

The theory of the new method is that the ripening of fruits is an oxidation process depending on free absorption of oxygen and the exhalation of carbon dioxide. The rubber latex coagulates into an airtight envelope which checks both. It also prevents the growth of mould spores and the bacteria of fermentation, so that the ripening fruit is held in a sort of trance, without any change whatever.

It looks as though this method of preserving fruit might get us over our quarantine difficulties. The airtight rubber "skin" asphyxiates insect pests as well as keeping out rot spores and retarding the ripening process. It may become of commercial importance in the shipment of pears, peaches, nectarines, and plums.

I suggest that your Horticulture Department should obtain some of the prepared rubber latex, and institute experiments with perishable New Zealand fruits. Dr. Cramer would, I am sure, give all necessary information on the subject.

Cultivation of Pineapples and Grape-fruit in New Zealand.—During my stay in Maui I was surprised to find that pineapples were cultivated on a vast scale up to as much as 2,000 ft. elevation. The season at the time of my visit was the hottest of the year, the thermometer in Honolulu (Oahu) and in Hilo (Hawaii) not falling below 73° F., and reaching a maximum of 83°. At an elevation of 1,500 ft. in Maui the mercury fell to 65° at night, but did not rise above 76° during the day; at 2,000 ft. the air was fully a degree or more cooler.

The pineapples grow for three years. In planting them the ground is covered with broad bands—about a yard wide—of thick felted paper, in which holes are made, and through which the crowns (or shoots) of the pineapples are placed. The paper prevents the growth of weeds most effectively, and also conserves the moisture of the soil.

I would strongly recommend to your Horticulture Division to experiment with the growth of pineapples in the warmer parts of the North Island. In the territory of Hawaii the summer temperature is not nearly so high as it reaches in North Auckland, Bay of Plenty, or Gisborne. It is, however, remarkably uniform, the difference between the summer and winter temperatures being comparatively very little. There is also a complete immunity from frost. It may be that this is the chief factor in the success of the Hawaiian pineapples. Therefore, in making experiments in New Zealand, it would be necessary to select localities where frost is never experienced. The pineapples in the Hawaiian Islands are all grown on soils rich in iron, of comparatively recent volcanic origin; such soils are common in New Zealand. The plants do not require a great deal of moisture, and are not dependent on irrigation, as sugar-cane is. I cannot help thinking that it will be found feasible to grow and ripen pineapples in the North Island if suitable localities are selected, and at any rate the experiment is worth trying. Information as to the hardiest varieties could be obtained from Mr. Nicoll, of Paia, Maui; while the felted paper could be got from Pan-Pacific Traders (Limited), of Honolulu.

Grape-fruit.—This citrus fruit, which is apparently a cultivated form of *Citrus decumana* (the shaddock), is very extensively grown in California, from whence it is largely imported into Honolulu. The small quantities which come into New Zealand sell at a prohibitive price. There is no reason why this fruit should not be cultivated in the North Island. There is an excellent market for it, and I recommend experimental work with this species also.

SECTION V of the Conference, dealing with Animal Industry, was presided over by Mr. Louis A. Henke, Professor of Agriculture in the University of Hawaii. Though not so numerously attended as some of the other sections, it did very good work, and submitted the following resolution to the General Conference :—

RESOLUTION 28.

Whereas the lack of uniformity in the quarantine regulations of the countries of the Pacific region, and the lack of any quarantine regulations regarding the movement of live-stock and live-stock products in some countries, greatly interfere with the freedom of commerce in these commodities :

Be it *resolved*, That this Conference suggest to the several Governments concerned that quarantine regulations relating to live-stock be established in all Pacific countries, and that a joint commission be appointed to promote uniformity in the quarantine regulations of the countries of the Pacific region.

Dr. Reakes, in his communication of the 3rd July, asked for information on several matters in which his Department was specially concerned, and I have endeavoured to obtain such for him. The following were the matters specified :—

(1.) "What view is now held regarding the actual degree of risk to human health involved by the ingestion of milk contaminated by the presence of the bovine tubercle bacillus as compared with the risk of infection from the tubercular human subject?"

As far as I could ascertain from Professor Henke and others, the majority of opinion on this disputed matter is to the effect that when a cow has tuberculosis of the udder there is a strong probability that bacilli will be found in her milk, and that in this way human beings, and especially children with less resistant power than adults, would be infected. Dr. Henke stated that "whether there is any danger from milk of cows which have tuberculosis but whose udder is apparently free from the disease is an unsettled question, for it is always hard to tell definitely if the udder is entirely free. Certainly it is wholly impossible to tell before a post-mortem is performed, and the tuberculin test does not reveal what part of the body is affected."

The following statistics, taken from the United States Department of Agriculture publication on "Diseases of Cattle," 1923, may be known to Dr. Reakes; they refer to figures supplied by various hospitals :—

"Of 63 children dying of tuberculosis at the Babies' Hospital, 59 cases proved to be human infection and 4 bovine—a percentage of 6·3 for the latter. Of 9 children dying of tuberculosis at the