

Differential Sets

Fusarium oxysporum f. sp. *lactucae* (Fol) - Lettuce

Differential host	Fol: 1*	Fol: 2*	Fol: 3	Fol: 4
Patriot*	S	S	S	S
Costa Rica No.4*	HR	S	S	S
Romabella*	HR	HR	S	S
Banchu Red Fire*	S	HR	S	IR

S = susceptible; HR = highly resistant IR = intermediately resistant

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

ISF DRT organized a ring test for validation of races and differentials. Results showed that:

- Races 1 and 2 were validated on the differentials,
- Race 3 requires a aggressive test to express enough symptoms and to provide conform results,
- Race 4 was found non-conform in most laboratories and requires further investigation.

References:

Fujinaga, M., Ogiso, H., Tsuchiya, N. Saito, H. (2001). Physiological specialization of *Fusarium oxysporum* f.sp. *lactucae*, a causal organism of Fusarium root rot of crisp head lettuce in Japan. J.Gen.Plant Pathol. 67:205-206.

Ogiso, H., Fujinaga, M., Saito, H., Takehara, T., Yamanaka, S. (2002). Physiological races and vegetative compatibility groups of *Fusarium oxysporum* f.sp. *lactucae* isolated from crisphead lettuce in Japan. J.Gen.Plant Pathol. 68:292-299.

Fujinaga, M., Ogiso, H., Tsuchiya N., Saito, H., Yamanaka, S., Nozue, M., Kojima M. (2003). Race 3, a new race of *Fusarium oxysporum* f.sp. *lactucae* determined by a differential system with commercial cultivars. J.Gen.Plant Pathol. 69:23-28.

Fujinaga, M., Ogiso, H., Shimohara, H., Tsushima, S., Nishmura, N., Togawa, M., Saito, H., Nozue, M. (2005). Phylogenetic relationships between the lettuce root rot pathogen *Fusarium oxysporum* f.sp. *lactucae* races 1,2 and 3 based on the sequence of the intergenic spacer region of its ribosomal DNA.. J.Gen.Plant Pathol. 71:402-407.

Protocol

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

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

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