

Differential Sets

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

Differential host	Fol: 1*	Fol: 2*	Fol: 3	Fol: 4*
Gisela	S	NT	NT	S
Patriot	S	S	S	IR
Costa Rica No 4	HR	S	S	S
Romabella	HR	HR	S	IR
Banchu Red Fire	S	HR	S	IR
Ballerina	S	NT	NT	IR
Lomeria	S	NT	NT	HR
Palmos	HR	NT	NT	HR

S = susceptible; HR = highly resistant; IR = intermediately resistant; NT = not tested

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

ISF EG DRT organized two ring tests for validation of races and differentials. Results showed that:

- Races 1 and 2 were validated on the differentials
- Race 3: It is important to create optimal test conditions to achieve expected susceptible results.
- Race 4: isolate 04750888 from Gilardi et al. (2017) was selected as representative of type Fol: 4.

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.

Gilardi, G., Franco Ortega, S., van Rijswijk, P. C. J., Ortu, G., Gullino, M. L. and Giribaldi, A. (2017). A new race of *Fusarium oxysporum* f. sp. *lactucae* of lettuce. Plant Pathol. 66, 677-688. Doi: 10.1111/ppa.12616.

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

Disclaimer: The information contained on this paper is for general information purposes only. You should not rely upon this information as a basis for making any business, legal or any other decisions. While we endeavour to keep the information up to date and correct, ISF makes no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability, or availability with respect to the information contained on the paper for any purpose. Any reliance you place on this information is therefore strictly at your own risk.