

SOME OBSERVATIONS ON THE DEVELOPMENT OF DOWNY MILDEW
PLASMOPARA VITICOLA ON GRAPES

N. Ramanathan and A. Sivapalan
(Dept. of Botany, University of Jaffna)

Downy mildew of grapes caused by *Plasmopara viticola* (de Bary) Berl. & de Toni is one of the serious fungal diseases of grapes (*Vitis vinifera* L.) in all grape growing areas of Sri Lanka. The disease is usually observed from December to March.

SECTION D

Laboratory investigations revealed that the germinating sporangia occur when the leaves are covered by dew. The sporangium germinates producing a single germ tube 18 h after inoculation at 25°C and penetrates the leaves through stomata. After colonisation within the leaves clusters of sporangiophores emerge out through stomata 72 h after inoculation but the infections become visible only on the 5th day after inoculation.

Infections were found to develop better at 20°C and 25°C and at temperatures above 25°C the fungus failed to develop. Infectivity of the fungus was also favoured when the leaf surface was covered by water drops than when the leaf surface was dry.

Although the sporangia are capable of germinating on both surfaces of leaves the germ tubes abort on the upper surface. The 4th, 5th and 6th leaves are found to be more susceptible to this fungus than the other leaves.

The luxurious development of the fungus at low temperatures and when the leaves are covered by dew is in accordance with the field observation that the disease is associated with periods of dew.

This work is supported by a grant from N. R. E. S. A., Sri Lanka (RGB/82/7).