Thesis Title	A Study of Dasheen Mosaic virus on Ornamental Pot-Plants in the *Araceae* family.
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Level of Study	Master of Science in Plant Pest Management Technology
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Year	1997

Abstract

A study of dasheen mosaic virus (DMV) on ornamental pot-plants in Araceae family, was performed. A survey for virus like symptom on Araceae plant was demonstrated in nurseries in and around Bangkok. The plants with symptom were detected for virus particles by Dip Technique and Derrick and Decorate Technique using crude sap and antiserum against DMV under clectron microscope. The flexuous rod particles about 750 nm. in length were seen in crude extract and the particles also serologically related to antiserum against DMV.

Host range study was tested in 4 plant families Chenopodiaceae, Cucurbitaceae, Leguminosae, and Solanaceae by mechanical sap transmission. None of these plants developed symptom after inoculation by infected plant sap. As a result of this, *D.picta* and *Monstera oblique expilata* were selected to do further comparison study for the good source of virus purification. The scheme was demonstrated by using 15% chloroform and carbon tetrachloride (1:1/V:V) as clarified solvent and 8% polyethylene glycol to concentrate the virus, before therse purified virus suspension was spun down at 27,000 rpm for 2 hr., using centrifuge tubes with sucrose solution as 10 % and 20 % supported at the bottom of the tube to avoid and damage of virus particles during ultracentrifugation. The sample from purified virus suspension of *D.picta* gave cleaner virus suspension with 25-40 particles E.M field, where as purified preparation of *Monstera oblique expilata* gained only 10 -25 particles E.M field with

more impurity. Therefore, the sample purified from *D. picta* was used as an antigen to produce antiserum against DMV.

A t wo-month old, female, White Newzealand rabbit was injected by both intramuscular (I/M) and intrasubcutaneous (I/S) methods. The first bleed was done 10 days after the last injection, followed by at 7 day interval, until the tenth bleeding. The quality of antiserum produced was tested by Slide precipitation test, Ouchterlony double agar diffusion test and Enzyme-linked Immunorsorbent Assay (ELISA). The study shown that the ninth bleeding gave the best titre at 1:256, tested by Slide precipitation test with purified virus suspension and at 1:128 tested by Ouchterlony double ager diffusion test. While, ELISA test using infected sap extract from *D. picta,* the best concentration was at 1:1000.