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RHIZOMANIA: SPREAD OF AND RESEARCH ON RESISTANCE BREAKING BNYVV TETRAD TYPES IN THE NETHERLANDS

ABSTRACT

Since 2004 rhizomania symptoms caused by BNYVV infection are observed in Rz1 (Holly) resistant sugar beet varieties on fields with the BNYVV A-type in the Netherlands. Since then, the number of fields increased gradually, monitored by the Diagnostic Service of the IRS (Institute of Sugar beet Research). All those fields had in common that rhizomania symptoms were found in Rz1 resistant sugar beet varieties. The resistance breaking of the most dominant P25 67-70 amino-acid tetrad variant was confirmed a few years later (Bornemann *et al.*, 2015). This AYPR tetrad of the BNYVV A-type is the most abundant tetrad among the samples in the Diagnostic Service. The degrees of infestation of those fields vary from a small spot to severe infestation of the whole field. Therefore field trials were conducted on fields with infestation of the AYPR variant, from 2011 to 2015, to compare yield levels of varieties with different levels of rhizomania-resistance. Besides the field trials a resistance test in the climate rooms was developed.

The spread of AYPR and other BNYVV A-type tetrads in the Netherlands together with results of field trials on infested fields and the resistance test are presented.
