GRAFT AND DODDER TRANSMISSION OF JATROPHA MOSAIC VIRUS DISEASE

Sanjay Kumar, Rajeshwari Sharma, A.K. Sharma and Manoj Kumar Sharma

Department of Botany and Microbiology, J.V. College, Baraut (Baghpat) U.P.

Abstract: The plant of *Jatropha curcas L*. suffer from several diseases, among them Jatropha mosaic virus disease is a newly emerging disease that challenges the productivity of a prospective biofuel crop, *Jatropha curcas*. Jatropha mosaic virus(JMV) disease could not be transmitted either through the vector aphids or through mechanically, but disease could be transmitted by grafting from donor *J. curcas* to healthy *J. curcas* and also from *J. gossypiifolia* to *J. gossypiifolia* but not from *J. curcas* to *J. gossypiifolia* and vice versa and the disease could also be transmitted successfully through dodder. 80% of the dodder transmitted *J.curcas* plant developed distorted symptoms within 15 days after inoculation.

Keywords: JMV, Jatropha curcas, Jatropha gossypiifolia, Grafting, Dodder

REFERENCES

Ahmed, M. and Hardwood, R.F. (1973). Studies on whitefly transmitted yellow mosaic of Urd bean (*Phaseolus mungo*). Plant disease reporter, 57 : 800-802.

Appiah, A.S., Amoatey, H.M., Klu, G.Y.P., Afful, N.T., Azu, E. and Owusu, G.K. (2012). Spread of African cassava mosaic virus from cassava (*Manihot esculenta Crantz*) to Physic nut (*Jatropha curcas L.*) in Ghana. Journal of Phytology, 4 (1) : 31-37.

Aswatha Narayana,D.S., Shankarappa, K.S., Govindappa, M.R., Permeela, H.A., Gururaj Rao, M.R. and Rangaswamy, K.T. (2006). Natural occurrence of Jatropha mosaic virus disease In India. Curr. Sci., 95 (In Press).

Bakker, W. (1970). Rice yellow mottle, a mechanically transmissible virus\disease of rice in Kenya Neth. J. Plant patho. 76 : 53-63.

Bird, J. (1957). A whitefly - transmitted mosaic of *Jatropha gossypiifolia*. P.R. agric. exp. Stn. Tech. pap-22.

Chenulu, V.V. and Varma, A. (1988). Virus and virus like diseases of pulse crops commonly grown

in India. In : Pulse crops. (B. Baldev, S. Ramanujam and H.K. Jain Eds.), Oxford and IBH publishing company, New Delhi, pp. 339-370.

Goodman, R.M. (1981). Handbook of Plant Virus infection and comparative Diagnosis, Elsevier/Holland, Amsterdam. Pp. 883-910.

Jones, N. and Miller, J.H. (1992). *Jatropha curcas L*. ; A multipurpose species for problematic sites. Land resources series asia-technical department-world bank, Washington, DC USA. No. 1, pp. 22.

Kaushick, N. (2001). Propagation of *Jatropha curcas* through stem cutting. Journal of non-timber forest products, 8 (3) : 223-226.

Nariani, T.K. (1960). Yellow mosaic of mung (*Phaseolus aureus*), Indian Phyto-Pathology 13 : 24-29.

Simons, J.N. and Coe, D.M. (1958). Transmission of pseudo-curly top virus in florida by Treehopper. Virology, 6: 43-48.

Takeda, Y. (1982). Development study on *Jatropha curcas* (Sabudam) oil as a substitute for diesel engine oil in Thailand. Journal of Agricultural Association, China, 120 : 1-8.