PLANT PATHOLOGY NOTES : NO. 7
SOUTH AMERICAN LEAF BLIGHT OF RUBBER

By D. Clarkson, Plant Pathology Section, D.P.I., Konedobu

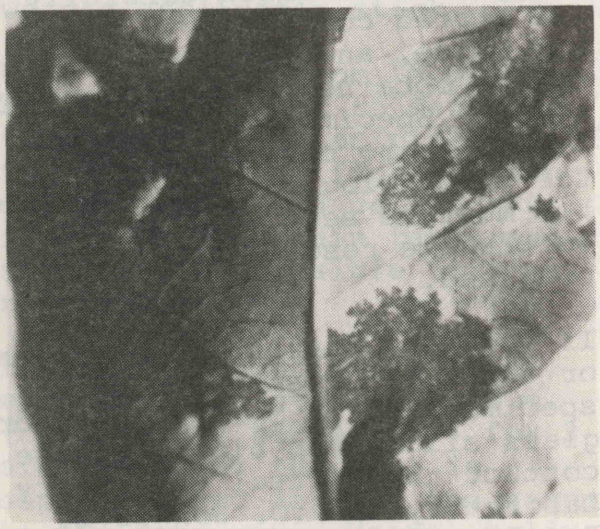
South American Leaf Blight of Rubber (SALB) is a very destructive disease of rubber which is at present found only in Central and South America. The disease is caused by the fungus *Microcyclus ulei*. Although SALB does not occur in Papua New Guinea it is essential that people working in the rubber industry know that it exists and how destructive it can be.

SYMPTOMS

There are two stages of SALB: the primary or conidial stage, and the secondary or perithecial stage.

Primary Stage

This occurs generally on young leaves. Black-brown lesions (spots) are found, mostly on the lower surface. These contain a large number of powdery fungal spores (conidia).



Lesions on a leaf producing spores (conidia)

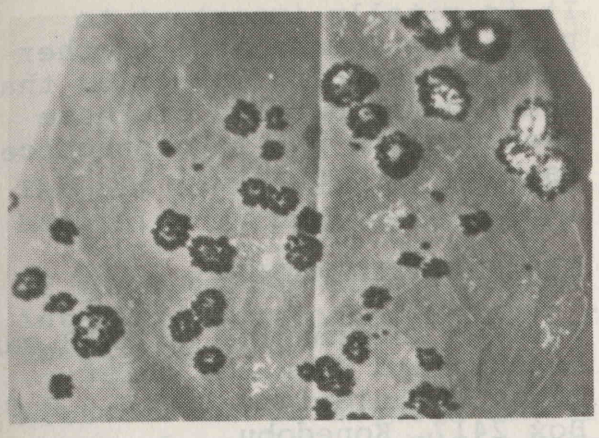
Leaves that are infected while very young will blacken, shrivel and eventually fall. If the leaves survive they will look ragged and have round holes in them.

Infected young leaves

Secondary Stage

This develops on leaves that have survived the primary infection. As the leaves become fully grown, a large number of small, round, black bodies (perithecia) develop around the edges of the old primary stage spots. This development takes place especially on the upper surface of the leaves. The perithecia are hard and stick up above the

surface of the leaf. They can change the feel of the leaf making it rough to touch.



Perithecia on the upper surface of an infected leaf.

CONTROL

Control of SALB using chemicals is a very expensive process, and it does not always work. Chemical control has been used only in nurseries where weekly application of zineb in wet periods is effective. Usually however, resistant material provides the greatest insurance against infection. High resistance from wild populations has now been bred into some of the older Asian commercial clones. Many resistant clones are therefore now available but, as yet, their yields are low.

Susceptible clone (centre) and resistant clones of Hevea.

Selection, testing and breeding against SALB is continuing in Brazil, Guatemala, Liberia, Malaysia and Sri Lanka.

QUARANTINE PRECAUTIONS

Links between natural rubber producing countries in the eastern and western hemispheres, particularly through the exchange of staff, carry the danger of spreading SALB. It is of the highest importance that this danger is made as small as possible and that the disease is confined to tropical Central and South America. The following procedures are recommended, by the Rubber Research Institute of Malaysia, for plantation staff and research workers following visits to any of the rubber growing countries of Central of South America.

1. The visit should be planned so that the return journey to the east is made through Europe or temperate North America.

2. Before leaving the affected area, pockets and footwear should be brushed clean.

3. All used clothing should be washed at a stop-over point in Europe or North America. Shoes should be cleaned again or be disinfected. Other personal belongings, including cameras, brief cases and suitcases should be wiped with disinfectant.

4. Papers and books that cannot be thrown away should be sterilised by ultra-violet radiation. This also applies to all letters and parcels received from rubber plantations in America.

CO-OPERATION

To help to make sure that SALB stays out of the Asian rubber producing countries, the Asso-

ciation of Natural Rubber Producing Countries (A.N.P.R.C.) has formed a technical committee which deals specifically with this disease. This committee will make it easier to maintain close contact between member countries and improve regional and international co-operation. Topics discussed by the committee at a recent meeting in Kuala Lumpur included:

1. The formation of Country Committees for SALB.

2. The standardising of phytosanitary certificates issued by different member countries.

3. Measures regarding the import of plants of the genus *Hevea* from the American tropics.

4. Current SALB Research Programmes.

5. Current disease control measures.

It is vitally important to Papua New Guinea and to other rubber producing countries that the recommendations of these meetings are put into practice as soon as possible.

FURTHER INFORMATION

Further information on SALB can be obtained from the chief Plant Pathologist, D.P.I., P.O. Box 2417, Konedobu.

Copies of this Plant Pathology Note, and of others in the series, are available from Publications Officer, Publications Section, D.P.I., P.O. Box 2417, Konedobu.