

Begomovirus transmission by mechanical inoculation,  
grafting, determination of host range and  
symptomatology

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**Abstract**

Begomovirus transmission assays were conducted by mechanical inoculation and grafting from five different host plant species, namely, *Zinnia elegans*, *Eclipta prostrata*, *Solanum nigrum*, *Capsicum annuum* and *Ageratum conyzoides* found infected under natural conditions of Pakistan. Solanum yellow leaf curl virus (SYLCV) infecting *Solanum nigrum* was the only one mechanically transmissible to *Nicotiana benthamiana* and *Datura stramonium*. However, all the five were graft transmissible. Biologically viruses were found to be different from one another based on incubation period, symptom expression and host range studies. Two yellow vein viruses, *Eclipta prostrata* yellow vein virus (EPYVV) and *Ageratum* yellow vein virus (AgYVV) produce leaf curl symptoms on alternate host plants but these can be distinguished from each other. Tomato, tobacco and datura proved to be good indicator plants for most of the viruses with a variety of symptoms.

**Key words:** Mechanical inoculation, grafting, Begomovirus, Symptomatology.