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## **Proceedings of the third annual convention of the Wisconsin Ginseng Growers' Association held at Wausau, Wis., August 9th, 1911. 1911**

Wisconsin Ginseng Growers' Association

Wisconsin: [s.n.], 1911

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① *Wisconsin Ginseng  
Growers' Association*

② THIRD ANNUAL REPORT



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MADISON**

Wausau, Wis., August Ninth, Nineteen Eleven





# PROCEEDINGS

OF THE

## Third Annual Convention

OF THE

### *Wisconsin Ginseng Grower's Association*

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Held at

*Wausau, Wis., August 9th, 1911*





# THIRD ANNUAL REPORT

OF THE

## Wisconsin Ginseng Growers' Association

The Third Annual Meeting of the Wisconsin Ginseng Growers' Association was called to order by President M. G. Eberlein, of Shawano, Wisconsin, at 2:35 p. m., August 9, 1911, at the Coliseum, Wausau, Wisconsin.

**Mr. Eberlein.**—It grieves me very much to inform you that our secretary Mr. Krier, is not here, and I am sure that you will miss him as much as I will. It therefore, becomes necessary for me to appoint some one to act in his stead. I would like to ask Mr. Burns to act as secretary of this meeting.

The first order of business will be roll call by the secretary.

Roll was called by the Secretary, Mr. Burns of Stanley, and the following members responded:

- |                               |                         |
|-------------------------------|-------------------------|
| Jacob Winkler, Stanley.       | Neil Downer, Granton.   |
| Frank Morgan, Wausau.         | J. E. Porter, Eureka.   |
| J. W. Schwartz, Spring Green. | Dr. E. Burns, Stanley.  |
| Dr. F. E. Loope, Eureka.      | Ed. M. Cedjka, Bryant.  |
| Jos. Kaufman, Oconto Falls.   | Mike Bender, Wausau.    |
| W. F. Fromm, Hamberg.         | J. E. Neefe, LaFarge.   |
| L. S. Jacobson, Eddrin.       | J. H. Koehler, Wausau.  |
| M. G. Eberlein, Shawano.      | James Allen, Knowlton.  |
| Mrs. Thos. McKinney, Berlin.  | A. G. Anderson, Merrill |
| R. M. LeMieux, Seymour.       | J. L. Hahn, Rock Elm.   |
| Napoleon Morin, Crandon.      | Wm. Berner, Antigo.     |
| Henry J. Steeps, Rice Lake.   | A. G. Browning, Antigo. |
| Mrs. Max Hoffman, Antigo.     | Henry Lohr, Johnsburg.  |

**Mr. Eberlein:**—The next order of business is the enrollment of new members. The chairman of that committee is Mr. Schwartz. Mr. Schwartz will please report.

**Mr. Schwartz:**—The Committee on Membership have to report the following names:

M. D. Green, Bryant.	C. J. McClellan.
Val. Butler, Antigo.	H. S. Card.
Julius Hiesinger, Antigo.	Herman Butt.
John E. Koudelka, Antigo.	Wm. Maurer.
L. Christenson, Saxeville.	E. C. Aderhold.
C. N. Roy, Sparta.	G. H. Weaver.
C. W. Fish, Elcho.	R. M. Griesbach.
Dr. C. B. Baker, Antigo.	Wm. Dailey.
Aug. Zellmer, Antigo.	Hildus Rolfson.

I recommend that they be admitted.

**Mr. Loope:**—I move that the report of the Chairman of the Membership Committee be adopted.

Motion seconded. Motion carried.

**Mr. Eberlein:**—These persons are now members of the association. We will now have a recess of ten minutes to give you the opportunity to pay your dues. For the old members the annual dues are two (\$2.00) dollars a year. For the new members an additional dollar is paid for initiation fee. Those who have become new members today will pay three (\$3.00) dollars for their annual dues and for initiation. If you have already paid, please state that fact to the secretary.

#### RECESS.

Meeting called to order again.

**Mr. Eberlein:**—The next order of business is the report of officers. Dr. Burns will read the report of Mr. Krier as secretary and treasurer.

#### Report of Treasurer read by Mr. Burns :

To the Members of the Wisconsin Ginseng Growers Ass'n.: Being unable to attend the 3rd annual meeting, I wish to submit the following report, together with a few recommendations, which need mentioning at least, if no action is taken I wish them considered.

Following the "Order of Business," under Article 10, of our By-Laws.

Ist. The following names of growers have deposited Membership Fee and Annual Dues for one year, and I recommend them to the Committee on Membership as being eligible.

M. D. Green	.....	Bryant, Wis.
Val Butler	.....	Antigo, Wis.
Julius Hiesinger	.....	Antigo, Wis.
John E. Koudelka	.....	Antigo, Wis.
Ludwig Christenson,	.....	Saxeville, Wis.
C. N. Roy	.....	Sparta, Wis.
C. W. Fish	.....	Elcho, Wis.
Dr. C. B. Baker	.....	Antigo, Wis.
Aug. Zellmer	.....	Antigo, Wis.

2nd. The financial report is as follows:

Expenditures for one year, ending Aug. 9, 1911.

Aug. 10, 1910.	P. W. Krier services for 17 months.	\$ 33.30
Aug. 30, 1910.	Antigo Lbr. Co., lumber for dog houses	7.00
Aug. 23, 1910.	1st Nat. Bank draft for dog Russia	75.00
Aug. 23, 1910.	1st Nat. Bank draft for dog Ludah	65.00
Sept. 8, 1910.	Labor on dog houses	6.00
Sept. 12, 1910.	American Express Ex. on Ludah	5.80
Sept. 22, 1910.	American Express Ex. on Russia	8.67
Oct. 2, 1910.	Fr. Riendl dog harness	3.50
Nov. 20, 1910.	Am. Express Ex. on Brown Lady	3.60
Nov. 21, 1910.	Mr. Collins, care for Russia when lost	2.00
Dec. 5, 1910.	C. Atkins livery rig to get lost dog	3.00
Dec. 8, 1910.	Postmaster, Stamps	4.00
Dec. 8, 1910.	Antigo Republican printing of annual report	49.25
Dec. 9, 1910.	Fr. Riendle repair on dog harness	1.00
Dec. 12, 1910.	Band draft for dogs Pedegree	4.00
Jan. 26, 1911.	G. H. Weaver, cornmeal for dogs	1.10
Feb. 11, 1911.	Antigo Journal Ad. for lost dog	.25
Mar. 11, 1911.	Fr. Riendl, dog collars	1.85
Mar. 11, 1911.	Raymond Bros., cornmeal for dogs	1.00
Apr. 4, 1911.	Cash Grocer, cornmeal for dogs	1.00
Apr. 30, 1911.	Eberheart & Legro, dog chains	1.00
June 10, 1911.	G. W. Weaver, cornmeal for dogs	1.15
July, 8, 1911.	Richard Koebke, P. M., Stamps	1.50
Aug. 6, 1911.	Dr. J. V. Bassett, services and medicine for sick dog	1.25
Aug. 7, 1911.	Antigo Republican printing membership list, notices, badges and copies of Constitution and By-Laws	22.05
Aug. 7, 1911.	Richard Koebke, P. M., Stamps	1.00
Aug. 7, 1911.	Miss Ella McMillen, Recording Minutes	10.00
	Total	\$314.27
Aug. 7, 1911.	Total Cash on hand	6.34
		<u>\$320.61</u>

Receipts for year ending Aug. 9, 1911.

Aug. 19, 1910.	Cash on hand	\$118.61
Sept. 27, 1910.	Refund from Rookwood Kennels for dog	15.00
	Cash received for annual dues	162.00
	Cash received for membership fees	25.00
	Total	\$320.61
Aug. 9, 1911.	Cash on hand	\$6.34

**Mr. Eberlein:**—You have heard the report of the Treasurer. What will you do with the report?

**Dr. Loope:**—It seems to me we had a flock of dogs there. I would like to know how many dogs there are.

**Dr. Burns:**—I will look over the report and tell you.

**Mr. Eberlein:**—I guess we can take a little more time for Mr. Burns to look over the report.

**Mr. Zahl:**—About those dogs, I can talk pretty loud. It was the original intention of the Organization to purchase two dogs. Mr. Krier did so. He bought one from a man in Kentucky that came in poor condition. It was not the kind of a dog we supposed we were getting. Then Mr. Krier took it upon himself to return the dog to the firm he got it of, and they offered to furnish a pup, a full blooded one, and such as he described on the circular the company sent out. The man sent the other dog, and there should be no purchase money in the financial report for that dog. But there is express charges. As I understand it, afterward there was another dog purchased from New Hampshire, a very high priced and very fine dog. In the report, there should be only two purchase prices but three express charges for the dogs. I guess it looks rather confusing and there seems to be more dogs than there are until you know the true state of affairs.

**Mr. Eberlein:**—The report of the treasurer has been read. Shall we accept the report?

**Mr. Zahl:**—Can we accept the report, or does it not have to be referred to the Committee on Finances for their acceptance?

**Mr. Eberlein:**—There is no member of the Finance Committee here.

**Mr. Zahl:**—The secretary read pretty rapidly. I would like to hear that report read again.

Report re-read by Dr. Burns.

**Mr. Eberlein:**—You have heard the report of the Treasurer again read. What will we do with the report?

**Mr. Berner:**—I move the report be adopted.

Motion seconded and carried.

**Mr. Eberlein:**—The Secretary will now read the report of Mr. Krier as Secretary.

You all know that we own three Bloodhound dogs, one male and two females, 1, 1, and 6 years old respectively. To date we have no off-spring from these dogs.

We all profit by our experiences, and for once did the W. G. G. Ass'n. also buy a "couple of cats in a bag" as the term expresses.

The stud dog is a fine specimen and he came from Fair Haven Vermont, bred and raised by J. L. Winchell, a very reliable man. Upon the arrival of the dog, Sept. 22nd, I began training him and gave him a lesson every day until Dec. 20th. These lessons would take from a ½ to 2 hours, all depending upon the course taken. All these trails



were made by my hired man, excepting when a few times I worked him on a neighbor who made the trails for the dog. Only one member of the association ever made a run for me, and that party is only a Co. member. After Christmas to this date, the dog would get a run once in 2 or 3 weeks, and that trial was made by a friend of mine who was particularly interested in the progress of the dog. He would do excellent work if I had a stranger to run for me at least once a week, but without help I can accomplish little from now on.

The young female dog is just about the age now that the dog was when I commenced work on him. I have made no attempt to work her as I think it's useless when one has no help. It needs a different runner after the first few lessons, and I didn't care to go begging for help.

A. E. Bonner of Coopersville, Mich., asks \$200.00 and up for his trained dogs, and I wish to tell the members that Mr. Bonner does not ask one cent too much for his stock. It's worth every bit of that to train a dog and put the time on him every day that is required to make a reliable man-trailer of him.

The bloodhound scare was a good one, in spite of the fact that we had no dogs last fall that would trail. The name itself carried considerable weight, and I'm positive that the thieves respect the dogs very much.

I know of only one way that we can solve our problem, and that is to purchase a thorough trained Bloodhound female, at least two years old. Then with the aid of her and a stranger to make the trail each time, we can without a doubt, make good reliable trailers of what-ever off-spring the dogs may succeed in having. But let me state right here, unless the person who is to keep and train the dogs, gets the necessary help which must and ought to be a different person for every run made, why the Association might as well sell what it has, and employ some other method of protection for its members. One or two cannot train these dogs alone, and unless the other members of the Association arrange to make a run when their turn comes, why it's up to the Association to hire the help, that will mean considerable expense, perhaps costing each member an additional \$2.00 a year.

Antigo has enough members in the Association to supply a different runner every two days, making a run at the very least, once a month with exception of the keeper, who must go with the dogs every time a trail is made. The reason for this being that he can help the dogs, for many times the trail is lost where the runner makes a sharp turn.

A year ago the association decided to purchase Bloodhounds, little any of us knew what that meant, but in the meantime I have come to realize that it's a great deal of work for the one who takes care of them and I think he



ought to be compensated accordingly. The feed and feeding does not compare with the time it takes to train them.

I would like to recommend that an amendment be made to our constitution and By-Laws and an Article added that provides for a Program Committee, Committee to consist of three members, of which the Secretary be chairman. (If possible appoint for convenience, two living in the same town of which the chairman is a resident.) This will relieve one person of a responsibility upon which the success of the meeting depends. Three can do and think of more things than one.

In conclusion, I wish to state that I would consider it a favor if the Association would accept my resignation. I have acted as Secretary and Treasurer since we organized, and in the meantime I have performed the duties to the best of my ability. I don't care to be selfish, and I think it best for the members to elect some one else. Whoever this new Secretary may be, I suggest that the compensation be larger than the present one for him. It is a responsible position and it takes a great deal of ones time.

Thanking the members for past responses, I beg to remain, Very cordially yours,

P. W. KRIER.

**Mr. Eberlein:**—You have heard the report of the Secretary for the year ending August 8, 1911. What shall be done with the report?

**Dr. Loope:**—I would move you that the report be accepted and placed on file.

Motion seconded and carried.

**Mr. Eberlein:**—As president of this Association, I take pleasure in speaking to you today upon a few things that have come to my attention during the past year.

The burden of this work, as you know, has fallen upon your secretary, Mr. Krier. Occasionally, he would write me on various propositions that came before him, and I gave him such information as I could.

One matter that was brought to my attention was that no effort has been made to get criminal statute on ginseng thievery in this state. The reason was that I considered that an attempt to get more favor from the legislature, might mean the destruction of the favor we already have. I believe that it is best to quit while your record is good. I thought that the Legislature of Wisconsin exempting ginseng from taxation was a lot, and that we ought not to ask for more for some time to come.

Talking of legislation reminds me of the Oregon law. Someone sent me a copy of that act. I have examined and studied the thing very carefully and have concluded that if any ginseng growers of Oregon want stock from me, they will have to send cash before they get the goods, and when they get the goods, I do not care what the grower or inspector does with them. I think that that legislation

is a fake piece of business, from the start to the finish. I think that there was some ginseng grower in the legislature of that state, and on account of having a small garden, he was instrumental in having a legislation passed which was not only vicious but absurd and foolish. This law requires the absolute destruction of any garden having any blight whatever, and three examinations a year by an official, and an examination of any stock and seed sent into the state for planting purposes and all blighted stock is to be burned and the garden destroyed. I have not been in the business very long, but I have been in it long enough to know that a garden may have blight one year and be a fine garden the next. If I lived in Oregon, I never would permit my garden to be destroyed until the Supreme Court had passed on that question. The ginseng grower who proposed this legislation in Oregon wanted a chance to make barrels of money, by selling all the nursery stock in Oregon, and the legislature has put him in a fair way of doing so. I do not know whether this legislation in the State of Oregon will effect us here in Wisconsin or not. I doubt whether it has. I advise you not to ship anything out there without receiving the cash first. But I would not have you sell stock that has been touched with *altenaria*. However, I am not prepared to say that because you have *altenaria* in your garden either this year or last year, you are not to sell your stock, but state to the purchaser whether or not you have had disease of any kind in your garden, but do not destroy your garden. It is an attempt on the part of some grower of nursery stock to get control of the market and make a good thing. I cannot help but speak of this matter today, because it struck me as being a bold and vicious attempt to get legislature for personal interests. I do not know whether other members have received copies of this legislation or not, but I have given you the general details of it. Mr. Goodspeed in his letters, has taken a similar view of this issue. Any sober-minded man can see that it is a vicious piece of legislation. One might as well be asked to chop down his apple trees if one branch of a tree is affected with blight.

Since last year we have a few robberies. In fact, I had a little loss amounting to about fifty dollars, and it was very amusing to trace the thing up. No one has landed in jail on account of it. However, I feel sure that I can put my hand on the offender. The robbery occurred on the only night in the year when the garden was not watched. We had been removing the fence between the old and the new addition, and had not finished before dark. Then some gentleman with light fingers took about four hundred three-year-old plants. If he had asked me, I might have been able to put him in a better locality, but he did not follow that inclination. The secretary was kind enough to send out notices of reward. No capture has

been made so far, but I feel certain that the thief was one of my own workmen. But I have been warned and hereafter I shall be more careful and not employ such workmen.

Question—Did you use the dogs?

No, the dogs were not used. They had not been trained then and nothing was accomplished. It would have been an ideal place to try the dogs out. I have no dog of my own. The fellow knew more about the business than I did. I have tried to keep my garden better guarded since then.

Mrs. Hoffman, at Antigo, had a loss on the seventh. Mrs. Hoffman is one of our members. She has had two or three losses. I had much rather have a thief come into my garden than have a poor woman's garden robbed. The idea of going into a poor defenseless woman's house, when there are men enough around there who have lots of ginseng, and can better afford to lose it. I hope the offender will be caught, and I will certainly be glad to give him a punishment that will be a warning. I am not prepared to say whether the dogs were used or not. I hope he will not profit by his stolen gain, and I hope he may be brought to speedy justice.

I believe that other losses have been reported, but have not heard of any rewards for capture. Men do not commit the crime at mid-day, and we cannot stay in the gardens day and night. Ginseng thievery will continue until someone gets shot or caught in a bear trap. That will help to warn the others. No penalty is severe enough to punish such a man. A man may in a fit of passion or uncontrolled temper, commit a crime, but for a man to deliberately plan a theft of ginseng for gain, shows that a man with such a tendency would not stop at anything, even murder. He would commit murder, if you could assure him that he would not be found out. I assure you that if I were a judge and such a man were brought up before me, I would be sorry for him. Nothing can extenuate such a crime.

The year's work has been pleasant in many ways. Occasionally I hear from various members asking for information on various propositions. I have answered those who have written, but find that I am about as much at sea on some of the questions, as those who wrote. Ginseng culture is a hard thing to master, and I believe that the mistake that we are all making is due to the fact that we are giving our ginseng too much sun. It grows too fast. It will grow slower and better in the shade, and that is where it ought to grow. You will have better results by growing ginseng eight years in the shade and have it standing up nice and green every year, then you can grow in five years and have it down with blight four out of the five years.

I visited a garden in Southern Wisconsin about two

years ago. The garden contained three acres. It was practically all an old garden. He has a large stock. I believe that at least two acres was five years and older. The balance was mainly four and three year old plants. A small portion of the garden was seedlings and two year old plants. I asked him why he had so few seedlings. He said, "Why, can't you see for yourself? They had blight this year and last year, and so I didn't have any seeds." "But they are in fine condition now," I said. "What did you do for them?" "Well,"-he said, "I was just as bad as the rest of you fellows. I thought fifty per cent of sun or not more than seventy-five per cent of shade was sufficient, and that if I had eighty per cent of shade, that I had reached the maximum of shade. Now my limit is not less than ninety or ninety-five per cent of shade. If you will notice my garden, you will see that I have covered up all the cracks. Again, a number of growers told me to use Bordeaux mixture on my plants. So I purchased about all the lime in Southern Wisconsin. Then I was advised to use Pyrox. I did this and sprayed my plants affected with blight several times, four or five times." The garden was badly infested with altenaria the year before, but then he had not a single leaf that had even a brown spot on it. I never saw such a beautiful garden.

This shows that the fellow in Oregon was wrong to think that it was necessary to destroy your garden to kill the blight. It does not even require the destruction of the plant. I believe the gentleman who spoke thus to me about his garden was right. Mr. Goodspeed also recommends Pyrox, but he sells it so I have taken his advertisement as a business proposition. But after the demonstration I have seen, I have come to the conclusion that Pyrox is the only thing for blight, and I am going to purchase enough to supply my own garden and also enough for my neighbors' gardens if they care to use it. Then I intend to shade about ninety per cent and open up part of my top and make a larger air space, and then I don't believe that I will be bothered much with blight. I made three different gardens and I am glad I did. I have one perfect garden. It is under a large oak tree which shades as large a piece as this house. I believe with the gentleman in southern Wisconsin, that a garden will be greatly improved by either shading or Pyrox, or both. I am going to try both. One of my other gardens, (it covers one-half acre) is also affected. In another acre garden, about one-half is affected with altenaria. I am very glad that my garden is divided into three parts.

I am giving such care and study as I can to ginseng culture, and to altenaria, but I will not speak of this, because of the fact that we have experts with us here who have made this work a special study.

I have received from various members at various times, various courtesies for which I sincerely thank you. We are all glad of the large meeting. I hope the Association will continue to grow and become a large body. And if I can find out anything that will assist my fellow members, I shall be glad to give you all the information that I can.

I believe that the lessening price of ginseng is due to the ignorance of many growers. They try to raise roots in a way inconsistent with what nature intended. The thing to do, I believe, is to get together all those who are interested and control the kind of seed to be raised and the prices for it. If you clip off the buds you are certain of getting a good price. A root that has been decapitated will be better to withstand blight than one with a large crop of seed.

**Mr. Curtis:**—We have tried to make arrangements to have five or six automobiles here at a little after four. These will not be enough to carry all of you, so those of you who will walk, had better go on and walk. We have arranged to go and visit some of the gardens this afternoon. Those persons who feel unable to walk, may go in the automobiles. The rest had better start now.

**Mr. Zahl:**—I move that we have an evening session. We will not get much work done otherwise.

Motion seconded and carried.

**Mr. Koehler:**—I move that 8:00 o'clock be the time for the evening meeting. Motion seconded.

**Mr. Zahl:**—I would offer an amendment to that motion to make it 7:30. Amendment seconded, accepted by Mr. Koehler, and carried. Motion carried.

Meeting adjourned.

Evening meeting called to order by the President, Mr. Eberlein, at 7:45.

We have with us Professor L. R. Jones of the University of Wisconsin, and I am informed that he must leave tonight. I am sure that he has an interesting talk to give us.

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## Ginseng Diseases and their Remedies

(Professor L. R. Jones, Department of Plant Pathology, University of Wisconsin.)

I can be with you only a short time. I shall, therefore, use this opportunity simply to introduce the subject and explain the relation of our department in the Experiment Station to the ginseng disease investigations. It is one duty of the department of plant pathology of the State University to study Wisconsin plant diseases and advise as to their control so far as practicable. Requests for help



about ginseng diseases have recently been coming to the Experiment Station in considerable numbers. As you probably know, these maladies and their remedies are not well understood and we have thus far, had neither time nor opportunity at Madison for their critical study. We are glad to announce, therefore, that the United States Department of Agriculture, at the request of a Wisconsin congressman, has undertaken to investigate these more critically for the whole country and has placed our best authority on this field, Professor H. H. Whetzel of New York, in charge of this work. As representing him Mr. Rosenbaum has come to spend a short time here investigating conditions in Wisconsin ginseng gardens that Wisconsin growers may have the fuller benefit of this study and the advice which is to follow. It is, therefore, important that you not only learn from Mr. Rosenbaum all you can while he is here, but also that you send in for his examination, specimens of any diseases that are troublesome in your gardens that he may be fully advised as to the Wisconsin problems. Such specimens should be clean, dry, and are best wrapped in newspaper with leaves of the plant so spread out and separated by the folds of the paper that they partially dry out in transit. If packed with soil or wet moss they become badly mused or even decay before they arrive.

Since he is to tell you about ginseng diseases in detail I will now simply introduce this subject with a few statements as to the nature and causes of plant diseases in general.

The plant is a living thing as truly as the animal and with much the same needs. Like the animal it must have air, water and food; and to manufacture a part of this food it must have sunlight. If any of these things are lacking or out of proper proportion disease may result. Some of the ginseng diseases are of such origin, and when rightly understood such are to be controlled by improved methods of culture, fertilization, water supply, drainage or shading.

There is another class of diseases due to parasites, and while unfavorable conditions just mentioned may predispose the plants to these they are not the direct cause. Such parasitic organisms may be either animal or plant. The animal parasites of chief concern are the insects and worms. The plant parasites are either of two types, bacteria or fungi. Since the next speaker will refer to specific examples of ginseng diseases due to each of these I will simply show illustrative specimens on the apple and point out certain differences.

Here we have the common twig blight of the apple (specimen shown). This is caused by parasitic bacteria which are generally introduced through the blossom or wounds in the stem and then grow and multiply in the



sap and spread especially in the inner bark where they poison and kill the tissues. The destruction of the diseased tissues and general sanitary measures are required in this and most such bacterial diseases.

This same apple is also subject to a fungus disease, the scab, which shows itself as dark blotches on the leaves and fruit. This scab fungus is a sort of mold-like growth which produces an abundant crop of greenish black spores or seed bodies on the surface of such spots and these, when scattered over the surface of other healthy apple leaves and fruits, with favorable moisture and temperature, germinate and send a germ-tube or sprout through the underlying skin of the apple and so start new infections. This, and such fungus diseases generally, are best controlled by spraying the surface of the healthy plants with some fungicide, that is, a solution which will destroy these fungus spores and so prevent such infection.

In these introductory remarks the purpose has been to prepare you for two fundamental facts; first, that some understanding of the cause of each disease is necessary for the intelligent planning or use of remedial measures and, second, that in most cases such measures must precede rather than follow the serious developments of disease, i. e., the aim should be prevention rather than cure.

In closing I would again invite you to send specimens of diseased plants with inquiries to the Experiment Station at Madison or directly to Cornell University for the advancement of the present investigations and that we may secure the fuller practical benefits for the Wisconsin ginseng growers. I thank you for your attention and yield the floor to our specialist from New York.

**Mr. Eberlein:**—In behalf of the Association, I wish to thank you, Professor Jones. We will notify you of the time and place of our next meeting.

**Prof. Jones:**—Thank you. I am sorry that I cannot stay longer this time.

**Mr. Eberlein:**—We have with us the assistant of Professor Whetzel who is doing such excellent work in behalf of ginseng growers, Mr. Rosenbaum.

**Mr. Rosenbaum:**—

Before I tell you anything about the diseases of ginseng, I want to say to you that Professor Whetzel is very sorry he could not attend the meeting himself. He is very busy and was unable to come.

Now, as I go along if I do not make myself clear to you, do not hesitate to ask questions.

I have talked about the diseases in the field today, and perhaps I may repeat some of these things tonight.

Most of the diseases of ginseng are caused by fungi. Fungi are plants just like ginseng is a plant. But the ginseng plants you can see with the naked eye, and the fungi you cannot. I will try to show you some tomorrow

through the microscope. These fungi produce their seeds much like ginseng produces its seeds. These seeds or spores spread the diseases in your garden. The seeds of the fungi are much more numerous than those of ginseng. There are, for example, thousands and thousands of the *Alternaria* Blight spores on a single diseased stem of ginseng.

Now, I have here on the table, specimens and photographs of the different diseases. You do not have all of them in your gardens just now, but you may have them simetime, and I have specimens here so that you may acquaint yourself with all of them. I will try to give my attention to the most important.

#### **Papery Leaf Spot.**

The *Alternaria* Blight is more common than any other ginseng disease in Wisconsin just now, but later you may get the others, and it is just as important to know about these as it is to know about the blight. The first disease which I want to discuss is called **papery leaf spot**. The difference between the papery leaf spot and the *Alternaria* blight is quite marked. The papery leaf spots appear only between the veins. In the case of blight the spot is not as transparent and has a rusty border. Leaves affected with papery leaf spot should not be removed. While there is any green part left in the leaf, it will still continue to manufacture food for your plant. If you remove the leaves from the top of your plants, no food will be made for it. Try the experiment yourself when you get home, by taking two dozen plants. From one dozen remove the leaves, and leave all the leaves on the other dozen. You will see when you dig the roots that those of the plants from which none of the leaves were removed weigh much more than the other dozen roots. The more leaves you have the more food will be manufactured for the plant. Now, a word or two as to the cause of papery leaf spot. No single cause can be assigned. Many causes may account for it; excessive dry weather may be one. In the case of excessive sunshine, more water will be evaporated and less left for the plant. The Root "rust" may also cause the spot. "Rust" destroys the little fibers of the root which absorb the moisture so that there is no way for the plant to obtain water. The leaves dry out in spots for want of water. In the case of the blight, the diseased spot in the leaf is full of the fungus. This keeps spreading and you must take the leaves off and burn them. In the papery leaf spot, on the other hand, no fungus is present and just as long as there is green coloring matter in these leaves, they will still continue to manufacture food for the plant.

#### **Fiber Rot, "Rust" or End Rot.**

I have visited about seventy-five gardens this summer, and I have gone into but one in which I have not found

the "rust," although several people claim that their gardens are free from it. I dug up a half dozen roots in Mr. Koehler's garden to see if I could find any rust there. I have not found any as yet, but feel pretty sure, that if I looked long enough I should have found some. This disease is due to a specific fungus that lives in the soil. Rust affects the roots directly while blight only affects them indirectly. Blighted plants grow again the next year if they do not suffer some from another attack of blight. Fiber rot or "end rot" attacks the roots directly injuring them and making them subject to attacks of other diseases also. The application of lime to the soil favors the development of the "rust." We have demonstrated in the State of New York, that this disease can be controlled by application of acid phosphate. If you have applied lime to your soil, you will have to apply more acid phosphate to counteract the lime. If you have not applied lime to your soil, acid phosphate at the rate of one thousand pounds per acre will probably control the disease.

Question: Is Tennessee phosphate rock the same thing?

Mr. Rosenbaum: I think it is, but I am not sure.

If your roots are badly rusted dig and dry them if they are large enough; if not it may pay to dip them in Bordeaux and replant. If you want to use the land again from which these rusty roots have been dug, I would advise you to treat the soil with formalin. Write me and I will tell you where to get this. If you get formalin (also sometimes called formaldehyde) at the drug store, they will charge you more than you will have to pay if you get it wholesale. It would be advisable for you ginseng growers to get together and buy it in bulk. It costs about ninety cents per gallon. Forty per cent strength is the strongest you can get. Dilute this 40 per cent formalin at the rate of one gallon of formalin to one hundred gallons of water and apply the diluted solution at the rate of one gallon per square foot of bed. It would be well for you all to take this down. Apply it with a sprinkling pot. A hose would be better if you can use one. Let one man spade up the soil while another applies the solution. It should be applied during the autumn or early spring. Wait at least two weeks before you plant any seeds or roots in the soil, respading several times. Formalin is a poisonous gas dissolved in water and it takes about two weeks for it to evaporate. In treating your land in this manner it will not only destroy the "rust" fungus, but it will also destroy any other fungi that may be present in the soil. In talking to ginseng growers, I have noticed that the majority of them claim that the soil that has grown one or two ginseng crops, cannot grow as good a crop again. If you will sterilize with formalin, the land should be just as good as when you started.

Question: You don't mean in the sense of a fertilizer

Mr. Rosenbaum. No. This acts as a fungicide. The soil will be just as free from disease producing fungi as when you started. If I were growing ginseng, I would use ordinary manure. Apply some manure for fertilizing, Though it may not be necessary to do so every year.

Question: Does not the application of manure cause grub worms?

Mr. Rosenbaum: I do not know anything about bugs, I am not a bug man. If you have very badly rusted roots, first treat your soil with formalin, one gallon of the 40 per cent solution diluted with one hundred gallons per square foot. The next thing is to apply acid phosphate one or two thousand pounds to the acre. This is not all. If you intend to plant the same diseased roots again, I would advise that you dip them first into a solution of Bordeaux, 3-3-50, the same as you apply for blight, then reset the roots while wet. To sum up: First, you treat your land with formalin to kill the organisms that attack the roots; second, you have to put the soil in an acid condition by using acid phosphate. Then treat the diseased roots by dipping them in Bordeaux before replanting.

The best way to dip the roots is to have a tub and two baskets. Dig out the roots and put in one basket. Then dip them in the tub containing the Bordeaux, and while setting these out have the second basket in the Bordeaux.

Mr. Eberlein: I would like to ask if, by applying this formalin to the soil, when it requires one gallon to one hundred gallons of water, and then one gallon of this covers one square foot, it would not be cheaper to use new land?

Mr. Rosenbaum: I am simply telling you how to control the disease if you wish to use the old beds. If you think it is cheaper to work up new soil, move your plants, and do everything over again, that is another question.

Question: I did not quite understand the difference between formalin and formaldehyde.

Mr. Rosenbaum. These terms are used for exactly the same thing. If you call for formaldehyde at the drug store, they will charge you twice as much. I suppose that is because it has a longer name. But you say that you want forty per cent formalin, and they won't charge you as much, because they will think you must know something about it. (Formaldehyde is a gas, when dissolved in water formalin results.)

Question: I would like to ask if the ninety cents a gallon which you say is the cost, is in car load lots.

Mr. Rosenbaum: You have to get it in carboy lots if you want it at that price. (A carboy is a large glass bottle holding several gallons.)

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Well, if we growers use this, we will have to get together and send for a lot to some wholesale druggist, and get it in large quantities.

Mr. Rosenbaum. I think you will be wanting to get about a carboy of this yourself before I finish talking, because it is used not only for rust, but for many other diseases. You may not use it all this year, but it will keep for four or five years.

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But we would not want to buy it for five years ahead.

Mr. Rosenbaum: No, but there are other diseases that we are working on now, and the preliminary study of these indicates that we will use formalin also for these other diseases. I think that in three or four months from now we will be able to tell you more about it. But as you say, the thing for you now to do, if you only want to treat several hundred feet or so, is to unite, as some of our growers are doing, and buy the formalin together.

Question: If applied at the rate of one hundred to one, would the formalin injure the leaves?

Mr. Rosenbaum: You do not apply it to the leaves. This is a treatment for the soil after the roots are removed.

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Well, I thought perhaps that if it was good for one thing it might be good for another.

Well, it might injure the leaves, I cannot tell you. I never tried it. I think that it would injure the leaves.

Question: What is the object in dipping the diseased roots in Bordeaux?

Mr. Rosenbaum: If some of the fungus remains on the roots after you have treated the soil, you are simply inoculating your soil again.

Question. Why not use the formalin directly on the root?

Mr. Rosenbaum: It may kill the root. If the solution is dilute enough it may work all right, but you see you would have to get a solution strong enough to kill the fungus and still weak enough not to injure the roots.

Mr. Zahl: To help this discussion, I will say that I sprinkled formalin very freely on my plants, and it did not hurt them. I used it just the same as Bordeaux and it controlled the blight.

Mr. Rosenbaum: Did you notice the weather conditions at that time? It may have been that the weather conditions were unfavorable for the blight.

Mr. Zahl. I do not remember about the weather. But I know that it was harmless to the foliage. I used it one to one hundred pounds.

Mr. Rosenbaum: I will try it out.



Question: Isn't arsenate of lead used for diseases of plants?

Mr. Rosenbaum: Arsenate of lead is used for insects, but not for fungi which are plants.

Now, I wonder if you are familiar with fiber rot or end rot of seedlings? I will pass some specimens around which show some of the typical signs of this disease. It shows the successive stages of the disease. Here is a healthy seedling. I will pass this one around, and you can take your time about looking at the rest and studying them here on the table.

Mr. President, am I to have any time tomorrow? If so, I will arrange to show these more plainly to your members.

Mr. Eberlein: We will arrange to allow an hour and a half tomorrow. But give us all you can tonight because some of us cannot be here tomorrow.

#### **Alternaria Blight.**

Mr. Rosenbaum: I will talk about the Alternaria blight since some of you will not be here tomorrow. You understand, I cannot tell you all about it in the short time I have. I could talk for a long time and then not tell you all there is to know about it. We hope to have a bulletin out shortly, which will better help you to understand these diseases. I may repeat some of these things tomorrow when I can use the microscope. This disease appears very early in the spring. It attacks the stems of the plants first, though unless you look very closely for it, you will not see it on the stems. It is on the stems that the spores of the fungus are produced. These are carried to other ginseng plants. If an insect alights on a diseased stem, it will become covered with these minute spores which it will carry away to healthy plants. It may carry away five hundred or more spores and spread them on throughout the garden, until the whole garden is diseased. It spreads very easily, and the little spores cannot be seen with the naked eye.

Question: What is the appearance of the spores on the stem?

Mr. Rosenbaum: They produce a fuzzy or velvety appearance, making a long black spot on the stem. I have a specimen here. Perhaps you can see them. By handling this specimen, I have possibly five thousand spores on my hands. Now, I will have to change my suit before I go into your gardens lest I carry the fungus spores with me. These spores need moisture to germinate. The spores or seed will not grow without water. That is one reason we tell you to spray before the rain and not after. It is almost as bad as not to spray at all, if you cannot spray before the rain. The spores of the fungus germinate by sending out germ tubes or little branches. Some have



germinated here, but I doubt whether you can see on account of the light being poor. (Mr. Rosenbaum arranged a specimen under the microscope, and the members came up to examine it.)

After the spore or seed germinates, and this germ tube penetrates into the stem or leaf, no amount of spraying will kill it. It is after this germ tube enters the plant, three or four days later, that the spot appears on the leaf or the stem as the case may be. The germination goes on during rainy weather. Get your spraying mixtures on before the rains, because once the fungus gets into the leaf you cannot hope to control it. We visited a very badly diseased garden this afternoon. It was badly affected with *Alternaria*. I think it was the second garden we visited. (This was Mr. Chellis' garden.) The very first thing to do this fall—in such a case of *Alternaria* blight, it is not enough to begin in the spring to get rid of the disease but you must begin in the fall—the very first thing to do after the tops die off, is to break off all tops and stems, carry them out and burn them or scatter straw and burn them on the beds. In the fall when the plants have gone into a condition of rest, apply copper sulfate five to six pounds in fifty gallons of water. Spray on the soil in order to kill any spores that remained on the ground. Be sure, in the spring to spray the ground with copper sulfate, then continue spraying before each rain with Bordeaux. Do not spray after the rain. Spray before.

Question: How are you going to know when it is going to rain?

Mr. Rosenbaum: That is a hard question to answer. The government puts out weather reports which show you approximately what the weather will be in your locality. You should learn how to use these weather reports to your advantage. These reports are sent out daily. In some places they are in the newspapers. Usually storms travel from west to east. If you study the maps you will soon learn when to expect a storm. I would advise you to begin studying them in the winter, then by summer or spring you will know about the game. If a storm, say, is in Idaho today, you can expect it here in twenty-four to thirty-six hours. Now, if you see according to your weather map that there is a storm in Idaho, you can feel pretty sure there will be a storm here soon. For example if I saw on a weather map today, that there was a storm in Idaho, I would expect it here late tomorrow afternoon or early the next morning. I would immediately take out my spraying machine and spray, covering stalks and stems and the upper side of the leaves, and the under side, too, although that may not be necessary, yet it will not affect the growth of the plant. It will not hurt the growth of your plant any, and it may help protect it some. The 3-3-50 Bordeaux will kill the spores and control the blight.

If you feel better about using 5-5-50, go ahead and use it. It will not hurt your plants if you test your Bordeaux, and if you use it right. I will show you how to test your Bordeaux tomorrow.

Question: Is it not better to use 5-5-50?

Mr. Rosenbaum: The 3-3-50 will kill the spores. After the spores are dead, if you feel better about using a stronger solution go ahead and do it. The 3-3-50 will kill the spores provided you put it on thoroughly.

Question: Does it kill the spores before they germinate?

Mr. Rosenbaum: Yes or when they are germinating. It will not kill the fungus after it has entered the plant. There isn't anything remaining of the spore after it germinates but the empty hull. The spore is a seed just as much as the ginseng seed. After the seed of ginseng has produced a plant, you have only the hull left.

Question: That is the point in question. Will the application of Bordeaux kill the fungus that develops from the spore?

Mr. Rosenbaum: No. You can spray all you want to, and if you do not get the spore before it germinates, and enters your plant, you cannot kill its growth once it is in the leaf. After you spray, your Bordeaux will not wash off. You can use a scrubbing brush, and you will find out that you cannot rub off Bordeaux. You will see the light blue color again after it is dry. Pyrox is the same way. That is the reason we tell you to spray before each rain in order to destroy the spores before they germinate.

Question: What is the use of spraying again between each rain if the Bordeaux will not wash off?

Mr. Rosenbaum: The leaf of the plant may grow some between rains and you spray again to cover any new growth.

Question: What material ought we to use to spray with?

Mr. Rosenbaum: Bordeaux will control the blight. You have seen here in the first garden that we visited, and I have seen it in twenty gardens, so I know that it will control the blight where applied before the rains, covering the stems and the upper sides of the leaves. Where they were sprayed with Pyrox, some gardens had no blight; in others it was not checked.

Arsenate of lead acts as an insecticide. There is no necessity of adding it to Bordeaux to stop blight, because blight is caused by a plant not an insect.

Question: Isn't Pyrox a proprietary article? I thought there was a secret formula for it.

Mr. Rosenbaum: Add Arsenate of lead to Bordeaux and you have Pyrox.

Question: How much Arsenate of lead?

Mr. Rosenbaum: Two pounds to fifty gallons of Bordeaux. It is not at all necessary, but if you will feel better about it, go ahead. In a crop like ginseng, it is a valuable crop as compared with potatoes. While it may not be practical to use Pyrox on potatoes, it may be on ginseng. If you can get Pyrox fresh, for it produces better results fresh, it is all right. If you cannot get it fresh, add two pounds of Arsenate of lead to fifty gallons of Bordeaux. I think that is all I will tell you tonight. Are there any questions you would like to ask?

Mr. Curtis: I would like to ask a question. A great many growers have sprayed with Bordeaux, and sprayed thoroughly, yet their gardens went down. Yet you say it will prevent the spore from germinating and will kill it. How do you account for it?

Mr. Rosenbaum: My dear Sir, did they spray before the rains? How thoroughly did they spray? I tell you, I do not call sprinkling, spraying. And the spray machine that most of you ginseng growers use, is not efficient.

Mr. Curtis: My garden, everybody is willing to admit was not in first class shape apparently. One other garden was sprayed with Bordeaux mixture, and was in fine shape. Do you think that was the entire reason for that being in good shape while others were not?

Mr. Rosenbaum: You mean, was that the only reason or the prime reason? Is it not partly because the gentleman who owns it, has practically a new garden? New land has less disease in it. Or is it because he sprayed thoroughly?

Mr. Curtis: Two years ago I had the pleasure of taking the gentlemen around. They were very much pleased with the condition of my garden at that time. They expressed decidedly that it was in as fine shape as any they had seen here. I felt reluctant to show my garden in the condition it was today. I appreciate the fact, however, that the only object we have is to solve difficulties and to learn how to remedy them. So I consented to show my garden as an example of a badly diseased garden.

Mr. Rosenbaum: Your garden is not in very bad condition. The roots are not badly affected. The thing for you to do is the three things I suggested before. First dig up your roots, treat soil with formalin, apply acid phosphate to your land. Examine your roots and if you find them badly affected with "rust," dip them in Bordeaux before replanting.

Mr. Curtis: Was the "rust" pretty general all through my garden?

Mr. Rosenbaum: I should say, judging from the samples I have taken up and from the plants, that the disease is pretty well distributed.

Will the plants go down with "rust" just the same as with blight?

Mr. Rosenbaum: You mean the tops? It takes the fibres off and there is no way for the plants to take up moisture to feed the tops. In that way the tops are affected. They turn red early and may wilt. They usually do not die down however.

Mr. Weaver: Are lime and ashes injurious to the plants?

Mr. Rosenbaum: Not to the plants. However, it induces a condition of the soil favorable for the disease.

Mr. Weaver: If the Bordeaux is sprinkled over the plants, will the lime in it hurt the growth of the plants?

Mr. Rosenbaum: In that case the lime does not get to the roots. Bordeaux is only for the tops.

Mr. \_\_\_\_\_: I have a large garden and if I waited until before I thought it was going to rain, I wouldn't be able to get half over my garden. So I set a time to spray and spray often. During a rainy season I spray oftener and I have good success that way. I have not any blight to speak of.

Mr. Eberlein: There are two things I would like a little information about. The purpose of using Bordeaux, as I understand, is to prevent the germination of these spores. You have not as yet touched upon the cause of the spores nor their origin. Can you tell us a little bit about where and how they originated?

Mr. Rosenbaum: You see first how they get on your leaves. They must get on the leaves before they produce injury. I will take up briefly the life history of this plant, that causes all the disease. It has a certain life cycle. It goes to sleep, and gets up, and it has another time to work. The summer time is its work time. The spores get upon the plant—they may be blown there by the wind, or carried there by insects, or carried in by your clothes as you pass through the garden. There are a great many ways that they may get there. The same way they may also get on the stem, and they do just as much injury on the stem. Where do they originate? It is thought they were brought in from the forest on diseased wild ginseng. Man began to bring the plants in from the forest, and when he brought the plants closer together, the disease became more noticeable. You would probably never have noticed it on a single plant in the forest. But when you bring the plants in close together, it spreads more easily from one to another, and then it is noticeable.

Mr. Eberlein: My other question is this. We know that the atmosphere and everything that we eat and breathe is alive with germs. We also know that if a person's health is not in good condition, he will be affected by these germs and by sickness. May be the disease will be tuberculosis. And unless he is physically strong enough to throw off the disease, he will be sick. Now, is it not true that a plant may be weak and thus subject to these

diseases? Is there any way to treat your plant, to make it strong enough to withstand the attack of these diseases?

Mr. Rosenbaum: While soil, shading and other cultural methods will influence the amount of disease in your garden, if you have blight spores and if certain conditions are favorable for the germination of the spores you are sure to have blight there. But as you said, cultural conditions may have much to do with diseases. Select seed from the healthiest plants, and select the healthiest seed heads. Then go through these, and select three or four of the best. In this way, while you will not get a plant entirely resistant to disease, it may be much more resistant than you have now. You growers should begin selection of seed by marking the seed heads, and then selecting the best seed from these seed heads.

Question: Is that the way you account for one plant whose stems are rank and unaffected, and other plants around it are affected, while this plant has no appearance of being affected. Is that the way you account for it?

Mr. Rosenbaum: It may be, and it may be also that the moisture conditions were not just right for the spores of the fungus to germinate there. I would select my seed from that plant. It must be that some condition makes that plant more vigorous than the others.

Mr. Curtis: I had an opportunity of visiting a garden in the north part of the state Saturday. Some of the plants were affected, while others were not affected at all. I wanted to find out the reason. I found that invariably the plants that were affected were planted with the bud of the plant quite deep in the ground. The unaffected plants were planted with the bud within an inch of the top of the ground. I believe that we plant our plants too low, or too deep. It is impossible for the plant to drink in the nitrogen and oxygen from the air which is necessary for plant life, when it is planted so low. I also believe that if the planting of ginseng continues, that we will have to make a study of the needs of the plant. If there is something lacking in the soil we should find out what it is and put it back. I believe that we will raise a healthy plant that will withstand the germs that are in the soil, just as a vigorous healthy man can breathe the germs of tuberculosis and not be affected by the disease. But just the minute you stop nourishing the system through the stomach, or the nourishment of the plant through its fibers and through its stem, just that minute you create an unhealthy plant. I bring this up for the sake of argument or suggestions along that line. I do not claim to know about this, but from a common sense standpoint, I believe that vegetable life is nourished—perhaps along different lines, but still just the same as human life is nourished, and if you do not give it the nourishment that the plants require, then they are susceptible to sickness; and that is proven to my



satisfaction in the gardens we have visited today. In the first garden there was no apparent disease, while in my garden—which was the last garden those in the automobiles visited—which was treated in exactly the same manner as the first garden, there was very much disease. That confirms in my opinion that there is something that has been extracted from the soil or some condition of the plant that needs attention. And I understand that it is the nature of the plant to go deeper into the ground, that the fibers pull themselves into the ground. None of the roots that were planted in this garden, were planted originally five or six inches below the ground, but they have drawn themselves down. Now, a plant that is that deep is not going to be as healthy and vigorous as it is up where that bud can get the sun. I believe that there is something in that worth consideration, and before we get through with this convention, I want to suggest that we, as an organization, employ some expert to make a study of this business and by testing the soil and expert examinations and investigations, give us something from time to time that will be of benefit to us.

There was some gentleman from my garden collected a bouquet of leaves and stems and would be very glad to have you examine those and tell the gentleman just what was the matter.

Dr. Card: It must be true that our most vigorous plants are raised from the best seed. Now, the question is where, and how to get the seed that will raise the vigorous plants. The plants from seed raised from old plants—not less than seven years old—produce better seed than younger plants do.

Mr. Rosenbaum: I should say from this hasty examination that these leaves have the blight spot, while all the rest are the result of the disease in the root which causes these leaves to turn the color they are now.

Question: Do you claim that the red in those leaves is due to disease?

Mr. Rosenbaum: It may be due to exposing leaves to an excess of sunlight, or it may be due to lack of moisture which disturbs the physiological functions of the plant. When these functions are disturbed they cause the peculiar colorations. I have had a large number of specimens at the laboratory this year. Half of that number had trouble with the root, so we advise you to send your whole plant unless you are sure the trouble lies elsewhere.

Mr. Zahl: I have found plants that were perfectly healthy in an open place where a slashing had been burned, and where there had been a superabundance of shade. And when this shade had been taken away, the leaves became red. I believe that a superabundance of sun will cause the leaves to turn red.

Mr. Eberlein:—The program as prepared, calls for



various articles. I think we had better take them up in the morning and also allow Mr. Rosenbaum time to finish his article.

**Mr. Zahl:**—I move that we adjourn until tomorrow morning at 9.00 o'clock.

Motion seconded and carried.

## Thursday Morning Session

Meeting called to order by the President at 9:05.

**Mr. Eberlein:**—I believe it would be well at this time to change the order of our program a little and have the election of officers. The officers of the Association hold for one year, and in consequence of this fact, there must be election of officers at this time. There shall be elected, President, Vice President, Secretary-Treasurer, and three members of the Executive Committee. The other members are appointed. The Chair will appoint as tellers, Mr. LeMieux and Mr. Bender.

Result of first informal ballot for President:

Mr. Eberlein.....	19		Dr. Burns.....	3
Mr. Neeffe.....	1		Mr. Koehler.....	2
Mr. Zahl.....	1			

**Mr. Neeffe:**—I move that the first informal ballot be declared formal.

Motion seconded and carried.

**Mr. Loehr:**—I move that the secretary be instructed to cast a ballot in favor of all the old officers except the Secretary-Treasurer.

Motion seconded and carried.

The Secretary was so instructed and cast such ballot.

**Mr. Eberlein.**—The next in order is the informal ballot for the election of a secretary for the ensuing year.

**Mr. Loope:**—According to the report of the Secretary, the question really hinges on the question of dogs, and perhaps the secretary would object to take so many dogs on his hands. That is the only trouble that I can see. The main question would be, what would become of the dogs if we do not elect Mr. Krier? If you should elect me, I would take the dogs and drown them the first thing.

We have plenty of material here. Mr. Steeps of Rice Lake, has plenty of ability for this position.

**Mr. Eberlein:**—It is up to the Convention to do as it pleases. It would be hard to pass the dogs to another man.

**Member:**—Do the dogs go with the secretaryship? Can we not leave them where they are?

**Mr. Zahl:**—Is there anything in the Constitution and By-Laws or any other place that necessitates the secretary to have charge of the dogs? Does one man have to have them all?

**Mr. Eberlein:**—This is my idea of the matter, my personal opinion. If Mr. Krier is not elected he will give up the dogs. It is all right if anyone will take in three dogs.

Result of first informal ballot for Secretary:

Mr. Steeps.....	8	Mr. Morgan.....	1
Mr. Krier.....	9	Dr. Loope.....	1
Mr. Zahl.....	1	Dr. Burns.....	6

**Mr. Eberlein:**—Now, prepare your ballots for the first formal ballot for secretary for the ensuing year.

**Mr. Burns:**—Is it out of order for me to make a motion that the gentleman receiving the majority of votes, be called elected?

**Mr. Zahl:**—As I remember it, Mr. Burns is Vice President at the present time. I did not know that Mr. Burns would then be eligible to the secretaryship.

**Mr. Eberlein:**—He would not, under the Constitution.

**Mr. Burns:**—Mr. President, personally, I would like to see Mr. Steeps as Secretary. Mr. Krier is not here, undoubtedly for good reasons. He expected to be here, but he was not able to come. I see he sent in his resignation and does not seem to care for the office. If it is in order to move that the informal ballot be called formal, I would make that motion.

**Mr. Eberlein:**—The motion is out of order.

**Mr. Zahl:**—I think that Mr. Krier ought to have a show. Mr. Krier does not want the office. He told me that he would be here. He said the only thing was that he was tired of the office and of taking care of the dogs. Perhaps we do not appreciate how much Mr. Krier has done for the Organization as its secretary. He has been a very faithful servant. Personally, I feel that the dog question has been overdone. But Mr. Krier has done right by us in a financial way, he has been a good secretary. It is a question in my mind whether he would take the office since he does not want it.

**Mr. Eberlein:**—The next thing in order is the taking of the first formal ballot for secretary.

Result of first formal ballot:

Dr. Burns.....	5	Mr. Steeps.....	11
Mr. Krier.....	10	Dr. Loope.....	1

**Mr. Eberlein:**—There being no majority for any candidate, we will take another formal ballot.

**Dr. Burns:**—Since I am elected to the office of Vice President, I cannot possibly accept the office of secretary, and besides that, I am very busy at home. Ginseng culture is only a side line with me. I would urge you again to cast your ballot for someone else.

Result of second formal ballot:

Mr. Steeps....	15.	Dr. Burns....	1.	Mr. Krier....	9.
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**Mr. Eberlein:**—The ballot giving Mr. Steeps a majority of votes, he is declared our secretary for the next ensuing year.

In order to complete the work of election, the Chair appoints the following committees:

Finance Committee—Mr. Neefe, Mr. Loehr, Mr. Morgan.

Membership Committee—Mr. Schwartz, Mrs. McKinney, Mr. Le Mieux.

**Mr. Eberlein:**—We still have several articles to be given. We will listen now, to a talk by Dr. Burns of Stanley, relating his ginseng growing experiences.

**Dr. Burns:**—Before I begin, was there not something in Mr. Krier's letter and report about having a program committee appointed? Is the Society going to do anything about that?

**Mr. Eberlein:**—It is left with the Association. The secretary formerly got out the program. I do not know whether we can appoint a committee for arranging the programs and get members near each other. Are there any suggestions?

Member: How would it work to allow the secretary to appoint his own committee or ask someone to work with him? I would leave it to the secretary. There are no members in the same vicinity with Mr. Steeps.

**Mr. Eberlein:**—If it is decided to leave it to the Secretary. We will listen now to Mr. Burns.

(Note.) There was no transcript made of Dr. Burns' speech, therefore I will give the substance of it from memory.—H. J. S., Secy.,

On the night of July fourth, the garden of E. J. Foley was entered and robbed. Mr. Foley sent word to the Secy. Mr. Krier, and reward bills were circulated offering a reward of fifty dollars for the apprehension of the thief. Mr. Paul Giese and others took up the clues left and followed them out. This finally resulted in the arrest and conviction of one Wm. Boettcher, who was sentenced to six months in the Clark County jail at Neilsville. Mr. Burns also stated that he had personally incurred about ten dollars expense in the matter, but that he did not expect to be reimbursed, however he thought that the reward money should be paid to Mr. Giese and his helpers.

Dr. Burns then exhibited two photographs of the convicted man and the order from the justice committing him to the jail for six months. These are now in the hands of the secretary.

**Mr. Eberlein:**—You have heard the report of Dr. Burns. A motion to pay Mr. Giese the reward money offered, is now in order.

**Dr. Burns:**—This is the first time that the Association has been called upon to make good its promise in this section, and it occurs that the information received about this case was furnished by several persons. It should be divided up legally and equitably.

**Member:**—Dr. Burns has gone to about \$10.00 expense and I think it ought to be made whole. The association should not expect a member to pay out money. The amount of the reward is left to the discretion of the Association.

**Mr. Neefe:**—That was almost cinched by the order from the secretary to Dr. Burns.

**Mr. Eberlein:**—The secretary had no right to state the amount of the reward, but he having done that, we must stand back of him. The matter is open for discussion.

**Mr. Neefe:**—I suppose before it comes up it ought to be put in the form of a motion.

Motion made that the Association pay the reward to Mr. Paul Giese.

**Mr. Zahl:**—I would amend that motion to add \$10.00 to reimburse Dr. Burns in this.

**Dr. Burns:**—I appreciate the disposition of the Association in this matter, but I do not feel like accepting it.

**Mr. Eberlein:**—The amendment has been made to the original motion that we shall include \$10.00 to reimburse Dr. Burns.

The original motion was that \$50.00 is to be equitably divided by Mr. Paul Giese among all those that may lay claim to the reward for assisting in the arrest and conviction of the offender who stole Mr. Foley's ginseng plants, and that \$10.00 be allowed Dr. Burns.

Motion seconded and carried.

**Mr. Eberlein:**—The treasurer will issue an order to Mr. Burns for \$10.00 and \$50.00.

**Mr. Burns:**—Since the Association has voted in this way, I wish to state the exact amount of my bill which is \$7.05, and is itemized as follows:

(Itemized Bill.)

I believe the Association would have no objection to draw the order for the exact amount of the expense bill.

**Mr. Eberlein:**—We will now have an article on "Transplanting Ginseng Roots," by Mr. R. M. LeMeiux.

### Transplanting Ginseng Roots.

Transplanting is considered, by most growers, as one of the necessary labors of Ginseng Culture. The object of transplanting is to keep the soil in better tilth and to save ground by growing the small plants more closely together than the larger ones.

The method of planting seed six inches or more apart and allowing the plants to remain in one place to maturity has been tried by some. This method, when successful, has but one advantage, the saving of labor; while it has several disadvantages, among which are; the plants, when they are small, take up more land than is necessary and land under a shack is expensive. Some plants will die and

this will compel transplanting to fill the vacant places. The main disadvantage, however, is that it is impractical in all soils except those that are very light and porous. Five or six years is a long time to leave soil without tillage and if the soil is anything but extremely light and porous it will become hard and compact. This is especially true of clay soils; even the best clay loams will get quite hard in much less time. This condition is, certainly, not favorable to the best plant growth. So it is obvious that transplanting is necessary in heavy soils and profitable in lighter ones. If the grower has an extremely light soil and the labor item is of great importance, it may prove profitable to plant seed in this way, but, generally, the ground saved by planting seed close together and transplanting later will more than offset the saving of labor.

It is best to transplant in the fall. At this season the plants are dormant and the soil is more likely to be dry and in good working condition. In the spring, these conditions are not apt to prevail. If the soil is wet which it is likely to be, transplanting will be an unpleasant job and can not be done as well as it should. The soil, because of its sticky condition, will not hug the roots as compactly as it should, leaving small cavities for air and water, which is apt to induce rot. Another point, the spring season is short and the buds may start before the roots can be planted and in this case the plants will not do well the first year. The probable reason for this is that the tops begin to grow before the plants have taken a firm root hold. In fall planting this difficulty would be lessened, because, the plants are dormant, the soil is in better condition, and the fall rains will wash soil into the few air and water pockets that may be left. Then, when warm weather comes in the spring, the feeders start to grow just as soon as the top and the stored nourishment in the root is not used to so great an extent so that a greater root growth during that season will result. However, we can make no hard and fast rules. If the soil conditions are right or if the grower has the facilities for keeping his roots dormant until he is ready to plant, spring planting should prove as satisfactory as fall; but the fact remains that few growers have such facilities and spring conditions are not likely to be as favorable as fall conditions, which gives fall planting the preference.

One year old roots do not as a rule thrive as well as older roots when transplanted; probably, because the rootlets are smaller and more easily broken in digging. Again, the texture of the soil comes in. One year olds grown in a sandy soil, are less likely to have their fibers broken than those grown in a heavier soil and so will thrive better.

System is necessary in all things and the transplanting of ginseng is no exception. The two year system has proven more satisfactory than others as it gives ample



chance to till the soil and does not destroy the feeders as much as more frequent transplanting. Under this system, the seed are stored for one year and planted in the fall, at a distance of 1x2 inches. The plants are allowed to remain in these beds for two seasons. Experience has taught that this distance will prove satisfactory, however, if space is no object, twice this distance or 2x2 inches may be a little better.

After two years the plants are dug and replanted, in rows five inches apart and three or four inches apart in the row. Here, again, they are allowed to remain two years and replanted in rows nine inches apart and five to seven inches apart in the row. The plants are allowed to remain in these beds two years when they may be dug to dry.

The preparation of the soil is important. The beds should be thoroughly tilled to a depth of eight or ten inches, adding a plentiful supply of humus. This may be in the form of well rotted manure, leaf mold, or compost. It is best to begin tillage four or five months before the beds are to be planted, that is, in the spring. In this case fresh manure, leaves, straw, or other vegetable matter may be spaded in and will be well rotted by fall. Peas or beans may also be planted in these beds and the vines turned under in July. In the fall, before planting, the beds should, again, be spaded several times to pulverize the soil and mix the humus with it. The object to be kept in mind in the preparation of these beds, is to reduce the soil to a loose friable condition. This is done by tillage and the addition of humus. A secondary object is to remove all large sticks, stones, and other rubbish. When this has been accomplished, the beds are ready to plant.

There are several methods of transplanting in vogue, some of which are no good. In using any method there are three important points to keep in mind; first, to keep the small roots as straight as possible; second, to firm the soil snugly around the roots; and third, to reduce the labor to a minimum.

The trenching method is about as good as any. A line with a stake at each end is tightly stretched lengthwise of the bed and a trench is dug along it with a hoe the blade of which is at right angles with the handle. Such a hoe maybe had by having a blacksmith bend an ordinary hoe. The depth of the trench depends on the length of the roots to be planted. The roots are then placed in the trench so that the buds will be about one inch below the surface. The stakes at each end of the line are then set over the required distance and the next trench is dug throwing the dirt from it over the roots in the first. This dirt is then lightly tamped with the blade of the hoe to pack it about the roots and fill up air spaces. The roots are then set in second trench and so on, until the bed is

full. The dirt from the first trench is then shoveled into the last being careful not to displace the roots in so doing. This method is economical of both time and labor and will prove as satisfactory as any.

The beds should be mulched as soon as it is convenient after planting, using cut marsh hay, cut corn stalks, or other mulch to a depth of one and a half to two inches. This should be done at latest, before the ground freezes.

Beds that have grown ginseng for two or four years may be safely replanted. These beds which have grown ginseng for six years had best be left idle and thoroughly tilled for at least one year. Crops, as a rule, do best under a system of rotation and ginseng is probably no exception. A good method, where the shading can be removed, is to plant these beds to some leguminous crop which may be turned under after it has made a good growth and before it's seeds ripen. Where permanent shade is used, this will not be so successful, as these plants require plenty of sunlight.

To summarize: Transplanting is necessary to the greatest success in Ginseng Culture.

The planting of seed at the proper distance for old plants, is a waste of ground and will prove a failure in heavy soils.

Fall planting is preferable to spring planting.

The older roots can be most successfully transplanted.

Transplanting every two years is preferable to transplanting more or less frequently.

In the preparation of beds the soil must be well pulverized and a good supply of humus added.

The method used should be as economical of time and labor as is consistent with the proper planting of the roots.

Rotation is probably productive of as much good with ginseng as with other crops.

**Mr. Eberlein:**—We have another article, "How Ginseng Disease are Fought in Our Garden," by Mr. Gaylor.

**Mr. Gaylor:**—I have not had time to prepare anything. Since Professors Whetzel and Jones from Madison are here, my knowledge would not be worth anything.

**Mr. Eberlein:**—We will next have a talk by Dr. Loope. "Some of the Trials of the Amateur Ginseng Enthusiast."

#### **Some of the Trials of the Amateur Ginseng Enthusiast.**

Dr. Loope: Mr. President; I did not expect to be called upon, and I want to get that subject a little more plainly. Oh, yes, some of the trials. I think that you all know something of the trials of the amateur ginseng grower, and of course, a great many of you will be classed as amateurs. I know that I come under that head. Now, the trials are various. I do not know what they might be in Antigo, or what they might be in Shawano, but I presume our president is not an amateur. He is a professional, and of course, that makes a difference. The trials

in this line come when you buy your stock, and pay good money for it and fit the ground, and get your shade, and all that sort of work, and the next year you don't have anything come up to amount to anything. That is a trial. All of you have had a little trial in this direction. I know that I have, and a great many others have. Even in amateur growing there are trials. Some invest in labor, and everything and get no returns. It looks pretty black. Then of course, that makes quite a little difference, and that is a trial.

Another trial is when the blight strikes you and the plants go down. There is a blank, and you are all pretty well familiar with this trial, in the different sections all over the state. A man who does not have any trials is not entitled to any kind of sympathy. Then everything is rosy and all right. But it is well enough to have trials. It fits you for better work later, and you will get these trials in various other ways. You have not only the blight and the rust, but you have root rot and all that class of trials that give you a little set-back when your nose gets too high. Then it is pretty hard to keep a stiff upper lip all the time, even in the ginseng business. I believe that is true.

Of course we amateurs have various sorts of trials that you professionals do not. When we get our crop ready for the market, we have dug it, dried it and want to sell it, it will be like last fall. You found you could not sell it. The buyers said, "Do not send it, we do not want it." They were not buying any in New York. The express companies were tied up. There is a little more trial, when you feel the lack of money in your pocket. Perhaps, you will have to wait until another year to have the price materialize. You who have been in the business for some time, and you who have your commission merchants that will give you a fair deal, you are all right. Take the amateur. He does not know which way to turn to sell his crops, and it makes quite a difference to him whether he gets anything from it or not. That way he gets a trial. I will not take up any more of your time to consider any other trials. I will let you consider your own trials, and you will find that you have plenty of them too. (Applause.)

**Mr. Eberlein:**—That concludes the program that we had prepared. Mr. Rosenbaum will conclude the program by giving us the rest of his talk.

### **How To Test Bordeaux.**

All of you have probably made Bordeaux. I will tell you how to test your Bordeaux to prevent the foliage from burning. To begin with suppose you make 3-3-50 Bordeaux for your blight, dissolve six pounds, if you are going to make a small quantity, of quick lime in fifty gallons of water and 6 lbs. of copper sulfate (blue vitrol) in 50 gal-

lons of water. Mix equal quantities of the two solutions just before using. If it were possible to apply the copper sulfate without the lime, this would not be necessary. You add the lime to prevent the burning of the leaves, and enough lime should be added to neutralize all of your copper sulfate. To test the solution, take five or ten cents worth of potassium ferro-cyanide and dissolve it in a little water. Five cents worth will be enough to last a life time. I will show you a good way to dissolve the copper sulfate. Do not dump it in the barrel, but tie it in a piece of rags and hang it in the top of the barrel, and it will dissolve in much less time, and it is not necessary to stir it. As some of the copper sulfate dissolves, the top of the liquid becomes more concentrated and sinks, sending up the clear solution to the top. Thus you have a constant current.

Now, here is your pure copper sulfate. If you spray this on your plants it would burn them. You add a drop of ferro-cyanide to the copper sulfate. You see the color that it takes. There is a precipitate of a brownish color. Pass it around. Now, the copper sulfate I just showed you had no lime in it at all. I will add a little lime. Put in enough to neutralize this copper. Here I have some with an excess of copper sulfate, and I will add a drop of the Potassium ferro-cyanide. You can see this yellow, brownish color form on the outside. Just a drop of it will show the test. You could not miss it once you tried it yourself. You will always see the brown precipitate. You will have to continue adding lime until no change in color appears, when the potassium ferro-cyanide is added. When you test your mixture with ferro-cyanide is added. When you test will not get any burning of your foliage. After I mixed up the Bordeaux, that is after I had added the lime and copper sulfate and mixed it together, then I would add a little ferro-cyanide, and if I found that it just formed the brownish precipitate, then I would add one or two dipperfuls more of the lime. Always add a little more lime than that necessary to neutralize your copper sulfate. If you do this, you can use 10-10-50 and still not injure the leaves, that is, if you have enough lime in to neutralize your copper sulfate.

Mr. Zahl: If the mixture is 3-3-50, 4-4-50, or 5-5-50, you always put in as much lime as will neutralize the vitrol? Either the lime I have is not the right quality or it is air slacked. Water slacked lime is exactly the same thing. It will take up moisture and lose its strength in slacking in that way.

Mr. Rosenbaum: Well, if you are not sure whether you have enough lime added, it is very easy after you have mixed your Bordeaux. Test the mixture with a drop of ferro-cyanide.

Mr. Eberlein: The first time that I made Bordeaux, I

got hydrated lime. Air slacked lime was not up to the snuff. It burned my plants a whole lot. I found that three pounds of air slacked lime is not as good as water slacked lime.

Mr. Zahl: Lime itself, if used with copper sulfate, will not kill the plant.

Dr. Loops: Did I understand you to say that if you add arsenate of lead to Bordeaux, you will make Pyrox of it? I use thousands of gallons of it every year in my orchard. I spray for both fungicide and insecticide. Ginseng has no serious insect diseases.

Mr. Neefe: There was one thing more, in making up this Bordeaux, which is better, stone lime or quick lime?

Mr. Rosenbaum: They are the same thing.

There are several other things I want to tell you about the diseases of ginseng. There are about six diseases that you people ought to know something about blight, fiber rot, soft rot, wilt, *Phytophthora* mildew and rust. There are several more but they are not of much economic importance. While I have not found any soft rot in Wisconsin or Michigan, it is one of the most serious diseases in New York State. It is by no means a recent disease. Van Hook worked on it as did Professor Whetzel, also, and now I am working on it. We do not know the cause. But we do know some of the conditions which help to bring on this disease. It is the man who has clay soil or heavy soil, that should take note of this. Moisture conditions undoubtedly affect the severity of this disease, and determine to a great extent, the appearance of it. You are apt to have it, if you have clay soils, and the air and moisture conditions are not just right for the growth of the plant. Moisture conditions can be remedied by tile drainage. This should be laid so that there is a tile drain in the center of each bed, the drains about four feet apart and about eighteen inches deep. Tile drainage carries off the excess of water, and also in case of a dry season, it brings the water from the lower depths. If your garden is on the side of a hill, you will need tile drainage just as much as if it were on level land. As I said, tile drainage will carry off the excess of water and bring up from the lower places. It makes better capillary connections and will granulate your soil. It will also aerate your soil. The roots need to breathe just as you or I. In addition to tile drainage for soft rot or fiber rot of roots, dig out immediately from the garden all affected roots: This disease, we believe spreads. Just as soon as one root is affected, the adjacent roots are also apt to be affected. In cases where soft rot is bad, dig the roots and treat your land with formalin the same way as you do for rust. Not only will it kill all organisms that cause soft rot and rust, but other diseases producing organisms in the soil.



I wonder if any of you ever noticed black roots in your garden with little knobby places on them.

Mr. LeMeiux: I had some in my garden, and I sent several to Professor Whetzel four or five years ago.

Mr. Allen: I have had some black roots in my garden but I had not noticed any black knobs on them.

Mr. Rosenbaum: Mail some to me, will you please? This is the worst disease that can ever get into your garden because you can never hope to save the roots and probably not use the land for ginseng again. You can soak your land thoroughly with formalin. If you find many in your garden, do not try to remove the roots or soil. The soil is full of the spores or seeds that cause this disease, and you are bound to drop particles of the soil as you walk. This disease is peculiar because it works in the winter and not in the summer. That is different than any other disease. It is called black rot.

Question: Is the cause known?

Mr. Rosenbaum: It is caused by a fungus. I cannot tell you how to prevent the disease. You can sterilize your land, but you cannot cure the disease when it gets into the roots. You can dig up your roots and sterilize your soil. If you dip your roots in formalin, you may control the disease in that way, but I doubt it, especially if the disease is far advanced. We have not been able to find enough of it to work upon. It is one of the worst diseases that the growers get in their gardens.

Mr. \_\_\_\_\_: I had some black roots in my garden about three years ago, and they only took in a small spot.

Mr. Rosenbaum: I cannot explain all the conditions. Yours may have turned black from some other cause. Perhaps you did not have black rot.

Still another disease which may cause you trouble is what we ordinarily call wilt. This is a disease of the roots. It works in the tubes that carry water to the leaves. You can tell that disease because the leaves and stems may appear perfectly healthy for a long time and then will wilt down. The vessels in the root become filled with the threads of the fungus. If you take up one of the roots and cut it, making a cross section, you can see a ring of yellow or brown, about one-eighth of an inch from the edge of the root. I have some pictures of it here. This ring shows black in the picture. The little brown spots are simply tubes that you are looking down upon, so that you see a little brown ring. The threads which fill the tubes do not allow the water to go to the tops of your plants. The next year the same thing will happen, the plants wilt. And so if you find many of these wilted plants that are shown here, the thing to do is to dig out your roots and dry them and treat your land with formalin. There is no remedy for

curing the disease after it has attacked and entered the roots.

Question: What size plants does it affect?

Mr. Rosenbaum: Most any size. I have never noticed it so much in one year or in two year old plants.

There is another disease, Phytophthora mildew. This is very abundant in New York State and also abundant in Michigan and Wisconsin. It works very early in the season. It is very much like late blight of potato. You can control it by spraying thoroughly and early enough with Bordeaux or Pyrox.

Question. What are the symptoms?

Mr. Rosenbaum: The symptoms. Well, this picture shows some of the symptoms. The tops of the ginseng where the three branches of the main stem arise droops down. It makes the leaflets droop down. We took some of the spores that cause this disease and sprayed on some perfectly healthy plants. We also sprayed some of the plants with ordinary water. These plants, that is, those where only water was used, remained perfectly erect. But the plants on which we sprayed the spores began to droop after several days. It is not like the Alternaria blight. This disease starts in the stems and through the stem it goes into the root. Alternaria blight does not affect the root. The thing to do is to nip off the tops before it goes into the root. Spraying with Bordeaux or Pyrox and continuing to spray before each rain and not after, will control this disease.

Mr. Loops: After all the disease you have there, would you not advise the Association to disband and all go out of business?

Mr. Rosenbaum: If I grew ginseng myself, I might advise you to do so. But the market is not over-crowded yet. These diseases are what make the prices of ginseng. What we would like to do with you people is this: we would like to have eighteen or twenty microscopes, and some real live material, and have you sit down and study these diseases the way we study them in school. Take three or four hours for each disease. The man who is going to learn the remedy for all these diseases will make a success of ginseng growing.

Mr. Weaver: Don't you think the weather conditions has a great deal to do with our plants?

Mr. Rosenbaum: The weather conditions will not produce disease alone. There are certain physiological diseases not caused by any organisms. If it is caused by organisms it can often be controlled. These physiological diseases are caused by some function of the plant being disturbed. It may be brought about by an excess of sunlight or too little sunlight, improper moisture conditions, etc.

Question: Just how much sunlight ought to be had to prevent this?

Mr. Rosenbaum: Eighty per cent, fifty per cent, or even solid shading. It depends upon the conditions. Every man has to work these problems out for himself.

As far as I can see, I have tried to cover everything of importance. Is there anything else you would like to discuss?

Mr. Weaver: What is the difference between the Alternaria blight of Ginseng and potato blight?

Mr. Rosenbaum? These two are caused by two entirely different organisms. You can spray spores of the ginseng blight on potatoes and it will not produce disease there. And the same, if there is blight on your potato crops, your ginseng will not contract disease from the potato. I might say that late blight of potatoes is more like Phytophthora.

Question. Does it depend upon the amount of water, or weather, whether there is blight?

Mr. Rosenbaum: No, it does not. All these conditions may influence the amount of the disease but only indirectly. The direct cause is a fungus. Moisture is a controlling factor because the spores need moisture to germinate.

Question: Does shading have anything to do with it?

Mr. Rosenbaum: The shading question will not account for ginseng blight, but it has much to do with the papery-leaf spot.

Dr. Card: With tile drainage, is there a surface outlet for that?

Mr. Rosenbaum. Yes. Your tile drainage should be arranged, if possible, so that the fall runs with the natural fall of the land and should have a surface outlet.

Question: How are we to know what our soil needs to make it right?

Mr. Rosenbaum: The thing to do is to write to The State Experiment Station at Madison and send a sample of your soil to the soil department, and they will give you all the information on that point. Ginseng does not require a very rich soil.

Mr. Eberlein:—That concludes our program. Is there any new business to come before the Association, that has not been settled?

## Discussion

Member:—I used to plant cross ways of the bed, thinking I could save considerable time because I was working alone. I plant the seedlings in a trench.

Question:—How deep is the trench?

Member:—It depends on the length of the roots. Make it deep enough so that the roots will lay in the trench

straight. Plant them horizontally or about so the roots slant 45 degrees. Occasionally you have a long root, then the trench will have to be a little deeper. About the right depth to plant the roots is an inch below the surface. The frost will not heave them. If it does they will settle back with the dirt if the plants are well mulched. I would not advise planting them deeper.

**Mr. Curtis:**—It is generally considered that fertilizing with barnyard manure is detrimental to the plants. What about this?

**Member:**—I have used it, and it is not so hard to get as other kinds of fertilizers. I think that after it is thoroughly rotted it does no harm. If you use fresh manure, put it on the beds four or five months before you intend planting the beds and let it get thoroughly rotted.

**Mr. Curtis:**—My object in asking was that when fresh manure is used and beds put in before waiting for the manure to rot, that the manure had a tendency to produce rot on the plants.

**Member:**—If it is thoroughly rotted, I do not think it makes any difference what kind of humus you use.

**Dr. Loope:**—I have seen quite a few grubs in my garden down around the roots. You will find them in almost any soil, but not in fresh manure.

**Dr. Burns:**—I have also had a good demonstration of grubs working in my garden.

**Member:**—These start at the fibre end of the root and if you dig down into the earth around the root and you will find a grub at the base of the plant that is pulling the plant into the mulch. They go from one plant to another. If you don't find the grub at the root you will find it between the plants or beds on its way to another.

**Question:**—How do you destroy them?

**Mr. Hahn:**—Take a tub of water and pour a little kerosene over the top and hang a light over it. Then at night, the June bugs from which the grubs come, bump against the lamp. They will fly towards the light and drop on the water when they strike the lamp and the kerosene on the water will kill them.

**Mr. Zahl:**—I think it would be wise to make some motion to the effect that some attempt be made to keep the production of seed down to a small percentage. I did not rise to make such a motion. I would not know just what way or what method might be adopted. I have nothing prepared to suggest, but a committee might be appointed to look into this matter and educate themselves and find a possible way to control the seed crop or seed output, or some kind of a compact for the Association as a body, whereby we could get together all the growers and regulate this thing so as to be able to keep up the price of ginseng. We could thus prevent any gardens being started or others going into the business which will re-

duce prices of ginseng. The price of ginseng will very materially drop if the output is increased, because I have been in touch with the Chinese ginseng buyers. I think I am the only man in this state who has ever exported ginseng direct to China. I have had experience in sending ginseng to China. The amount that the Chinese will take is a quantity that will never be over 200,000 pounds a year, or a million dollars' worth. This is a really small quantity, not large, when you consider that China is the principal consumers of this article. The output recently has not reached this figure, but if it were not for the diseases, the price of ginseng would not be over half what it is today. If it were not for the diseases, it would be down to \$2.00 or \$1.50 per pound.

In view of these things, is it not a wise thing, and does it not belong to us as a body to start something so that we can see how and what can be done? Is it not well to start to thinking along these lines.

**Mr. Loope:**—I think that Wausau, and Antigo, and Shawano and most of the other places have started on that this year. If the diseases keep coming we will not have to worry about that subject much. It would be better to educate how to control diseases and then learn how to control the market for ginseng.

**Mr. Curtis:**—This is a time in the history of this country when combinations in restraint of trade meet with a good deal of trouble, and I would not like to see ginseng business subject to prosecution of restraint of trade. If we adopt the gentleman's suggestions, would we not be restraining trade in ginseng?

**Mr. Loope:**—I was suprised the other day to receive a letter from Wausau inquiring for seed and other stock. I always supposed that Wausau was pretty nearly headquarters for ginseng line of products. Yet this letter asked the price of seed and other stock. Of course I answered that letter and stated that I had some seed this year, and very little else. I have not had a letter with an order yet, but I expect it every day.

**Mr. Eberlein:**—I want to remind Mr. Zahl that when an Association is prosecuted, that they go after the officers first.

**Mr. Kneefe:**—I cannot see how it is going to restrain trade. It will open up a splendid trade on formaldehyde.

**Mr. Steeps:**—I am interested in the dog question. Now, I am located in the Northwestern part of the state, away from the ginseng centers of the state so that I can not take care of these dogs. Unless the two can be separated, I shall have to hand in my resignation as secretary.

**Mr. Koeler:**—Mr. Curtis has a number of dogs. Would he consider taking care of these dogs?

**Mr. John Curtis:**—I cannot say that I will. I do not care to after having heard the secretary's report read yes-



terday, if I have to comply with his statement which will make it necessary to ask your friends to run barefoot to make trails for these dogs. This would be a little bit more than I would like to tackle.

**Dr. Loope:**—I will take care of the dogs. Send them down to me, and the river is close by too.

**Member:**—It seems to me that the dogs, providing they are trained properly, in my estimation, should be distributed over the country and in different parts of the Association, and I think if they are trained according to directions, and given the proper amount of exercise, they would amount to something that way. Different members would have them and the amount of labor is not the question. It would be most wise to have them distributed that way, and with that I am in a position to accept one or two dogs, give them good training, and proper care and if the Association sees fit to accept the proposition I will do so.

**Question:**—Where are you located?

**Member:**—Twenty miles northwest of Wausau.

**Question:**—Could you take the three of them?

**Mr. Curtis:**—It is not so much a question of who will take the dogs, as who will be qualified to take care of them and make them what we need. A bloodhound is no better than any other cur dog unless he is trained and the average man is not capable of training him. After we bought the dogs, they were not trained. So it would be only best to select a man who will know how so that they will be well trained.

The dogs are of no use unless they are well trained. I have seen bloodhounds in this city, high bred dogs, but they were not trained so they are of no use. You should place the proper training of these dogs in the hands of someone who will see to it that it is well done. Or, we could send them off and get them trained and keep them here, but their training would have to be kept up or they would lose the good of it. If we did this we could keep them here and then they could be sent out with a man who is capable.

**Member:**—How will we find someone who will be capable of keeping the dogs? I think it would be a good idea for the secretayr to write around and find out who would be capable, and take offers.

**Mr. Curtis:**—We could keep them here and feed them, but we have not sufficient time to take care of them properly as far as training is concerned. It would take an experienced man, a man who knows how to handle them. It would be better to have the dogs sent somewhere where they can be properly trained, and then keep them here in charge of some capable man.

**Dr. Loope:**—The dog question is quite a question, and gives us some trouble, but it can be solved easily enough.

Mr. Steeps is superintendent of schools and he can get some of his boys to do their cross-country training by exercising the dogs.

**Dr. Burns:**—The dogs are no good to us without training. Our members are widely separated, living in all parts of the state. We want them located where a quick shipment of them can be made. It would be out of the question to keep them out in the country twenty miles. These dogs should be well trained and kept where they can be got at short notice in a short time. To bring the matter to a head, it might be well to have a motion made.

**Question:**—What would be the cost of training these dogs?

**Mr. Steeps:**—Is there any one here who knows whether, after a dog is trained to be a man-trailer, it will continue to be such, or must the training be kept up.

**Mr. Curtis:**—The dogs would have to be sent off and then when they get back here, they would have to be in constant training to keep them trained. They can not lay around.

**Dr. Burns:**—If that is the case, we must have made a mistake when we bought the dogs. We'd better sell them for the most money we can get for them.

**Mr. Curtis:**—There was a suggestion made that this County of Marathon has been thinking of buying some dogs, and possibly we can make arrangements with the officers of this county to take the dogs and give them training and if we can induce them to take them and keep them, I think it would be wise to turn them over to the County to use for other purposes and I would like to be permitted to make a motion that the officers be requested to see the officials of this County to make arrangements for turning the dogs over to Marathon County, with the provision that they be sent out to help ginseng growers when necessary.

**Member:**—Why not have Mr. Curtis act with the members? I move that the president appoint a committee of three. I offered that as an amendment to Mr. Curtis' Motion. Amendment accepted.

**Mr. Curtis:**—The ginseng growers of Wausau will give all possible help, and I think my motion is better as it was.

Mr. Curtis' motion seconded and carried as amended.

The chair appointed the following on the committee:

Mr. Curtis, Mr. Koehler, Mr. Morgan.

**Mr. Card:**—As a new member, I am a little bit disappointed that nothing has been said about getting in touch with the best markets for our dry root. This seems to me a very important item. Now, we are selling to middlemen.

**Mr. Zahl:**—We have no trouble as it is. The growers, as a rule, are well acquainted with the buyers through the Special Corps. There are a number of firms mentioned and we are all fairly well familiar with them. There is

Butler & Co. of New York, which is a reliable firm, and Samuel Wells & Co. of Cincinnati. You will have no trouble if you wish to sell what you may have.

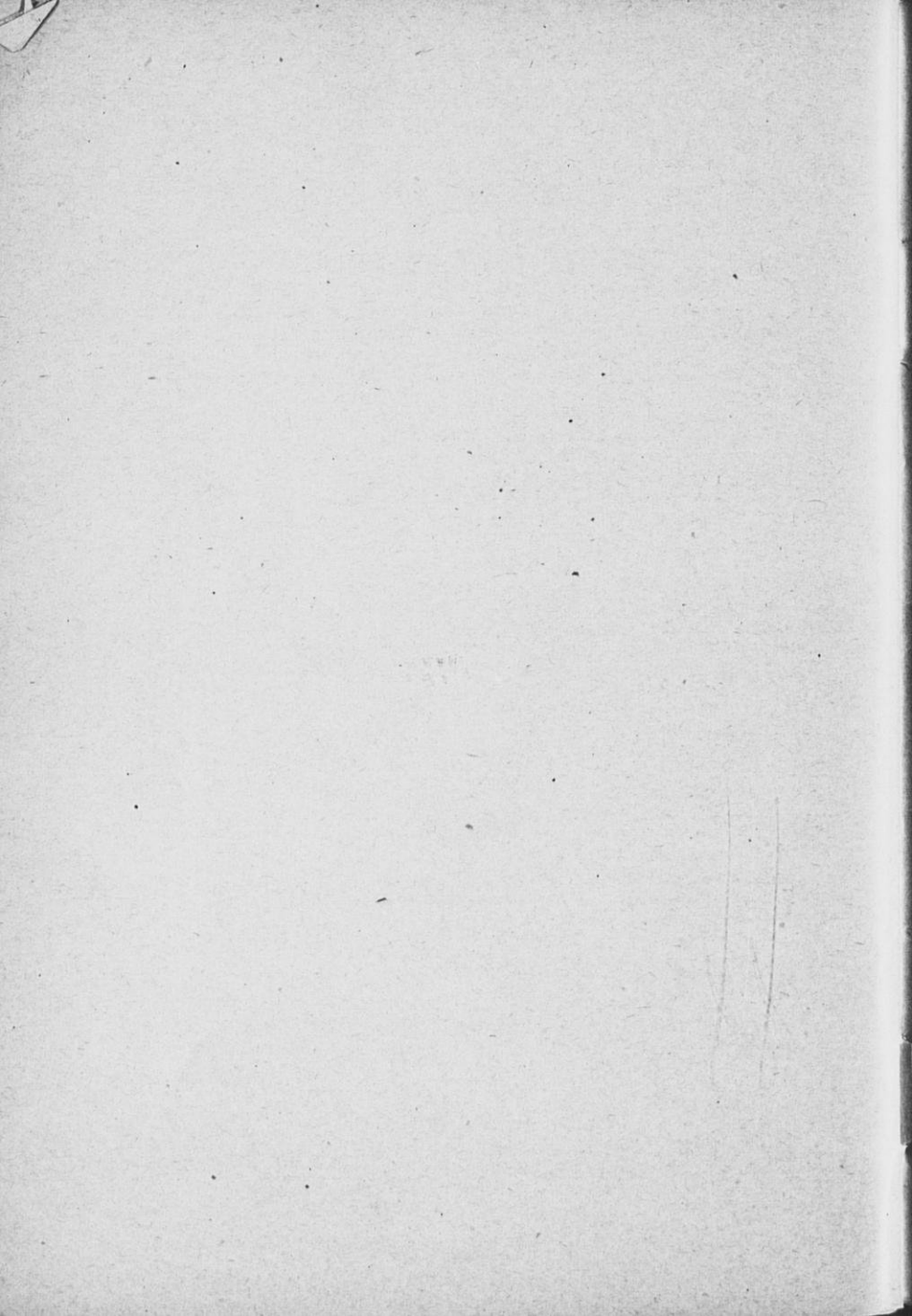
**Mr. Card:**—Yes, but the middlemen make the profit, and we could make more ourselves if we sold to the consumer direct. We ought to have a representative of some kind.

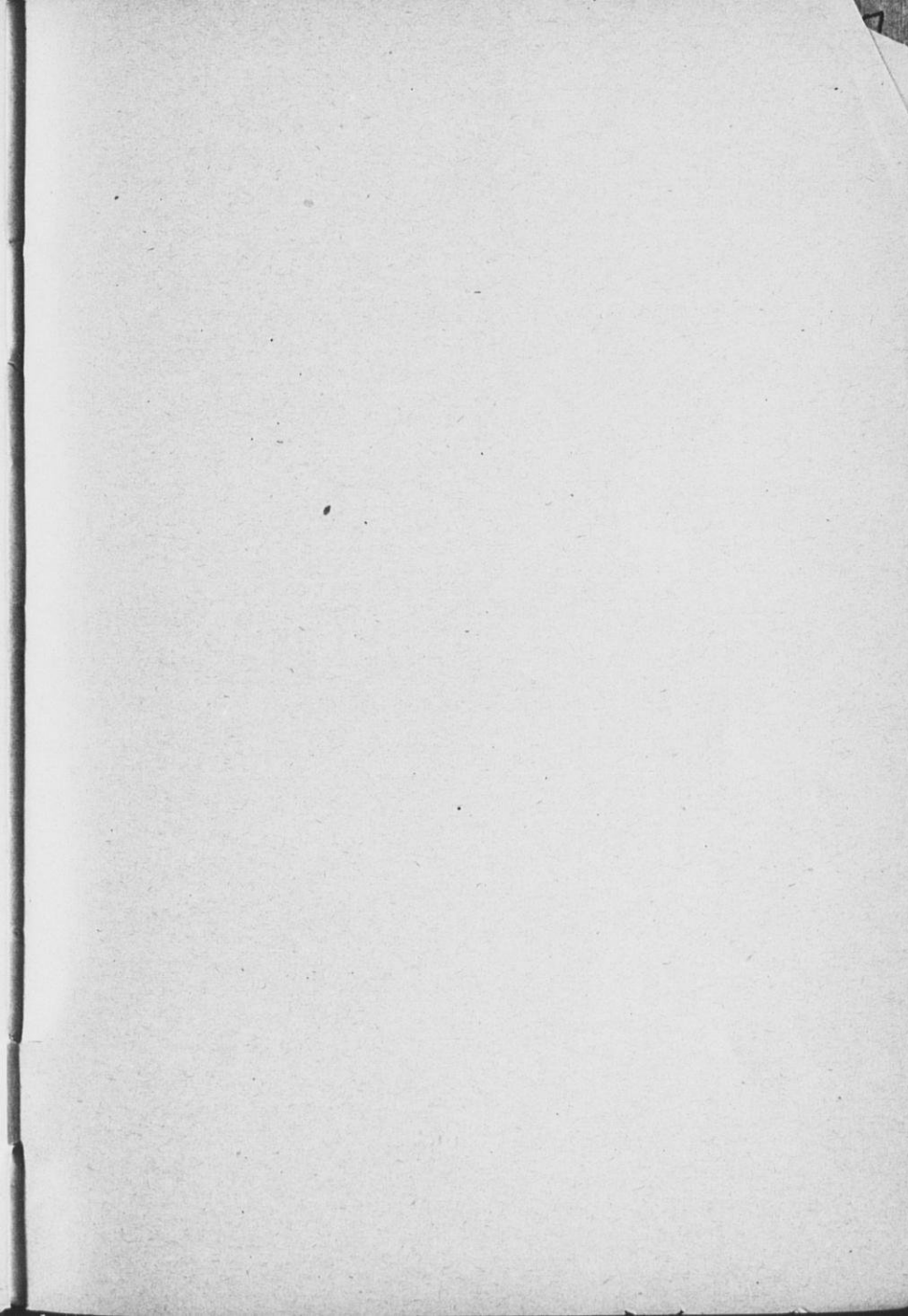
**Mr. Zahl:**—I would like to say that I have exported ginseng to China, and it is very slow business. I have sent over two or three thousand dollars worth at one time. Very few growers have enough ginseng to pay to go into it this way. The difference between the wholesale price and the price the consumer pays, is very much smaller than is generally supposed. The New York firms do not make a very large margin. Of course, there is a profit for them, but the grower is better off if these firms do their exporting for them. After the ginseng has started from San Francisco, it takes from four to five months for it to get there and the returns to come back.

**Mr. Steeps:**—I move you that we adjourn.

Motion seconded and carried.













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