

PROSPECTS OF INDICATOR INOCULATION TESTS
AS A MEANS OF DIAGNOSING
PLANT VIRUS DISEASES IN DEVELOPING COUNTRIES

Premala Jeyanandarajah
S.N. de S. Seneviratne and Tamara Liyanage
Central Agricultural Research Institute, Gannoruwa.

Virus diseases affecting many crops cultivated in developing countries including seed-transmitted virus contribute substantially to production losses. The detection and identification of such viruses are important aspects in formulating measures to combat them.

While serological techniques and methods requiring sophisticated equipment are widely used in developed countries to obtain information accurately, their adoption widely in developing countries is impractical on account of limitations of facilities, competent staff and funds. In this situation, indicator inoculation tests serve as a very practical and reasonably reliable means of characterising viruses. Their usefulness has been demonstrated using a wide range of host plants in investigating virus diseases of leguminous crops, chilli, passion fruit, papaw, etc. These tests have also been used to advantage in seed health testing to detect virus infections in seeds intended for crop production.

A desirable objective is the increased collaboration of scientists in developing countries, perhaps on a regional basis initially, to list test plants for virus assay, select diagnostic hosts and prepare descriptions of symptoms associated with specific viruses or their strains. A greater emphasis on assembling minimal facilities and staff training can greatly enhance the capability of developing countries to combat virus induced crop losses.