the practice of planting trees along the state highways has been in vogue for perhaps half a century. They have used fruit trees and it has been found to be very feasible. The state has found that the proceeds of the trees has gone a long way towards keeping up the highways. Of course they probably have had their population under more rigorous control than ours has been. They have been able to collect the proceeds of the trees better. The question of the railroad rights of way might be taken up. A few of the railroads in the United States have already begun planting trees along their rights of way looking forward to a future supply of cross ties. It seems to me the greatest difficulty that will be encountered in this work will be the conflict with the telephone companies and the power lines. If that can be satisfactorily solved, I think the rest of it will be comparatively easy.

MR. SMEDLEY: In Pennsylvania near our large cities, the highway department has become aware that the roads are all too narrow. There was a bill passed in the last legislature giving the commissioner of highways a right to establish the width of roads at thirty-three feet, I think it was, with one hundred and twenty feet as the maximum. The department is now making a survey of all the main highways near the large cities. I happen to live just out of Philadelphia, about fifteen miles, on the line between Philadelphia and West Chester. It is a continuation of Market Street the principal east and west street of Philadelphia. It was laid out sixty feet wide. That was one of the first to claim the attention of the department and it will soon be, I understand, established on the map as one hundred feet wide or probably one hundred and twenty feet. That primarily is to stop the encroachment of the buildings near Philadelphia so that when the question of opening this road to its new width comes up damages will not be excessive. Some of us living along there take great pride in that road and want to see it developed but it is going to be some time before this is opened to its full width and it is needless to plant trees until it is. I don't know how you have things in Michigan but a great many of our Pennsylvania roads are old highways that have worn down with banks ten or fifteen feet high, and it is oftentimes a question where to put the trees.

PRESIDENT LINTON: Our highways in Michigan are, ninety per cent of them perhaps, four rods in width. That you will know is a good ample width, sixty-six feet wide. The basis of the planting as adopted by our state highway department, as I understand it, is thirteen feet from each line fence, making trees forty feet apart on opposite sides of the roadways. The main portion of the planting will be forty feet apart but that is simply a detail and the entire matter is left with the state highway commissioner and those who assist him. And, as stated by Senator Penney, they are very competent men in that department. Of course some trees would be placed further apart than others. There is no absolutely fixed distance. I don't know of any movement that will more quickly cause the planting of more trees than the one we are outlining at the present time in undertaking to cover the highways of this country. Michigan alone has six thousand miles of state trunk line highway. That is only a small portion of the highways in our state. These are the important roadways connecting our largest cities and business points. Just as an estimate I would say that we have ten times as many miles of roadway in Michigan as we have trunk line highways. If that average should be maintained throughout the country in each one of the states,

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and I imagine our state is an average one as to the number of miles of roadway, you would see that there would be three hundred thousand miles of trunk line highways alone, saying nothing about all the other highways and by-ways. So that I believe within the next five or ten years this roadside planting will cause more trees to be planted, and useful and valuable trees too, than all the efforts made in this country up to date in re-forestation. The people are alive to this subject and are asking for this very thing. It is only for us to map out a plan, arrange the details, and provide the sources from which they can obtain their supply and the trees will be planted.

It was my lot and good fortune last fall, following our meeting in the City of Washington, to visit Mount Vernon and there meeting the superintendent Mr. Dodge. He said to me that our association could have the products of the black walnut trees at Mount Vernon upon condition that that crop should not be commercialized in any way but used for public purposes. In behalf of the association I accepted the crop of walnuts, and, as I recall it, got in the neighborhood of thirty bushels of fine walnuts. They were selected walnuts the best and larger ones. It so happened that they arrived late in Saginaw, where my home is, and it was simply impossible to distribute them generally throughout the country. When it became known that we had these walnuts, and it became necessary to distribute these nuts and have them planted in our immediate locality, our people were delighted with the fact, and every school in every school district in the country called for them, and every city school called for some of these walnuts. They were planted in every school yard, in many cases with appropriate ceremonies along patriotic lines, and that did a great deal of good. Our citizens as individuals called for them. I was surprised to see the interest in it. They wanted them in their yards and at their city homes. Following all this I had about two thousand of these walnuts left. I wondered just what I could do with these. It was impossible to arrange a program for distribution so I asked the superintendent of parks of our city if he would plant and care for them and he readily agreed to do it. So that what was left of the consignment was placed in our finest and largest park. Shortly after having planted these, and the papers having noticed what had been done, I sent a copy to our honored first president, Dr. Morris. Soon thereafter I received a letter from him saying that he disliked very much to predict disappointment, but disappointment certainly was coming to us for our efforts in Saginaw, because, he said, "Mr. Linton, I have gone through this experience and the squirrels and other rodents will certainly get every one of those nuts. You will be disappointed in the results in the spring and I am telling you this so it won't come to you all at once. I want you to be prepared for the disappointment when it comes." I rather imagined it would come. I knew that the trees in that particular park harbored a good many fox squirrels and others, and I imagined they would get these walnuts. But I was very much astonished this spring to see the entire crop come up through the ground. I imagine it was a ninety-five per cent crop. So that we have about two thousand young walnuts growing about as high as this table from last year's planting. They are thrifty and they will be distributed around the state of Michigan this coming spring, and at other places. To show the interest manifested in that particular movement I will say that I received letters from perhaps half of the states in the country asking if they could not be supplied with some of these walnuts from George Washington's former home at Mount Vernon. I even got letters from the State of Virginia asking that some of them be sent from Saginaw, Michigan, to them in Virginia for planting at their home. So you can see how far reaching a thing of this kind can be. I know that we have started something here that will sweep from one end of the United States to the other, and will do more good along the lines of re-forestation than any organization up to date has been able to do.

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MR. LITTLEPAGE: I move that a committee be appointed to report at the morning session the best method of getting this bill before the various legislatures. I thought first of attempting to formulate what idea I might have in the form of a resolution, but it appears to me that it is something that may require a little thought. Therefore I move the appointment of a committee of three to report in the morning the best form of a resolution or whatever seems best to adopt by this association to get action.

This motion was put by President Linton and unanimously adopted.

The President appoints on this committee Mr. Littlepage, Senator Penney and Dr. Canaday.

PRESIDENT LINTON: This action will close the discussion relative to the tree planting law. Any other subject that you desire to discuss can be brought before the meeting in any proper manner.

MR. BIXBY: As the secretary noted this morning, perhaps the most extensive program of nut tree planting which has yet been carried out has been on the other side of the world, in China. One of the members of the association is Mr. Wang who lives near Shanghai and is secretary of the Kinsan Arboretum there. Some time ago he obtained some American black walnuts from Japan. He planted them and they grew so much faster than he had anticipated, and I think faster than any other tree with which he was familiar, that he conceived the idea of planting the new highway, which was being made from Shanghai to Hankow, with these American black walnuts. In due course he sent a money order to pay for two thousand pounds to the secretary. Last year was not the best year to get black walnuts, and the secretary forwarded the money order to me and asked me if I could get these walnuts for him. There was more trouble in getting them in New York last year than there usually is, but finally I did get them and had them made up in twenty-two bags and shipped to Mr. Wang at Shanghai. In due course they arrived and he is anticipating great things from them. The growth that he reported of this first lot of black walnuts was something astonishing. It seems to me that they grew the second year ten feet high. It was a very astonishing growth, a much more vigorous growth than I ever heard of their making here. At any rate there are two thousand pounds of American black walnuts that have been shipped to

MR. JONES: A matter that will be of interest is that Mr. Wang wrote me a letter in which he says that the black walnut grows three times as fast in China as the Japanese walnut. Here in the nursery we find the Japanese walnut doubles the black walnut in the first two years in growth.

PRESIDENT LINTON: We would like to hear from those present who are familiar with trees, as you all are, as to the merits and demerits of the various kinds of trees that we desire to plant. In Michigan the only ones we are considering are the black walnut, the hickory, the butternut and the beech. The beech in our state grows to be a beautiful tree, as it does in most states in our country. In addition to that our state agricultural people are suggesting that we plant the hard maple, which is a fine tree in Michigan, and the basswood, and one or two others, to provide food along certain lines. The hard maple, for instance, produces maple sugar, the basswood the bees draw honey from. The simple and useful trees and shrubs are the only ones in our state that we are giving any consideration to.

DR. CANADAY: What would be the best way to start a hickory along the roadside? From the nut?

PRESIDENT LINTON: From my experience with the black walnut I would say that would be the proper way to plant these hickories, to plant the nuts where the trees would be. It is far less expensive than any other method. It is easily cared for by the road men who take care of a section of the road.

MR. MCGLENNON: I am interested in the cultivation and culture of the European filbert at Rochester and have been for a number of years, and I believe successfully. In different meetings of this association that I have attended and in correspondence with the officers of the association, filbert culture in this country has been referred to as still in the experimental stage. Now when you have been in a thing for ten or twelve years and have not had any set-back but progress along all lines of activity, I believe you have passed out of the zone of experimentation and have gotten down to doing something. That is what we have done in Rochester with our nursery which I believe is the only thing of that particular kind in the country. Mr. Vollertsen, my collaborator, came to me with this idea years ago. He told me what he believed could be done and what had been done in filbert culture where he had been until about twenty years of age, having worked in a nursery from the time he had been able to do manual labor. In this nursery they had given especial attention to the cultivation of filberts and he had learned their method of propagation. He told me about this and believed it could be done in this country. I corresponded with some of the prominent nurserymen in the New England states and they told me it would be folly to attempt anything like that in this country, that I would be wiped out by the blight. They had tried it with some of the European varieties. Nevertheless I went ahead and imported five plants of twenty leading German varieties from Hoag & Schmidt, a prominent firm of nurserymen in Germany. I turned them over to Mr. Vollertsen having rented land for him and furnished the funds for the fertilization and cultivation of the land, paying a wage to him to go ahead and make the experiment. I wanted to know rather than to believe. His method of propagation was from the layer. Now we have fruited these propagated plants and found them true. We started in with half an acre. We now have two and a half acres, probably fifty thousand plants altogether. We have never had the semblance of blight. Our cultivation has been thorough. Our fertilization has been consistent. Mr. Vollertsen has been on the job very steadily and understands his business thoroughly. I think that this talk of blight is something that we should not take so seriously to heart. On half a dozen occasions some of our good friends have said, "What about the blight; don't you think it will wipe you out?" I think it is well to be prepared for the truth but the same thing might be said if I plant a peach orchard, that in a few years it will be wiped out by the yellows. I can't make myself believe that the matter of blight in filbert culture in this country is a serious menace. The consensus of opinion in this association seems to have been that even if it does appear there are remedies for it. Our esteemed first president, Dr. Morris, when he visited our place in Rochester some years ago when the convention met there, said that he thought we should not worry about it. He was satisfied that if blight appeared it could be controlled by the removal of the blighted part. I believe that the same principle applies to the development of filbert nurseries as to any phase of life, that eternal vigilance is the price of safety. I believe that thorough cultivation, keeping the plants strong and healthy, will help them resist disease. But if blight does appear, by watching closely it can be removed and I think controlled, as suggested by Dr. Morris. Maybe it has been all right up to the present time to be on our guard but there is my work that has been going on for ten or twelve years. During these last two or three years we have been sending our plants all over the country, to California, Virginia, Pennsylvania, Ohio, Illinois, Iowa, Indiana, Canada, and we have been getting fine reports with not a single reference to the appearance of blight. On the contrary they report that our plants are fruiting and they ask for more plants. As a specific instance I can cite a prominent doctor in Louisville, Kentucky, who some years ago got some plants from us and some filbert plants from some other nursery. We had a letter from him the other day in which he spoke in most complimentary terms of the plants he had gotten from us, that they had fruited, were true, and he wanted to know if we could furnish him from fifteen hundred to two thousand plants within the next few years. William Rockefeller on the Hudson, another customer of ours, reports plants doing splendidly and fruiting well. Mrs. Jones of Jones & Laughlin Steel Company reports plants growing splendidly there. Those are just a few of the instances I could cite. As I suggested to some of the gentlemen today at the next meeting it might be well for me to bring specific references from different parts of the country where our plants have been planted and are bearing fruit and are doing well, with no reference

whatever to blight having appeared, and I shall be very glad to do that.

It seems to me, too, that the filbert is one of the best nut producing plants for use here in the North. Usually it is grown in bush form. It is very hearty and begins to bear early and abundantly under proper care. In view of the exceptionally wide range of climates and soils it seems to be one of the good nut producing plants for this association. Now it can be consistently considered that I have an ax to grind as I am producing filbert plants for sale, but I assure you, ladies and gentlemen, that it is not with this thought in mind that I make these references. I have the interests of this association very much at heart. My whole time and attention and money is given to nut culture. I am extensively interested in the culture of paper shell pecans in Georgia. Successfully, I might also add. And I want to be equally successful with the filbert because I believe that it is the one great nut bearing plant that this association can stand back of and urge the people to plant, not because I am producing them but because I am a member of this association, and I want to see this association a success.

Three weeks ago last Monday, on account of my interest in pecan culture in the South, and having a good crop at our grove this year, I went to New York and spent the day there conferring with a big commission man down in the Washington Street section who handles large consignments of nuts. The subject of the filbert was discussed and I found a very great interest on the subject. They were one and all, I think I can say, appalled when I told them that there was a nursery in New York State producing filbert plants and filbert nuts. Mr. James, vice-president of the Higgins & James Company, showed me a very fine filbert, a variety with some unpronounceable name, I think Italian, and he said, "Isn't it a beauty?" It was. But when I told him that we had just as fine in Rochester and some finer he looked aghast. I invited him to come to Rochester and be convinced. He told me, as others did, that there was a wonderful future for the filbert in this country.

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The filbert, too, I think, is especially adapted for waste lands on farms. A great many farms have considerable areas of waste land which, I believe, could be made very profitable by the planting of the filbert, because just ordinary farm soil with ordinary fertilization, according to our experiments, demonstrates that the filbert will make "the desert to bloom as the rose." And it is a beautiful shrub for ornamental purposes. Come to Rochester and go down to Jones Square, and you will see a beautiful border of the purple filbert. Some of our customers are purchasing it, William Rockefeller for instance and Mrs. Jones, for the borders of walks and drives. I think that we should try to reach the gardeners and the agricultural and horticultural societies of the country in our campaign for the furtherance of nut culture.

In Dr. Kellogg's recent list of diets, fruit and grain and vegetables, covering two pages of his pamphlet, he gives there as the food value of the pecan in protein, fats, and carbo-hydrates 207.8, and next to them the filbert, 207.5, and next the English walnut at 206.8, and next to that the almond, at 191.1.

MR. BIXBY: I really think that Mr. McGlennon has done more than anybody else to get the filbert on a practicable basis. He has also mentioned why the association has been a little bit cautious in saying too much about the filbert. In some of the early plantings the blight made serious inroads. There has been a lot learned about the blight since that time and apparently it can be controlled by cutting out the blighted portions. I have seen filberts in certain sections of the country where the blight went half way around the twig. Apparently that can be controlled by cutting out that blighted portion. Or, if the worst came to the worst, by cutting off the limb. But there have been a number of filbert plantings made the last few years where that blight has not appeared at all. One of the greatest difficulties with the European filberts was that while the bushes would grow all right they would not fruit, or fruit only once in a few years. Mr. McGlennon, when he imported those plants from Germany, apparently took all the varieties the man had. I believe that is one reason why Mr. McGlennon is raising filberts when most of the plantings of one bush, or two bushes of one kind have failed. He has enough varieties to properly pollinate the hazel flowers. That is a thing that must be borne in mind. Any one wanting to plant filberts must not ask what is the best filbert and plant one. He must say, what are the best filberts, and plant several varieties. I believe that is one of the things that has enabled Mr. McGlennon to raise filberts when many previous attempts have failed.

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MR. MCGLENNON: Replying to Mr. Bixby's remarks they are well taken. I overlooked mentioning in my talk a fact, because I believe it is a fact, that it is due to the number of varieties we have that every variety has fruited. Now they are in the nursery and the principal consideration is wood. We are working every plant for wood. We have not been able to supply the demand for plants and won't be for another year or two. Next year I shall probably have ten to twelve thousand plants. We layered some twenty-five thousand plants last year, and we are layering some twenty-five thousand this year. Mr. Vollertsen has been very persistent with regard to the maintenance of the smaller nut varieties, has insisted upon it, because we have found that they are very much freer bloomers than the larger fruited varieties. We have made up our selection, as catalogued, carefully to that end, including some of the smaller fruit varieties. A party asked me the other day if I would send them a plant this fall. I said, "No, but I will send you three plants," meaning one of the small fruit and two of the larger fruit. It is the larger fruit that the consumer is going to demand. He is going to buy the larger nut, although the smaller nut is really better for eating.

MORNING SESSION

Friday, October 7, 1921

The Convention was called to order at ten o'clock by President Linton.

THE PRESIDENT: The first on our program this morning will be the report of the Committee on Uniform Bill for Roadside Planting. I will ask the chairman, Mr. Littlepage, to make the report.

MR. LITTLEPAGE: The committee met last night after adjournment and considered different methods of getting this bill (a copy of which I now present) before the various states, and after some deliberation it was decided to report, on behalf of the committee, as follows:

That the committee,—the same committee which has been appointed,—be authorized by the association to prepare in proper and simple form a sufficient number of copies of this bill, to be accompanied by a letter, formulated by the committee, which letter will set out substantially three things:

First: Call the governor's attention to the fact that this bill is the one adopted by the State of Michigan, but that it should, of course, be modified to comply with the special judicial or road machinery of each particular state.

Secondly: A short argument in behalf of this character of legislation.

Thirdly: A request to each governor that he refer the bill to his attorney general to put it in proper form to fit into the machinery of his particular state, and that he also refer it to his appropriate state board of forestry, agriculture or what-not.

We suggest, as I said before, that this committee be authorized to prepare a letter along those lines, to be accompanied by a copy of the bill, and that, after it is prepared and ready, it be sent out by either the president or the secretary of the association. It was also thought by the committee to be desirable, at the same time that this is sent to the governor of each state, to send copies to the various agricultural and horticultural journals of the respective states, that being done with the view of getting some publicity. Then, too, the committee thought that it might be well, at that time, for the respective members of the association in these various states to write to their representatives in the legislature calling attention to this bill.

Now that is the report of the committee, and, Mr. President, I move that this report be adopted and the committee instructed to act along those lines. [Pg 60]

(Motion seconded and carried, and the report of the committee was adopted unanimously.)

THE PRESIDENT: Now, ladies and gentlemen, I consider that we have performed a most important task in the pioneer work connected with roadside planting in America. There is no question but that with this association the idea first originated; and the work to date along those lines in the United States has been brought about by the Northern Nut Growers' Association. It is a work in which I, personally as well as officially, as you know, have been greatly interested and the unanimous adoption of the committee's report, endorses that line of work. I wish to thank you, individually and collectively, for your interest and the action which you have taken.

MR. LITTLEPAGE: I feel that our president in this instance has hit a high-water mark. He has taken hold of a very important idea and has developed it. After making an observation or two I am going to move a vote of appreciation to our president and accompany it with a vote of thanks to Senator Penney for coming down here from Michigan and lending his aid and enthusiasm.

We listened last night to a discussion about this roadside planting. As I observed before it is not without its difficulties the same as everything else; but this proposition extends to the various state boards of horticulture, highway, or what-not, one of the greatest and finest opportunities. Personally I believe in nut trees; but you must first get the public with you. Suppose you had a highway into Lancaster lined on either side for a half mile with pink weigelas in the spring. You would have the whole population going up and down that highway looking at the display. And the pink weigelia is almost a fool-proof shrub. It grows without cultivation and grows very rapidly and blooms in the greatest profusion. Suppose in mid-summer you had another highway lined with hydrangeas. I believe a particular one that is hardy is called *paniculata grandiflora*. It is a fool-proof shrub also, requires very little care and comes on after the other flowers go. It also can be produced very cheaply. You would have the population looking at and admiring the blooms and it would inspire, in each one of those individuals, a desire to go and do likewise. Suppose you had a half mile of sweet gum trees. If you go down through the counties of Pennsylvania now you will see the sweet gums—some of them a deep dark purple, some of them a bright golden yellow, some of them red, some of them with all the colors and all summer a beautiful foliage—suppose you had a half mile of those leading into a street of any city in America. The population on Sunday would drive out there and admire their beauty. It affords a wonderful opportunity. The individuals who care for those trees and shrubs, while moving up and down the highway caring for them, will be carrying with them a little university of horticultural knowledge. The average [Pg 61]

farmer thinks it is a terrible thing to spray. It is the simplest thing in the world as you know. This machinery by which these trees and plants and shrubbery would be cared for would be a moving university up and down the highway teaching the farmers how to care for their trees. Mr. Rush's trees which we saw yesterday were the finest examples of well cared for trees. You could not travel over the country and find trees showing a finer degree of care. Nobody could look at those trees without feeling that he would rather give a little more care to his trees. So that, if this idea is carried out, as it will be, it will become popular with the various state boards. They like to do things that are popular or that please the people.

As I said at the commencement of my remarks I am going to take the liberty of moving a vote of deep appreciation to the president (Mr. Linton), and also a vote of thanks to Senator Penney.

(Motion seconded and carried unanimously.)

THE PRESIDENT: I desire to thank you, one and all, for this vote of appreciation. My connection with the Northern Nut Growers' Association has been of a most pleasant character. I have found a group of men and of women who are interested not only in their own welfare but in the welfare of the race. What we have started today—or rather completed so far as organization is concerned—will do as much good in the United States in the next decade as any movement that has been started by any organization or association. It means re-forestation on a larger scale with right trees and right plants, as stated by my friend Mr. Littlepage. A new start will be made along those lines. The poor trees will be cast aside and the next generation will have trees and bushes and plants that not only will be beautiful to the eye but will be beneficial to mankind and to those birds and animals that we desire to have around us.

The greatest credit should be given to those of this association who in a scientific way have endeavored to bring about better varieties of nuts, better varieties of the products of trees, and their names certainly should go down in history with that of Burbank, or with those of other men who have devoted their lives to this kind of advancement. I am sure that will be the result. I know that as the message goes down along the line to the various states, their efforts will at least be recognized as having been beneficial and advantageous to all.

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I want again to thank every one of you for the kindness that you have extended towards me and to my colleague, Senator Penney, who is most actively engaged in this work. Situated as he was—a most prominent member of the Michigan legislature—he was able to promote the very work in our Wolverine State that we today are undertaking to bring about in the United States, and I would call upon Senator Penney to say a word in this connection.

SENATOR PENNEY: Mr. President, it seems to me that after all these remarks have been made, this subject has been very well covered. I was very much interested in the remarks of Mr. Littlepage because he spoke of different ornamental trees and shrubs with which I am not familiar and which are not grown in our part of the country.

Our esteemed president, Mr. Linton, is doing wonderful work up in Saginaw at the present time in conjunction with our superintendent of public parks. He is helping to lay out some of our parks and to plant trees and shrubs there. One gentleman of Saginaw furnished the means to buy one thousand trees and the matter was put in charge of Mr. Linton to see that they were properly planted. This work and similar work that Mr. Linton and I have undertaken to promote and to push. We have done similar things in regard to the promotion of good highways. We have absolutely no interest in stone quarries or gravel pits or in any kind of contracts for the building of roads; yet we have spent several hundred dollars or more in going about Michigan giving talks at different meetings and promoting roads. One of the things that Mr. Linton tried to promote was this tree planting bill. Inasmuch as I was in the legislature I had the opportunity of helping to put this work across. We have a wonderfully good highway commissioner in our state. He is enthusiastic over this proposition. While our bill was passed just a short time ago, he has already planted eighteen miles of trees in one locality, and, he said, at very little cost. Just think what might be done throughout the United States. Suppose the prominent highways throughout the United States were planted with useful and ornamental trees, beautiful shrubs and things of that kind. Wouldn't it be a wonderfully beautiful and useful thing for the country?

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In closing I wish to thank Mr. Littlepage and the other members of this association for the very kind treatment we have received here.

THE PRESIDENT: We are fortunate in having a paper that was prepared and will be presented by our esteemed treasurer Mr. Bixby, and I take pleasure in calling upon him at this time.

WHERE MAY THE NORTHERN PECAN BE EXPECTED TO BEAR

Willard G. Bixby, Baldwin, Nassau Co., N. Y.

In the January 1916 issue of the American Nut Journal is an article by Meredith P. Reed read before the Western Association of Nurserymen at their annual meeting in Kansas City, Mo., December 1915 entitled the Pecan Areas of the United States, describing the limits between

which the pecan may be grown. In this paper the matter of the Pecan Belts of the country are discussed and their extent determined pretty largely by the length of the season (in average years), that is by the number of days between the latest spring frosts and the earliest fall frosts. A map was shown on which these areas were marked out, and it has been very useful to the writer in answering inquiries from persons who want to know if pecans can be grown in a given section.

Mr. John Garretson, Aspers, Adams Co., Penn., has on his place bearing Stuart and Schley pecans, two of the standard southern varieties. These bear nuts of typical shape but which are only a fraction of the size that these nuts would be if grown in southern Georgia. This clearly shows that some of the standard southern pecans require something which they do not get at Aspers to enable them to properly mature their nuts. The trees stand the cold of winter but the fruit does not properly mature. Mr. Jones has suggested that it is heat that is lacking and has advanced the idea that even though the trees are hardy to winter cold they have not sufficient summer heat at Aspers to enable them to mature their crops. This has brought up the question as to whether there was any method of measuring the summer heat available for causing pecan nuts to grow and mature.

Observations on northern pecans (and some southern ones) on my place at Baldwin caused me to note that no pecans started to vegetate at Baldwin before May. May is the first spring month here when the pecan will leave out. May is also the first spring month when the average monthly temperature here will reach 50°F. It occurred to me that if we note the excess average monthly temperatures over 50° and sum these items for a season we would get what might be termed a figure for "pecan growing heat units." This figure of 50° is doubtless capable of some refinement. There is no reason to suppose that further study may not show that it should be somewhat more or less but it is the best we have so far and seemingly it is proving useful.

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If we calculate these figures for Evansville, Ind., for 1914, for example, and show the method of doing it we will have

1914	Average Monthly Temperatures	Average Monthly Temp. in Excess of 50 deg.
January	39.6	
February	29.9	
March	42.0	
April	55.4	5.4
May	67.9	17.9
June	80.0	30.0
July	82.2	32.2
August	78.0	28.0
September	69.6	
October	60.8	10.8
November	49.2	
December	31.0	
		Total 143.9

The pecan growing heat units, pecan units they may be called for short, for Evansville, Ind., in 1914 were 143.9. From this we might conclude that a place where the pecan units for 1914 would figure out 143.9 would be likely (as far as climatic conditions are concerned) to grow pecans as well as Evansville, that is, of course if other years should show similar figures.

With the idea of seeing if the experience of those who were growing pecans would be anything like what might be calculated from the Weather Bureau Records, letters were written to all members of the National Nut Growers' Association to find out if pecans grew and bore well in their sections and if so which varieties. From the replies received it has been in a number of instances difficult to judge just how well pecans grow in some sections. For this reason I have interpreted the replies somewhat on the basis of my own knowledge and on certain facts told me by Mr. C. A. Reed. Apparently at least 175 pecan units are to be found in most places where the southern pecan is successful commercially. This corresponds to a line through Augusta, Milledgeville, Macon and Columbus, Georgia and Montgomery, Alabama. There seems little question but that pecans can be grown north of this line but until I get more positive information than I now have I shall doubt if the planting of southern varieties of pecans much north of this line is nearly as advisable as it is south of it.

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When we come to compare this figure with the pecan units for Ocean Springs and Pascagoula, Miss., where a number of the fine southern pecans originated which are now being propagated we find an average of about 222 pecan units. To reduce this to a percentage we find that many of the standard southern pecans grow and bear well when the pecan units are as low as 79% of those of the place of their origin. In other words the adaptability of the southern pecan is 79%, that is it will grow and bear well where the pecan units are as low as 79% of those of the place of its origin or to use rough figures, 80%.

When we come to ascertain the pecan units of the locations where the northern pecan grows and bears well we will consider Evansville and Vincennes, Ind., as places where it bears well; Burlington, Ia., as a place where it does quite well, but not as well, as in Evansville; Clinton, Ia., as a place where trees are growing well but where they bear a large crop only once in several years; and Charles City, Ia., as a place where the pecan does not mature its nuts. The pecan units

are also shown for several important places outside of the native pecan area.

	Highest	Lowest	Average
Evansville, Ind.	(1919) 147.5	(1917) 116.4	135.7
Vincennes, Ind.	(1914) 144.7	(1918) 123.1	130.8
Burlington, Ia.	(1914) 125.8	(1917) 90.2	108.4
Clinton, Ia.	(1914) 109.2	(1917) 75.3	94.9
Charles City, Ia.	(1914) 91.2	(1915) 65.4	78.5
New York City	(1914) 101.2	(1917) 85.2	94.3
Lancaster, Penn.	(1919) 108.7	(1917) 84.9	98.4
Gettysburg, Penn.	(1919) 108.4	(1916) 89.4	100.7
Cincinnati, O.	(1914) 131.7	(1917) 88.9	109.5
Baltimore, Md.	(1919) 127.2	(1917) 106.7	121.0
Washington, Md.	(1918) 126.8	(1917) 104.7	119.3
Hartford, Conn.	(1919) 88.9	(1917) 74.8	85.1

If we consider that Evansville and Vincennes are the center of the pecan district near which most varieties have originated and that a place should have 80% as many pecan units as in this Evansville district in order to have the northern pecan do well, a place should have 105 pecan units in order for one to feel reasonably certain that the northern pecan will do well there. It will be both interesting and instructive to see how well the applications that may be made from the conclusions compare with observed facts.

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We know that there are large numbers of pecan trees at Burlington, Ia., and that the trees grow and bear well. Its pecan units are 108.4. We should conclude that at Baltimore and Washington with pecan units at 121.0 and 119.3 respectively that pecans would grow and bear well. There are pecan trees over 100 years old at Marietta, Md., which is half way between Baltimore and Washington. These trees bear nuts and although it has not been possible to get bearing records it is evident that they bear considerably for on the roads of that vicinity are hundreds of young pecan trees which evidently came up from nuts borne by these old trees. We should expect the pecan to do well at Cincinnati, O. In fact I have been expecting to find it native there, but, so far all inquiries have failed to do so. At Fayetteville, however, which is about 40 miles east of Cincinnati and somewhat north of it, are bearing pecan trees raised from seed brought from Shawneetown, Ill., which is in the Evansville district. Seed from these Fayetteville trees planted at Baldwin have shown nearly 100% germination.

There is some question as to how well pecans should bear at Gettysburg, and Lancaster, Penn., and at New York City where the pecan units are much like those at Clinton, Ia., where, on forest pecan trees, we get a fair crop but once in several years. Perhaps with our present knowledge these places should be considered on the borderland between the country where the pecan is likely to do well and that where it will not mature its nuts. We know that pecan trees have borne nuts at Aspers, Pa., near Gettysburg, at Lancaster, Pa., and at Westbury and Glen Cove, Long Island, near New York City but so far it has not been possible to make sufficient observations to form definite conclusions as to what to expect. It seems quite likely that fertilization and care may help materially the maturing of crops in those sections which in our present knowledge we must consider on the borderland.

Probably we should not expect pecan nuts to be borne at Charles City, Ia., where pecan units are but 60% of those at Vincennes, and pecan units at Hartford, Conn., are not so very different. There are northern pecan trees at Charles City, Ia., which many years ago were brought there, but the information I have about them is that they have never borne. There is a large pecan tree at Hartford, Conn., but I have never been able to learn of its bearing nuts.

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As the northern pecan trees now being planted get to bearing age we shall have actual experimental data as to what they will do in the different sections. Until that time by the method outlined herein and with the Weather Bureau Records for several years at hand inquiries regarding its probable adaptability for a given section can be answered with far more confidence than was possible heretofore.

THE PRESIDENT: Is there any discussion upon the excellent paper just read by our treasurer?

MR. JORDAN: May I ask if, according to that theory, the Stuart and the Schley would not be expected to do well in Washington?

MR. BIXBY: I should say not. My intention was to indicate roughly a dividing line between where the pecan would be an important commercial crop and where it would not. We know the Stuart pecan bears pretty well at Petersburg, Virginia; it bears at Aspers, Pa., which is near Gettysburg, but the nuts are a fraction of the normal size and not very well filled.

THE SECRETARY: We all appreciate the amount of work that is represented by this report of Mr. Bixby and how valuable it is from a scientific as well as from a practical point of view. I wonder if it could be made more useful if Mr. Bixby could make a little map showing the isothermal lines on the basis that he has followed in his investigation.

MR. BIXBY: That could be done in a very general way, but altitude makes such a difference that there would be many places included in any belt at which, probably, certain pecans would not grow nor would not mature. It is very evident that local conditions make a great difference. I should say that a map to be useful would probably have a series of dots all over the country indicating what pecans would be best grown in that section; and while that would, to a certain extent, form belts yet there could be selected many places in any one belt where another pecan would be preferable.

MR. J. W. RITCHIE: I started in this nut-growing business knowing nothing about it. I found that there were men in it who had been working at it for years who knew many things that I wanted to know. They forgot that I knew nothing and that I might want to know some of the things that they had in their minds which gave them a background. I think there ought to be some way by which all this knowledge that we have can be brought together so that a beginner could pay a dollar or a dollar and a half or, if necessary, two or three dollars and get it all at once. I have visited Washington and have seen Mr. Littlepage. He showed me some Kentucky hickories and Stabler walnuts and I then decided that if I could raise any nuts there would be no trouble about selling them. I can sell just as many of those nuts as I can produce; but yet I do not know a thing about how many nuts will grow on a Kentucky hickory in one year. If you will lay the facts before me and let me judge them I will take the risk myself. I do not want anybody to tell me whether to plant nuts or not to plant them. I will decide that question for myself if you will give me the data to work on. I want a book that will give me the varieties. I want to know what particular nuts can be put out in this region here that would have a chance of commercial success. Then I would like to know as much as I possibly can about those varieties, their respective qualities, what they will produce and especially how to propagate them. I happen to have a place where there are a great many walnuts, butternuts and hickories. I would like to know, in detail, how to propagate those nuts. In a conversation with the secretary he spoke of northern pecans. I have read about the Marquardt, the Burlington and the Witte. I do not know whether the term "northern" included those three or not.

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TREASURER BIXBY: I would be very useful if I could directly answer a good many of the questions that are asked. A great many people would like to know the pecan they can plant in their sections and be sure of success. That I would like to tell them. I do not have the information. It is frequently more difficult to answer questions than to ask them.

Regarding the Burlington and the Witte pecans, they come from the most northern section where good pecans have been found, where the heat units are the lowest. They come from Burlington, Iowa, where the heat units are 180, if I remember correctly. If we assume a place where the heat units are 80 per cent of those at Burlington, those pecans should grow and mature there. They would probably do fairly well in New York City. I think we might feel justified in saying that they would not do well at Charles City, Iowa, because pecans from near that section, or back north of that section, have been growing for twenty-five or thirty years, and have not fruited. There the pecan units are very low, only 78. It would seem reasonable that at places where the pecan units are somewhat over 90, including New York City, Lancaster, southern Pennsylvania, and of course practically all sections south of it, they ought to do well. Those are the safest pecans, the Marquardt, the Burlington, the Witte, and the Green Bay, to plant in the northern section.

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MR. LITTLEPAGE: The Stuart pecan originally stood within fifty feet of the Gulf of Mexico. There is where it originated. It is one of the leading southern nuts; and yet I saw a Stuart bearing nuts in Mr. Roper's orchard down at Petersburg, Virginia. It has grown beautifully. There is a strictly southern pecan, nurtured by the waters of the Gulf of Mexico, which has the widest latitude. You can find the same thing up north. The fact that the Burlington grows at Burlington, Iowa, means this, that it ought to grow in all similar latitudes, or else violate known laws of horticulture. But it does not mean that some other pecan that grew 250 miles south of that might not grow still further north. The questions asked are important. Why does not the association, just as fast as it gets information, stick a pin there and fasten it down? For example, will pecan trees grow, say, on the thirty-ninth parallel, which runs through my grove down in Maryland. They will. Will they bear? There is one Major there that has this summer fifty pecans on it; another one there with perhaps a dozen. On the 27th day of March of this year, which was Easter Sunday, the temperature dropped sixty-eight degrees in twenty-four hours. It is a wonder it did not kill the forest trees. But with all that the pecan stood there just as hardy as the oak. It destroyed some of the ends of the swelling buds, not the dormant buds but some of those that had begun to swell a little, and that no doubt affected the crop or we would have had, perhaps, all the varieties, the Butterick, the Warrick, the Niblack, the Busseron, the Major, and the Green River fruiting. Do we want to grow a Major? I do not know. But the man that makes the mistake is the man who fails to set nut trees. How about the Stabler walnut bearing? It bore matured nuts at the age of four years on my farm in Maryland this year. The nuts are here. That answers that question. I have very grave doubts about pecan trees thriving in the Lancaster latitude; yet it may be that I am wrong about that. There may be some particular variety that will thrive here. If I lived in this section I would set out the trees so that when the one, two, three or four varieties are found that will thrive here we will have something to work on. There isn't any question about the black walnut or filbert thriving here, or the hickory, because we find them growing. If you go through southern Michigan and northern Indiana, you will see the shagbark hickory by the thousands growing along the railroad. This association should endeavor to get some affirmative data and distribute it among its members.

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I have a row of Indian hazels. I put them on the side of my garage to make a sort of a screen

because they grow those big crinkling pretty leaves. That row is probably fifteen feet long. If I had forty acres of those hazels with the same quantity of nuts on that are on there this year I could buy another farm.

MR. OLCOTT: I would like to ask about Evansville, Indiana.

MR. LITTLEPAGE: Evansville, Indiana, is almost exactly on the thirty-eighth parallel. The Busseron pecan tree grows almost exactly on the thirty-ninth parallel which is the northern boundary of the District of Columbia. The big orange groves in California are at the Lancaster latitude, which shows just how such things twist and turn, how difficult it is to learn them and why it is going to take a lot of experience to work them out.

THE SECRETARY: I knew that Mr. Jones was a very patient and a very courteous gentleman; but I did not suppose that his patience and his courtesy would enable him to sit there for nearly a half hour with, lying in his lap unopened, the new book on nut culture which has just been published by Dr. Morris, probably the first copy that you or I have seen. I see that Mr. Jones has finally yielded to temptation and has uncovered the book. Perhaps that is the book that will supply Mr. Ritchie's needs. I mention it now because I think that you all ought to know that such a book has been published by Dr. Morris and that it can be bought of the MacMillan Company, Publishers, of New York City.

MR. MCGLENNON: I think Mr. Jones has overlooked the following on the fly leaf of Dr. Morris's book:

*"To J. F. Jones, first authority in the world today
on the subject of nut growing. With the compliments
of one of his pupils, Robert T. Morris.*

"New York, October 3, 1921"

(Applause).

THE PRESIDENT: If there is no further discussion along this particular line, we will now receive the report of the committee on grades of membership.

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TREASURER BIXBY: The committee recommends that Article II of the By-Laws be amended so as to read as follows:

"Annual members shall pay two dollars annually, or three dollars and twenty-five cents including a year's subscription to the American Nut Journal. Contributing members shall pay five dollars annually, this membership including a year's subscription to the American Nut Journal. Life members shall make one payment of fifty dollars and shall be exempt from further dues. Honorary members shall be exempt from dues."

It was moved and seconded that the report of the committee be adopted and the amendment to the by-laws made as therein recommended.

(Motion carried unanimously).

THE TREASURER: I would like to give notice of our intention, at the next regular meeting, of moving to amend Article III of the Constitution, by adding to the same the following:

"There shall be four classes of members: Annual, contributing, life and honorary. Annual, contributing and life members shall be entitled to all rights and privileges of the association. Honorary members shall be entitled to all rights and privileges of the association, excepting those of holding office and voting at meetings."

THE PRESIDENT: Notice has been duly made and will be filed in the proceedings of the session.

We have with us Prof. F. N. Fagan to whom I am sure you will be glad to listen at this time in connection with the work that is being carried on at State College with which institution he is connected.

PROFESSOR FAGAN: At the Rochester meeting we reported on an English walnut survey that was made in Pennsylvania. Since that time we have not done anything except with Mr. Jones's and Mr. Rush's help, to gather information about the parent trees of which we located definitely about three thousand and indefinitely probably two thousand more. All of these trees but one were in bearing. They were seedling trees and as much variation was found in the trees as we would naturally expect to find in seedling trees. Our problem is to determine the trees worthy of propagation. It is necessary also to solve better the propagation problem. We cannot expect to get any large amount of planting of any of our nut trees until we can put the trees to the public at a price at which it will feel that it can afford to invest. To the members of this association, or to other people vitally interested, two or two and a half or three dollars is not anything for a good tree; but to the average planter of home ground or farmstead that is too much money. We all know that it is not an easy task to propagate these trees and we are not condemning the nurserymen. We know that they cannot afford to grow a budded or a grafted tree of known parentage for any less. So the problem of propagation is one of the largest that we have before us, and it is one to which our station and I myself are giving all the thought and time that we can.

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We realize the importance of the nut industry in the state if for no more than roadside and home planting. Whether commercial planting will extend through the north with our black walnuts, our

butternuts, our hickories and our English walnuts, to the extent that it has in the south with the pecan, is a question which time alone can solve.

We now have new land at the station suitable for the planting of nut trees. It is going to be the best land that we have on our new farm and we hope next spring to make a collection planting of varieties. We have not much money but we can make a start. It is not going to be at a place that will be set aside and not cared for. It is going to be along the public road, where we will have to take care of it or we will be criticised.

Until we solve our problems of selection and propagation we will go along at a fair rate of increase in regard to our plantings; but we will not reach the man who has a piece of ground and who says, "I would like to plant that ground in walnuts, maybe fifteen or twenty trees but I cannot put thirty dollars into those trees, or twenty dollars when I can buy apple trees for twenty cents."

Yet the future looks just as bright to me as it did the day I started to make the English walnut survey, just as bright because we will overcome these obstacles.

I might close by saying that while we are ready at the college and at the experiment station to go ahead we are not ready to plunge into any extensive experiments. It requires money and the money does not come in such quantities that we can plunge into anything in fact. But we are ready to begin to build a foundation on which we expect later on to experiment, and I hope that in ten more years, or in nine more years, if this association comes back to Pennsylvania, we can invite them to the experiment station to see what foundations we have laid and what progress we have made in the experimental work of nut culture.

THE PRESIDENT: Will there be any discussion on the subject so ably covered by Prof. Fagan? Are there any questions that you desire to ask the Professor? [Pg 73]

THE SECRETARY: I would like to ask Prof. Fagan if he has a good word to say for the English walnut in Pennsylvania and in other parts of the country as a profitable tree to plant, from the result of his inspection of the trees of the state.

PROF. FAGAN: We get a letter probably on an average of once a week, from some one in the State of Pennsylvania who wants to plant anywhere from five acres to a hundred acres in English walnuts. We tell him to go slow, to feel his ground out pretty well and to remember that he is planting a tree that is a greater feeder, probably, than any other fruit tree; that it must have food or it won't grow; and instead of planting a hundred acres to plant maybe half an acre and select the best varieties that information at the present time indicates, those that lived through the winter of 1917-1918.

We have seedling trees in Pennsylvania, that probably date back to near revolutionary war times; in fact there are some around Germantown that no doubt were growing at the time of the revolutionary war, around the old Germantown Academy. Personally I would not hesitate to plant as good an acre of land as there is in Lancaster County, or ten or twenty or fifty acres, to the better types of English walnuts that we have today. It probably would not be profitable in my time; I do not know; but it certainly would be profitable in the lifetime of my children. I would not, however, want to plant the nuts on cheap and poor mountain land where the most of our larger plantings, even of chestnut, have been made throughout the country, on land that was not worth the attention of other crops. When people write to us that they have certain types of land we always tell them if they can grow an average crop of corn, wheat, clover or potatoes on that land there probably isn't any question but that if they plant English walnuts they will be successful in raising some English walnuts. Whether they will raise them profitably or not is another question. But nothing can take the place of one or two good trees on every farm, especially in southeastern Pennsylvania. There isn't much question but that those trees can be grown successfully from a line through Allentown to the Susquehanna River, and on over to the general range of the Allegheny Mountains, down to the Mainland and West Virginia line. Even in our higher elevations of sixteen or eighteen hundred feet I can show you some good old bearing trees that are ten or twelve inches in diameter. No dwelling houses there. They are out in the country and they are high up. [Pg 74]

THE SECRETARY: As has been stated the essential thing in the successful growing of Persian walnuts, and probably other nuts, is high fertilization. I believe that many of our failures to grow the Persian walnut are due to lack of sufficient food.

THE TREASURER: I do not suppose that any one in the association has made more of an effort to get better records than I have—at least I have made a good deal of effort. I have learned that in 1916, if I remember correctly, the Stabler bore sixteen bushels of hulled nuts and it was estimated that two were washed away by the rains. In another year, I was informed the Weiker tree bore twelve bushels. In following up other trees I found it impossible to get any results. I tried to get information as to the parent Hales hickory and the most I could learn was that the family had gathered as high as two or three bushels in one year. But when I saw that the tree stood on the side of a well traveled road with only a low stone wall to get over, and that the squirrels were plentiful and the children undoubtedly likewise, I thought it a wonder that the Hales got any of the nuts.

In the case of most of our fine parent nut trees they are either situated in out-of-the-way places where it is a task to get to them, or else they are situated on the side of a traveled road where the passersby are pretty likely to get a great many of the nuts.

Take the case of the Fairbanks hickory in Alamosa, Iowa. It stands on the side of the road on top of a hill outside of the limit of the houses of the town. I do not see how it can help being that a great proportion of the nuts are picked up by passersby. When we have grafted trees planted where they can be protected and the crop can be watched we can get reliable data for our records; but I am afraid that except in a few instances, we cannot get such data for the parent trees.

MR. RUSH: California is the leader in the Persian walnut industry and I think it would be better for us to fall in line and adopt some of their varieties. I find that they are perfectly hardy here, just as hardy as are varieties that have been grown here for a hundred years.

MR. L. N. SPENCER: Right back of the postoffice are some English walnut trees. They are growing very nicely. They have withstood all kinds of weather. I have not noticed any dead limbs on the trees nor any other indications that the climate here is not adapted to the growing of these trees. We would be glad indeed to show you the trees if you would come to the postoffice. They are not on ground belonging to the United States government but on private ground.

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I have been very much interested in your discussion. I came here because I expect to set out some more nut trees.

THE PRESIDENT: There are two items of business left for the convention. One is, receiving the report of the nominating committee; the other is, to determine upon a place for holding our next convention. If there is nothing further to be brought before the session by the members these two items will now receive our consideration. The first of the two would be the report of the nominating committee.

MR. OLCOTT: Your nominating committee respectfully reports the following nominations for officers of the Northern Nut Growers' Association for the coming fiscal year:

President—James S. McGlennon, Rochester, N. Y.
Vice-President—J. F. Jones, Lancaster, Pa.
Secretary—William C. Deming, Wilton, Conn.
Treasurer—Willard G. Bixby, Baldwin, N. Y.

Your committee begs leave to suggest that as the details of an aggressive campaign to increase the membership of the Association entail a considerable amount of correspondence and other work, the Secretary should be relieved to as great an extent as is practicable, and to that end particular attention should be paid to the selection of a Membership Committee. It is the belief that this is one of the most important committees of the Association and that systematic endeavor upon definite lines should be made to extend the membership; that this work should begin at once and be maintained earnestly throughout the coming fiscal year.

RALPH T. OLCOTT,
J. F. JONES,
JOHN RICK,
C. S. RIDGWAY,
Committee.

MR. LITTLEPAGE: I move the adoption of the report.

(Motion seconded and carried, and the officers therein referred to were declared elected.)

THE PRESIDENT: The second item is to determine the place of the next meeting. A motion would be in order covering that.

THE TREASURER: Inasmuch as we have in Rochester, New York, an orchard of filberts which is beginning to bear real crops—and that is something none of us has ever seen—if Rochester would like to have us come I move that we go there next year.

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MR. OLCOTT: Rochester would like to have you come.

MR. MCGLENNON: I was going to ask that the convention be brought to Rochester next year. I would certainly like to see it there. I second Mr. Bixby's motion.

(Motion carried unanimously.)

It was moved and seconded that the next annual convention be held on September 7 and 8, 1922.

(Motion carried unanimously.)

MR. LITTLEPAGE moved (seconded by Mr. McGlennon) that Mr. Harrison H. Dodge, Superintendent of Mount Vernon, be elected an honorary member of this association.

(Motion carried unanimously.)

THE PRESIDENT: I desire to say that in this package I have four seedlings from the walnuts that were supplied from Mount Vernon. A few of the walnuts left from last year's supply were placed in the hands of a nurseryman or florist in Saginaw too late for planting—the ground had become frozen—and those few nuts be placed in pots in his greenhouse. They grew very vigorously and I have four of those in little earthen pots for planting this afternoon.

MR. MCGLENNON: I make a motion that a vote of thanks be extended to Dr. Morris and the others

whose papers were read by our secretary yesterday morning and that they be notified accordingly.

SENATOR PENNEY: I second the motion.

(Motion carried unanimously.)

THE SECRETARY: I feel that we should express our appreciation of the efforts of the local committee and the management of this hotel. I therefore move a vote of thanks to Mr. Rush and Mr. Jones for their work in the management of this convention, and to the management of the hotel for the kindness they have shown us.

MR. LITTLEPAGE: I second the motion.

(Motion carried unanimously.)

THE PRESIDENT: We will now adjourn to gather here at two o'clock in order to go on a sight-seeing trip or excursion around the city and county and then to Long's Park at 4:30 o'clock for the tree planting.

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PROCEEDINGS OF THE TREE PLANTING CEREMONIES AT LONG'S PARK, LANCASTER COUNTY, PA.

4:30 p. m., October 7, 1921

PRESIDENT LINTON: The four young walnut trees that we have before us are grown from walnuts from trees at Mount Vernon near the tomb of General Washington. The trees there were planted unquestionably during the lifetime of Washington, and have grown to be fine specimens of their particular species. Last fall the ladies of the Mount Vernon Association gave to the Northern Nut Growers Association all of the walnuts upon the trees at Washington's home. They divided those nuts into two lots and the best ones were presented to the association for the purpose of public planting. Under no circumstances were the nuts to be commercialized or sold for gain but were to be planted by the school children of the land, if it could be satisfactorily arranged in the short time that we had before the end of the planting season. We found it impossible to distribute these walnuts throughout the country, although the demand kept coming for them from many states, so they were distributed first to the district schools outside of the city of Saginaw in the County of Saginaw and there planted by the school children with appropriate ceremonies. Then our city schools asked for them and in every school yard in the city of Saginaw are some Washington walnuts growing today. Following this distribution to the schools we had still several bushels of the nuts, and one bushel was presented to what is known as Merlin Grotto, a branch or division of the Masonic Order. As General Washington was a member of that organization it seemed fitting that that society should have some of the nuts. So in the beautiful grounds outside of our city that are owned and controlled by Merlin Grotto there were also planted some of these Mount Vernon walnuts. Then we still had about two dozen of them left, and they were planted in what is known as the Ezra Rush Park in Saginaw, our largest city park. They are there in rows to be transplanted this coming spring and will be again distributed to the schools, or to public places desiring them, as long as they may last. The four specimens that you have before you, gentlemen, are from nuts from trees planted during President Washington's time at his home. We trust that they may live in this beautiful park in Lancaster and that they may go down in history showing the source from whence they came.

PROF. HERBERT H. BECK: Gentlemen: It is a very great privilege to represent Franklin and Marshall College in extending a word of greeting as well as comradeship to the Northern Nut Growers' Association. I use the word comradeship advisedly because we have interests that are indubitably kindred. Our two institutions are both concerned with the cultivation of something that will contribute to the strength and happiness of each as Americans—your institution in the cultivation of useful trees—our institution in the cultivation of useful men. It may well be said, show me a man who loves and cultivates trees and I will show you a man who loves his fellow men and puts that love into practice. That cannot be said, unfortunately, of every man who graduates from college. It is to be doubted whether the name of John Harvey, considered abroad as worthy of a higher place in the annals of American horticulture, is greater than the name of Johnny Appleseed, the man who took apple trees out into the frontier of the open road. My only regret is that I have never been in a position to do so. I can say, though, with Dr. Holmes, for whose opinion on such things I have a most profound admiration, that I have an intense, passionate fondness for all trees in general and for certain trees in particular. When I go out among the trees I have a kinship there. I am never lonely when I am in a forest and I cannot say that when I am alone in a big city. I like to look upon an old tree as a patriarch with not only an honored past but an interesting story locked up under its bark. As I go to such a place as Valley Forge, I like to lay my hand on the rough bark of an old tree and say, "Oh, but that you might tell your tale; you are the only thing left which looked upon the scene in which a few were crucified that many might live." Such are the thoughts that come to me when I stand by an old tree. I like to let my mind run back to the beginnings of trees, to the pre-historic times when this bed rock was laid down, when all this region was an inlet or bay from the Atlantic Ocean and the upland was

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treeless as our rock record shows. Then there were the beginnings of low fern-like growth and clotted mass which gradually increased in size until they assumed the enormous proportions which made the coal beds possible. And then I like to follow the growth of trees on to the broad leaf. We have the beginnings of the broad leaf, the sassafras, the poplars, the maples, and the oaks, and then, as the crowning feature of the evolutionary process, the nut tree. I like to let my mind run ahead a bit, particularly at such a time as this when we are setting out new trees. What sort of people will these trees live to see? Will there be a decadence of the taste and fondness for trees, which we hope is growing? Will these trees live to see a race of people who take no interest in such things except a commercial one, who have no thought for the beauty of the trees nor for the rights of posterity? Will these trees perchance live to see an upheaval of the happy affairs which now exist in this country? In one hundred and fifty years many things can happen. There is much in the existing turmoil of war conditions that suggests possible disaster within the next couple of centuries, and possibly that the fair constitution of Franklin and Washington may be submerged in a chaos of something that means nothing. The remote possibility of the invasion of a conquering race to destroy all these things—but banish the thought. God grant, that these young trees may grow up to furnish shade and fruit in proper season to thousands of happy people, that they may always be useful and that they may not live to see the time when disaster may come to this fair land.

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In closing, gentlemen, I wish to compliment you on what seems to me to be the excellence of your personnel and organization. I am strongly impressed with the fact that your organization has a prime scientific value as well as a profound practical significance. I congratulate you on these excellent qualities and traits of your association, wish you all success and thank you for the privilege you have given me.

DEAN R. L. WATTS: This seems to me almost like a sacred moment. As I stand here in this circle, the ground upheaved there and that hole in the ground, I think of something else that we stand around sometimes. In a very large degree, especially in considering the remarks of Professor Beck, it is a sacred occasion. What could be more sacred? What could we regard with greater solemnity than the planting of trees that will help all mankind.

Particularly in connection with the planting of young trees I think of my own boyhood experiences. Whenever I think of the boys and girls in the woods picking up nuts it is pretty hard for me to think of those boys and girls going wrong. One of the biggest things we have to look at in this country is the question of maintaining high standards of manhood and womanhood. In that the safety of our country rests.

I wonder why I was asked to speak at this meeting of the Nut Growers' Association. I do not know whether my friend Professor Fagan suggested that I be placed on the program or not. Perhaps he had heard about what happens in my own home. I have never gotten away from liking a little manual labor. I do not want too much of it but I do like a little of it, making garden and taking care of the furnace. Mrs. Watts sometimes blames me for wanting to take care of the furnace in the cellar in the winter time from the fact that I have always a bag of nuts down there. When I go down she hears me cracking nuts. From my earliest boyhood days I have been tremendously interested in the whole nut proposition. What I have to say here today I have put in written form.

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A NATIONAL PROGRAM FOR THE PROMOTION OF NUT CULTURE

Dean Watts

I am highly honored in being invited to present a paper before the members of the Northern Nut Growers' Association.

For twelve years your association has stood for all that is good in American nut culture. You have considered the different classes and varieties that are worthy a place in American horticulture. You have discussed how the various classes may best be propagated and cultivated and have disseminated whatever information is available concerning the control of fungous and insect enemies of nut bearing trees. Some of your members have conducted investigations of great value to the industry and others have made a special study of the food value of nuts as compared with other standard foods. The eleven annual reports of the association are indicative of the broad field of study and service which has been covered by a zealous and enthusiastic body of nut specialists.

Surely there is no doubt in the mind of any member of this association concerning the importance of nut culture in the United States. From the standpoint of food alone, we are more than justified in waging a vigorous campaign for the planting of millions of trees. Who can mention any article of food that is more nutritious, more wholesome, more delicious than any and all of our native nuts as well as many imported species? And what other class of trees even approaches the nut as a dual purpose tree? In fact, as is well known, nut trees have four distinct values; namely, to furnish food, shade, timber and ornamentation to the landscape.

In view of the important place which nut trees should have in American horticulture, can we not

manage in some way to plan and carry out a comprehensive national program for the promotion of this proposition? Surely there are thousands of people and hundreds of organizations and institutions of various kinds which would consider it a privilege to have a real part in such a worthy cause.

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For one who has been a member of this association for only a few hours, it may seem a little presumptuous to even suggest a national program for the promotion of nut culture, to say nothing of what should constitute such a program. But, running the risk of someone hurling a chestnut burr at me, I will venture a few suggestions, though they may be as old as the sweetest of American nuts.

RESEARCH

The great fundamental need of all American agriculture is research. This statement applies to nut culture more than to any other branch of horticulture because it has received less attention from well trained investigators. Much credit is due the members of this association for their patient and painstaking studies. But instead of having a mere handful of men devoting their time to nut investigations, there ought to be several men in each state engaged in working on the numerous problems of vital importance to the nut industry.

Prof. Reed of the United States Department of Agriculture should have a staff of several specialists, in order that he might make greater progress in working out projects of national importance. The State Agricultural Experiment Stations have shown very little interest in this matter. Funds should be made available in each state to undertake nut investigations that promise results of economic value. However, if the United States Department of Agriculture and the State Experiment Stations are to make real expansion in nut investigations, there must be demands and outside pressure from prominent people; as for example, from the members of this association. More and more the farmers of the country are petitioning their Experiment Stations to make certain studies and it is unlikely that these institutions will do very much for the nut industry unless the rural population indicate that they want this line of work included in the experimental program.

Mr. President, cannot this association block out at least a tentative nut research program for the whole United States? What are the problems that should have first consideration? What do you think the Pennsylvania Agricultural Experiment Station should do for nut culture in this state? As Director of the Pennsylvania Station, I would like to have this question answered by the nut enthusiasts of the state. Dr. Fletcher and Prof. Fagan stand ready to carry out your wishes and I pledge them my heartiest co-operation. Many of you know that the Pennsylvania Station is now working under a great handicap financially, but this situation may change within a few years.

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TEACHING

I have been wondering whether all of the Agricultural Colleges give instruction in nut culture. If they do, just how much consideration is given to this important matter. It is one thing to give a careful, thorough, systematic course, covering a whole term or semester but quite another proposition to give a few disconnected lectures. If a committee of this association could look into the matter and formulate a suggestive program for the Colleges, it would stimulate greater interest in the subject in all of the Agricultural Colleges.

In this connection let us not lose sight of the fact that the number of College boys on our farms is increasing very rapidly. Not long ago I attended a Farm Bureau meeting in Washington County, Pennsylvania, at which there were twenty-five to thirty young men who had taken Agricultural courses at The Pennsylvania State College. We can readily see what an opportunity it is to teach these College boys the benefits of planting nut bearing trees on their home places.

Again, we should manage in some way or other to permeate our town and rural schools with the nut planting spirit. Thousands and thousands of shade trees are planted where nut trees would be much more desirable. Every country school ground might well serve as a demonstration center of the best nut producing trees for that community. If such a scheme were carried out intelligently, our farmsteads would soon abound with nut trees. Let us not lose sight of the value of the demonstration idea in any nut propaganda work that may be undertaken.

EXTENSION SERVICE

The United States has the best and most wonderful system of Agricultural Extension of any country in the world. Are we using this system to extend the planting of nut bearing trees. Do we not know of classes and varieties which may be planted under suitable conditions that will be certain to give satisfactory results? If so, why not get this information in definite form before our County Agents and Farm Bureaus and let them pass it along to the soil tillers. Perhaps the time is not far off when the Colleges might appoint Nut Extension Specialists who would work through the County Agents and public schools and handle this matter in a thorough, effective, systematic manner. Surely we have the machinery for the dissemination of whatever knowledge is available relating to the selection, planting and care of nut bearing trees.

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STATE DEPARTMENTS

All of the numerous State Departments of Agriculture, Forestry, Game Conservation, etc., in this and every other state should be vitally interested in the nut proposition. Perhaps some of the officials in these State Departments don't realize the possibilities of nut planting? Is there any way of educating them? For example, our Game Commissioners are worrying over the disappearance of the chestnut as a source of food for squirrels. Do they realize that the bush chinquapin might be substituted with success, in some sections at least? And why not get game and squirrel lovers and tree planters in general to enthuse about the planting of black walnuts with a liberal sprinkling of butternuts? The result would be food for the squirrels, for the kiddies and some for the old folks, besides useful timber trees and also beautiful roadsides and farmsteads.

THE PRESS

We ought to manage in some way to get more material relating to nuts published in country papers and magazines, especially in the farm papers. Millions of copies of the agricultural papers reach our farm homes every week. They are read largely by the boys and girls who are always very much interested in nuts.

STATE LAWS

I do not know how much can be accomplished by passing laws that will encourage the planting of nut bearing trees, especially along the roadside. All of us will watch with much interest the Penney Law of Michigan. A very careful study should be made of this phase of the problem and then urge the passage of such laws in each state as will be most favorable to the development of the whole proposition.

ASSOCIATIONS

For real aggressive work we must rely very largely upon numerous associations, national, state, county and local. This association should take the lead and many others can render tremendous assistance in carrying out a national program. Enthusiasts in every community should see to it that the subject is properly represented at the local meetings of horticultural associations and other organizations which discuss rural problems.

In closing this paper may I again urge the importance of a constructive research program, if nut culture is to make any considerable progress in the United States.

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APPENDIX

Members and others present: E. M. Ives, Meriden, Conn.; Jacob E. Brown, Elmer, N. J.; Jacob A. Rife, S. J. Rife, J. S. Rittenhouse, Loraine, Pa.; Christian LeFevre, W. Lampeter, Pa.; John Rick, Mr. and Mrs. Samuel L. Smedley, Prof. H. H. Beck, J. E. Fortney, J. F. Jones, Harvey A. Penney, James M. Balthaser, James S. McGlennon, Ralph T. Olcott, John Watson, J. G. Rush, T. P. Littlepage, Mr. and Mrs. C. S. Ridgway, Prof. F. N. Fagan, A. C. Pomeroy, C. M. Leiter, Ralph W. Leiter, Elam G. Hess, W. N. Roper, Mr. and Mrs. W. G. Bixby, Mrs. N. R. Haines, Wilmer Wescoat, Patrick O'Connor, Postmaster Spencer, Dr. W. C. Deming, W. S. Linton, J. S. Ritchie, Dr. C. A. Cannaday, Dean R. L. Watts, Mr. and Mrs. W. C. Rhodes, Ammon P. Fritz, Mr. and Mrs. Blockhauser, D. F. Clark, Rev. and Mrs. Geo. A. Stauffer, Harry Stuart, Oliver S. Shaefer.

Exhibits: Black walnuts, Ohio, Stabler from original tree at Brookville, Md.; Thomas, considered the best of the larger sorts, and perhaps the best cracker among these, tree a very rapid grower and a good and reliable bearer; Persian walnut, Alpine, from Benj. Mylin, Willow St. Pa. grafted tree; Juglans sieboldiana or sieboldi, Japan walnut, rapid grower and beautiful tree; Juglans cordiformis, Japan walnut, tree similar to the sieboldiana but a better nut, grafted trees bearing very early; Indiana pecan from original tree Wabash River bottoms, Oaktown, Ind.; Niblack pecan from original pecan in Indiana; Weiker hickory seedlings, 1, 2, 3, 4, 5, from seedlings 60 years old from the parent tree 200 years old at Lampeter, Lancaster Co., Pa., showing marked variation from the type of the parent tree, which is believed to be a cross between the shagbark and the shellbark; Kirtland shagbark from original tree at Yalesville, Ct.; Laney shagbark-bitternut hybrid from original tree in Rochester, N. Y. city park; Fairbanks shagbark-bitternut hybrid from topworked tree, original tree near Cedar Rapids, Iowa; Leaves, burrs and nuts of Morris hybrid chestnut No. 1, American sweet chestnut pollen on chinkapin. High quality, good size, prolific. Tree has not blighted to date after twelve years exposure to blighting chestnuts and chinkapins. Leaves, burrs and nuts of Morris hybrid chestnut No. 2, American sweet chestnut pollen on chinkapin. High quality, bright color, good size, not so prolific as No. 1 and No. 3 as it leaves some of the racemes of burrs unfilled. The tree has not blighted to date after twelve years of exposure to blighting chestnuts and chinkapins. Leaves, burrs and nuts of Morris hybrid chestnut No. 3, American sweet chestnut pollen on chinkapin. Many Japanese and Korean chestnuts were blossoming in the vicinity and this may be an accidental pollination from them instead of from pollen of the American chestnut. Quality not so good as that of No. 1 and No. 2. Nut dull in color instead of bright. Tree prolific, has shown blight but once during twelve years of exposure among

blighting chestnuts and chinkapins. Blight took place at a place where the tree was injured by a falling limb from a dying chestnut tree. The blighted spot was cut out and did not reappear. Filberts, Emperor, Du Chilly, Montebello, Noce Lunghe, Italian Red, Des Anglais, Red Aveline, Cornucopia, Imperial Daviana; Nelubium luteum, American lotus, also called water chinkapin, Yonkopin, etc., an aquatic plant; Nelubium speciosum, Egyptian lotus, much cultivated for its large, beautiful flowers.

*** END OF THE PROJECT GUTENBERG EBOOK NORTHERN NUT GROWERS ASSOCIATION
REPORT OF THE PROCEEDINGS AT THE TWELFTH ANNUAL MEETING ***

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