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THE SURVIVAL OF *CERCOSPORA PERSONATA* (Berk. and Curt.)

ELL. & EV., *CERCOSPORA HIBISCI* TRACY AND EARLE.,
AND *CERCOSPORA HENNINGSII* ALLESCH IN THE SOIL

It has been found by earlier workers like Rolden and Querijero (1939) and Hemingway (1954) that mycelium and spores of *Cercospora personata* could remain viable in the soil for a long time and infect the succeeding crop as conditions become favourable. Shanta (1960) observed that *Cercospora personata* survived in the soil on the fallen debris for as long as 22 weeks.

In the present study an attempt was made to determine the survival of *Cercospora hibisci*, *Cercospora henningsii* and *Cercospora personata* under the soil and weather conditions obtained at Vellayani. *Cercospora personata* causes the 'tikka' disease in groundnut while *Cercospora hibisci* and *Cercospora henningsii* cause leaf spots in bhindi and cassava respectively.

Infected leaves of groundnut, bhindi and cassava were subjected to the following treatments. (a) Buried in the soil at a depth of 10 cm. (b) Buried in the soil at a depth of 10 cm, after covering the leaves with wire mesh. (c) Kept exposed on the surface of the soil. Leaf samples were drawn at intervals of one week and incubated in humid chamber for 24 hours for sporulation. They were then shaken in water and the spore suspension was examined under the microscope. The viability of spores was determined by germination studies in water-

It was noted that *Cercospora personata* and *Cercospora hibisci* survived for six weeks, while *Cercospora henningsii* survived for five weeks on infected leaves buried at a depth of 10 cm. The survival rates were more or less the same in the case of infected leaves which were wrapped in wire mesh and buried in the soil. In the case of infected leaves placed on the surface soil, it was found that *Cercospora personata*, *Cercospora hibisci* and *Cercospora henningsii* survived for 17, 16 and 14 weeks respectively. A progressive decrease in the number of viable spores was noted in all the treatments.

It was thus seen that all the three organisms survived for longer periods in infected leaves kept exposed on the soil while they died out faster when buried in the soil. The organisms died out faster in buried tissue, possibly

because of the competition from saprophytic organisms in the soil. The burrial of infected plant residue can thus help in the faster elimination of the pathogen.

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College of Agriculture,
Vellayani, Kerala.

P. KARUNAKARAN
J. SAM RAJ

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