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Mapping of Mungbean Yellow Mosaic India Virus (MYMIV) resistance genes and Marker assisted development of MYMIV resistant soybean varieties in India

*Anita Rani**, ICAR- Indian Institute of Soybean Research, Madhya Pradesh, India

Vineet Kumar, ICAR- Indian Institute of Soybean Research, Madhya Pradesh, India

Balwinder Gill, Punjab Agricultural University, Punjab, India

Pushpendra Rathi, G.B. Pant University of Agricultural and Technology, Uttarakhand, India

Shruti Shukla, ICAR- Indian Institute of Soybean Research, Madhya Pradesh, India

R K Singh, Division of Crop Science, Indian Council of Agricultural Research, New Delhi, India

S M Husain, Directorate of Soybean Research, Indaur, Madhya Pradesh, India

Yellow Mosaic Disease (YMD) is a devastating disease of the leguminous crop. Among legumes, soybean is an economically important crop in which YMD causes 15-75% yield loss. This virus is transmitted by the white fly, *Bemisia tabaci* Genn. and possesses bipartite, single stranded, circular DNA genome referred as DNA A and DNA B. MYMIV produces typical yellow and golden mosaic patterns on the leaves of affected plants. Initially symptoms appear as small yellow specks along the veins and then spread over the leaf. In severe infections the entire leaf may become chlorotic. Since 1970s, MYMIV is posing a major threat to Indian soybean cultivation and it is reported to spread throughout India in alarming proportions. YMD caused by MYMIV is one of the major constraints in enhancing the yield of soybean crop in India. None of the dominant varieties of central India, hub of soybean cultivation, is resistant to this virus. Various accessions of *Glycine max* and *Glycine soja* have been reported to be source of YMV resistance genes. PI171443 is widely used accession in development of MYMIV resistant soybean varieties in north plain zone of India. The gene for MYMIV resistance gene was mapped on Chr. 6 closely linked to GMAC7L and Satt 322 in this accession. Duplicate dominant genes also have been mapped in *Glycine soja* on two different chromosomes. The molecular markers linked to these genes are being utilized in marker assisted introgression of MYMIV resistant genes in dominant varieties of soybean in India.