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Response of An *R* Gene Pyramided Potato Genotype to Infection With *Phytophthora Infestans*

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Introduction: *Phytophthora infestans* is the most important potato disease. It is a hemibiotrophic pathogen, with a high evolution capacity. Resistance breeding is thought to be the most suitable solution. Gene pyramiding is advanced as a solution for late blight disease.

Materials and methods: we used a genotype with 3 *R* genes (*R2*,*R3*, and *R4*). a detached leaf test was performed. We used 2 *P. infestans* isolates I (NL08448) and I' (88133) were kindly sent to us by W.G. Flier, G.B.M. van den Bosch and G.J.T. Kessel from Plant Research International BV, and a mixture of different *P. infestans* isolates (M). In tab.1 are shown the reactions of potato to infection. We perform a differential display technique. For amplification we used a set of decamer primers (Taoutaou et al., 2008).

Results and Discussions: the response of potato to inoculation is shown in tab. 1. The profile of expressed genes is shown in the fig.1 with the primer 70.03. In the compatible interaction the gene expression was suppressed.

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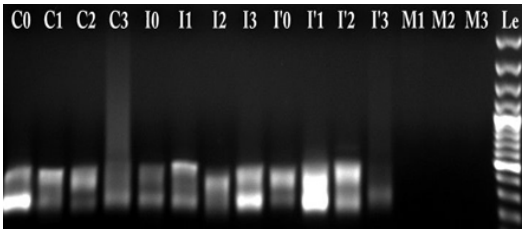

Fig.1 expression profile. C: control, I: isolate I, I': isolate I', M: mixture; 0, 1, 2, 3: days post inoculation

Inoculum/genes	*R2*	*R3*	*R4*	*R2R3R4*
I	S	S	R	R
I'	S	S	S	R
M	S	S	S	S

Tab. 1 reaction of potato to inoculation with different types of inoculum. S: susceptible, R: resistant

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