

Differential Sets

Lettuce mosaic virus (LMV) . Lettuce

Lettuce mosaic virus (LMV), member of the genus *Potyvirus*, is a major disease of commercial lettuce crops. LMV is transmitted by seeds and aphids. Resistance is governed by two recessive genes $mo1^1$ and $mo1^2$ which are considered to be either closely linked or allelic and by one dominant gene $Mo2$ (overcome by most LMV isolates). The most common mechanism of resistance is mediated by a slowly multiplication of virus than in susceptible cultivars and a delayed expression of symptom.

The LMV isolates have been classified into four pathotypic groups (I, II, III, IV) on the basis of the behavior of LMV isolates toward identified resistance genes.

		Pathotype →			
		I	II	III	IV
Isolates		LMV-Yar Gr4 Gr5	Ls1 Ls265 LMV-0 LMV-F LMV-W	LMV-1 LMV-9	LMV-E LMV-13 Ls252
Variety	Gene				
Sucreine, Saladin	-	S	S	S	S
Ithaca	Mo_2	R	S	S	S
Capitan, Malika, Mantilia	$mo1^1$	S	R	S	S
Salinas 88	$mo1^2$	S	R	R	S*
Vanguard 75	$mo1^2 Mo_2$	R	R	R	S*

S = susceptible; R = resistant; S*: with LMV-E Salinas 88 shows delayed symptom and Vanguard 75 shows hypersensitivity reaction, but increasing the symptom and finally stunt.

References

Bos, L., Huijberts, N. and C. Cuperus (1994). Further observations on variation of lettuce mosaic virus in relation to lettuce (*Lactuca sativa*), and discussion on resistance terminology. *European Journal of Plant Pathology* 100: 293-314.

Pink, D.A.C., Lot, H. and R. Johnson (1992). Novel pathotypes of lettuce mosaic virus . breakdown of a durable resistance? *Euphytica* 63: 169-174.

Pink, D.A.C., Kostova, D., Walkey, D.G.A. (1992). Differentiation of pathotypes of lettuce mosaic virus. *Plant Pathology* 41:5-12.

Revers, F., Lot, H., Souche, S., Le Gall, O., Candresse, T. and J. DUNEZ (1997). Biological and molecular variability of Lettuce mosaic virus isolates. *Phytopathology* Vol. 87, 4: 397-403.

NOTE: ISF has done its best to provide information that is up-to-date and published in refereed journals, and therefore accepts no liability for the use of this information.