

Masking of Spike-disease Symptoms in *Santalum album* (Linn.).

DURING the course of disease transmission studies, it was found that certain stocks for long periods did not exhibit the characteristic symptoms of the disease, and were therefore believed to represent disease-resistant varieties. The leaf tissue from such operated and disease-resistant varieties was found non-infective as shown by transmission experiments conducted with the leaf on susceptible stocks. Two such plants on being accidentally injured—in one case by a borer, and by wind in the other, both involving the removal of much foliage—exhibited the characteristic symptoms during the course of 15 days after the accident, with sprouting of the dormant buds. This suggested the possibility of accelerating the manifestation of disease symptoms by defoliation and by light pruning, which has met with great success. Foliage tends to inhibit the external manifestation of the disease symptoms. In one instance the infected stock remained apparently healthy for 417 days and more than doubled its girth

and size during this period ; but on light pruning and defoliation the stock exhibited the symptoms during the course of 16 days, with bursting of the dormant buds. A study of the physiological changes in the composition and reaction of the cell sap induced by defoliation should reveal the true cause of this remarkable phenomenon.

In diseased forest areas, therefore, external appearance of sandal is not the true criterion of its freedom from infection, which, if dormant, manifests itself on pruning the plant. This curious masking of symptoms in the case of sandal appears to be influenced by intense sunshine, and temperature. During this masked period the virus appears to be localised in certain tissues (phloem) of the plant, where it multiplies and exists in a highly virulent form.

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