D-41: Occurrence of VAM fungi in some legumes examined and their relation to nodulation

S P Ekanayake, R M K Abeyagoonasekera
(Dept of Botany, Univ of Peradeniya)

The root systems of the Leguminous plants *Centrosema pubescens* Benth., *Delonix regia* (Boj.) Rafin, *Desmodium heterophyllum* (Willd) DC, *Desmodium triflorum* (L) DC., *Leucaena leucacephala* (Lam.) de Wit, *Mimosa invisa* Mart., *Mimosa pudica* L., *Phaseolus aureus* Roxb, *Sesbania sesban* (L.) Merr., and *Tamarindus indica* L., were examined for the occurrence and the intensity of infection of vesicular arbuscular mycorrhizal (VAM) fungi and the observed parameters related to the number of nodules formed by the plant.

Healthy plants were selected, their root systems separated, washed well in water and fixed immediately in formalin acetic acid alcohol mixture. The method of Phillips and Hayman (1970) was used to prepare root segments for microscopic examination of VAM fungi.

Of the plants examined, 8 showed the incidence of VAM fungi. Although afungal mycelium was observed in association with the roots, the presence of VAM fungi in *Tamarindus indica* L. and *Delonix regia* (Boj.) Rafin was questionable since structures resembling vesicles and arbuscules characteristic of VAM fungi were not seen. These 2 legumes were also devoid of nodules.

The intensity of infection of VAM fungi was found to be positively correlated to the numbers of nodules produced by the nodulating plants. These results also show that in certain legumes the presence of more than one symbiotic association is possible.