

Research Article

Infectivity of Cowpea Isolate of *Mungbean Yellow Mosaic India Virus* by Agroinoculation

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Abstract

Mungbean yellow mosaic India virus (MYMIV) transmitted by the whitefly *Bemisia tabaci* causes serious economic losses in various parts of the world. Agroinoculation with the cloned components DNA A and DNA B of a non-sap transmissible isolate MYMIV-[IN::Ana:CpMBKA25:04] has been demonstrated here. The cloned components were introduced into the legumes using sprouted seed inoculation method in frenchbean, mungbean (cv. K.851, GM-2-12-24, GM-9907, GM-9908, GM-9922, GM-02-01 and local Delhi cultivar), blackgram and cowpea. Seedling inoculation was carried out in tobacco plants. Cent per cent symptom was seen in frenchbean cv.Sel.9 from seventh day onwards. Average infection on 7th, 14th and 21 day was 40, 60 and 100 per cent, respectively in mungbean cv. K.851. Flecking symptom developed in mungbean cv. GM-2-12-24 and local Delhi cultivar from fourteen day onwards with 40 and 20 per cent infectivity respectively. The plants remained free from infection in mungbean cv. GM-9907, GM-9908, GM-9922, GM-02-01 and cowpea. The seedling inoculated tobacco plants also remained free from infection. Agroinoculated plants with DNA A alone could not produce symptom on any of the plants.

Key words: Agroinoculation, begomovirus, mungbean yellow mosaic India virus

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