moth get by them, because they do not want it on their own stock, and more particularly because they do not want it on the larger amount of stock which they ship out. Our most reliable nursery last year placed two men as supervisors over their trimmers and graders. They were talked to by the importer and by myself. The proprietor urged upon them the absolute necessity of care, and the two men, his own most careful foreman, were given to understand that nothing must get by them. I had an inspector myself on the ground, and one brown-tail nest got past them all. The trimmings were cleaned up thoroughly and burned every day.

PRESIDENT WASHBURN: Do you think it is perfectly safe to let the nurserymen trim before they are inspected?

MR. SUMMERS: I thought it was better to do so. The brown-tail did get by them in two cases; one was a shipment into Illinois; the other one was found after the seedlings had been set out the next spring. We have adopted the policy of going over all seedlings as soon as possible after they are set out.

MR. ENGLE: These conditions differ somewhat from those in my state. There are two of us that inspect. All bundles were opened in our presence and gone over, and passed on to another set of men, who tied them up and took them away, and no trimming was done whatever. Every package was opened and examined, except such varieties as were practically all roots, which we did not open.

THE PRACTICABILITY OF NURSERY QUARANTINE STATIONS

By A. F. CONRADI, *Clemson College, S. C.*

For a number of years we have had laws in the various states to govern interstate shipments of nursery stock. The object of these laws is to protect the respective states against the introduction of certain injurious insects and plant diseases. The laws of most states closely resemble each other as far as the provisions contained therein are concerned, though the rules and regulations governing the various inspectors, vary to some extent.

A mere law is not much of a protection unless the act and the rules and regulations give wide latitude to the inspectors. The efficiency of a law is mostly governed by the inspection force. The writer has found badly infested stock bearing a certificate signed by one of the most conscientious and one of the oldest entomologists in this country. It was never inferred that this was a blunder on the part of that entomologist. It is merely assumed and without hesitation that the official whose name appeared on the certificate had never seen the stock.

Though this consignment was fully covered with the necessary tags and certificates, yet it was so badly infested that the infestation was in evidence by merely glancing at the shipment. This occurred some years ago. Minor cases are coming to our attention from time to time. It is especially discouraging when these shipments are sent into sections of the state where considerable effort has been put forth to eradicate scale.

In South Carolina we have worked hard to eradicate scale from the state and in several instances we have confiscated or returned shipments found at railroad stations. These shipments were properly covered with tags and certificates, but these were certainly no protection to us. It is merely a question as to how frequently such consignments are shipped,—not only into South Carolina, but into other states as well, but which are never seen until the trees have been planted. Of course in a state where a large inspection force is active the number of chances for such stock to reach destination are reduced, but a number of states have not an inspection force sufficiently strong to keep close enough vigilance throughout the state.

Our inspection laws have no value in protecting us against our reliable nurserymen. We need no such protection. They will ship to us nothing but clean and sound stock. It is easy to see for whom these laws are made. Do they serve that purpose sufficiently well?

The writer, with the view of overcoming this difficulty, has for some time advocated the establishment of receiving stations for nursery stock within this state. Such stations may be located in convenient sections and a law passed that all stock coming into the state be shipped to one or another of these stations where the inspector has an opportunity to inspect the same. At any rate the inspection office would then have a method by which stock coming into this state could be checked and recorded.

Under what conditions would such stations be constitutional and would they be practical? The first is a question to be answered by the courts. The writer believes that under certain conditions as those described below that such stations could be economically and efficiently operated. Take South Carolina for example. The main office is at Clemson College in the northwestern part of the state. One entomological field laboratory is located at Marion in the eastern part of the state, another laboratory operating part of the time near Charleston in the southern part of the state. While the second field laboratory is not permanent, it is hoped to make it so. We would then have three convenient locations for such stations.

The amount of nursery stock shipped into South Carolina is not overwhelming and with the present amount of interstate trade, it

would not be very difficult to handle them at such receiving stations. Even where a tremendous amount of stock is shipped into the state, it would not always be necessary to handle every shipment. The inspection office makes as close a study as possible of all outside nurseries, doing business in the state, and these offices are generally well informed as to the reliability of the various nurseries. This information is a very convenient guide in handling interstate shipments. Instead of establishing quarantine stations, were the law amended so that every citizen would be required to notify the state inspection office every time a shipment of nursery stock had arrived, the visiting of the different places throughout the year would no doubt involve a greater expense and loss of time than a system of receiving stations where all stock is systematically inspected. The former would necessitate the employment of county or district inspectors in order to carry it out effectively.

These are merely suggestions. It is difficult to foretell what the efficiency of such a system would be without carrying out the experiment. These suggestions are not intended to burden our reliable and conscientious nurserymen but they are intended for all unscrupulous nursery dealers.

RESULTS OF EXPERIMENTS ON DIPPING TREES AND FUMIGATING PEACH BUDS

By T. B. SYMONS and E. N. CORY, *College Park, Md.*

[Withdrawn for publication elsewhere.]

MR. HEADLEE: I wish to say that in connection with our work against mill insects, extended tests made to determine the formula, which would give the maximum amount of gas in the minimum time, indicated that the one now recommended by the Department of Agriculture (1-1-3) is best.

THE HEALTH OF PLANTS AS RELATED TO INSECTS

By J. B. S. NORTON, *College Park, Md.*

The influence of insects upon plant health is enormous, as is witnessed by the great expenditure of time and money on economic entomology which is devoted mostly to protecting plants against this division of the animal kingdom. In this land of specialization the development of this branch of plant pathology by men specially interested in the insect has, as in the branch of fungous diseases developed