

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 reduced multiplication of virus compared to susceptible varieties. There is also a delayed expression of symptoms in resistant varieties.

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

Differential hosts	Gene	I	II	III	IV
Sucrine*, Saladin	-	S	S	S	S
Ithaca*	<i>Mo2</i>	HR	S	S	S
Capitan*, Malika, Mantilia	<i>mo1</i> ¹	S	HR	S	S
Salinas 88*	<i>mo1</i> ²	S	HR	HR	S**
Vanguard 75*	<i>mo1</i> ² <i>Mo2</i>	HR	HR	HR	S***

S = susceptible; HR = highly resistant;

S**: with LMV-E Salinas 88 shows delayed symptoms

S*** with LMV-E Vanguard 75 shows a hypersensitive reaction followed by severe symptoms (mosaic and stunting)

*differential hosts and isolates that are used by the seed sector

References

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

Protocol

CPVO. See <http://www.cpvo.europa.eu/> for a protocol on disease resistance testing

For more information contact ISF Secretariat at isf@worldseed.org

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