

Resolved, That this Conference urges all Governments and organizations undertaking work of this character to provide the most expert scientific supervision for such work, to include skilled biologists trained in the study of parasitic and predatory forms of life, and to assist, so far as possible, in the creation of a much larger number of such trained men by encouraging the study in the higher educational institutions of the very numerous problems of natural control.

Resolved, further, That Governments and institutions be advised to arrange their permanent stations intended for phyto-pathological and entomological investigations in such a way as to facilitate international exchange of parasites in every possible manner, and to afford to the experts of other countries who may be engaged in exploration work of this character all possible facilities and assistance.

In presenting Dr. Tillyard's valuable paper on "Insects in Relation to the New Zealand Food-supply," and in the course of my comments upon it, I made the following statement, which I desire here to emphasize: "In the control of insect pests the introduction of parasites should not be left to the judgment of private individuals, however highly qualified, or even of any scientific society. It is a matter affecting the whole community, and no action should be permitted in any case until full discussion leads to a consensus of expert opinion on the subject. The whole history of introduction of animal-life in New Zealand teems with examples of well-meant but misguided activity in this direction."

Previous to my departure from Wellington in the beginning of July I asked Dr. Reakes to specify any points on which I might seek special information at the Conference. Some of these matters I was able to look into to some extent.

In regard to the questions contained in the memorandum submitted to the Director of the Fields Division, on the 3rd July, by Mr. R. Waters, Officer in Charge of the Biological Laboratory, I regret to say that not one of these questions arose in the Conference. Entomologists were strongly represented, but neither bacteriologists nor fungologists were represented.

Mr. J. A. Campbell, Director of the Horticulture Division, drew my especial attention to the attitude of the United States in connection with fruit-fly, mealy bug, and plant quarantine, as affecting the Dominion of New Zealand.

I gather that the position in regard to fruit-fly is as follows: The United States authorities, both in Honolulu and California, are apparently now quite satisfied that there is no danger whatever from this pest from New Zealand. I was not able to ascertain whether any definite communication had been received by the authorities in Honolulu from the Head Office in Washington; but Mr. E. M. Ehrhorn, Chief of Division of Plant Inspection in Hawaii, stated that they had the assurance from the New Zealand Government that as far as apple shipments were concerned there was no fear of any fruit-flies.

In regard to mealy bug, I have a letter from Mr. Ehrhorn, dated 20th August, in which he says: "In our letter to the Pan-Pacific traders, dated 27th May, we called their attention to the insufficient certificate issued by the Inspector, Mr. N. J. Adamson, Ettrick, Otago, as it only certifies that the contents of a shipment of 250 cases of apples are 'free from disease.' No mention is made of insect pests. I am glad to know that the Department of Agriculture in New Zealand has refused to accept any fruit for shipment to Honolulu from orchard districts where mealy bug occurs. . . . As the mealy bug gets into the blossom-end of the apples and pears, you can see that its spread is easily accomplished, as nobody eats the core of the fruit, and wherever this is thrown the mealy bug has a chance to get on to grass or shrubs, and in this way get established. We have a record of twenty-four plants on which the mealy bug (*Pseudococcus maritimus*) will thrive. The other species—*P. comstocki*—has a record of infesting some seventeen plants. You can therefore understand why we are so particular about not allowing fruit infested with mealy bugs to enter our territory."

The subject of plant quarantine received a very considerable amount of attention in the Conference, and I was able to place the New Zealand position before interested members. The opinion was expressed and was voiced by Mr. Ehrhorn that the able officer in Auckland who was responsible for the proper inspection of fruit, imported plants, &c., required more efficient support. I was informed that while a very strong and efficient staff was employed at Wellington, that at Auckland was undermanned. I give the opinion for what it is worth. The Honolulu authorities, at any rate, consider that the position at the northern port wants strengthening.

Preservation of Fruit for Transportation.—A very interesting statement on this subject was made by Dr. P. J. S. Cramer, Director of the Experiment Station of Buitenzorg, Java. The method is merely that of dipping the fruit in rubber latex, allowing the rubber film to harden, and then shipping the fruit as ordinary freight without cold storage. Dr. Cramer has shipped fresh strawberries treated in this way, the fruit holding its flavour, form, aroma, and practically the same stage of ripeness from ten to fourteen days. He has shipped latex-dipped ripe mangos and the mangosteen, which is considered the most delicate of all tropical fruits, from Buitenzorg to L'Acclimatization Société, in Paris, where the members proclaimed their arrival in perfect condition. In the course of his experiments he took green bananas and dipped them half their length in the rubber latex. The untreated half of the fruit ripened while the "rubberized" half of the bananas remained green.

Rubber latex is common and cheap in most tropical countries. It can be preserved almost indefinitely by adding ammonium sulphate, which retards coagulation. In fact, tanks of preserved rubber latex have been shipped from the tropics to London and New York for the experimental production of various commercial articles, and it has been suggested that there is a wide field for its utilization in various textile-manufacturing lines. Its utilization as a preservative in the shipment of fruits opens up fascinating possibilities for the fruit-farmer. The thin film of rubber on the surface of the fresh fruit strips off as easily as a glove from the fingers, allowing the normal ripening process to continue.