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Czech J. Genet. Plant Breed.

M.:

Genetic variability of the Czech *Pea enation mosaic virus* isolates

Czech J. Genet. Plant Breed., 50 (2014): 100-104

The *Pea enation mosaic virus* is an example of symbiogenesis of taxonomically unrelated PEMV-1 and PEMV-2 viruses. Partial RNA sequences, PEMV-1 coat protein, PEMV-2 movement protein gene and satellite RNA from seventeen isolates were compared with the aim of enlarging the knowledge of PEMV variability. The isolates showed genetic variability based on the nucleotide sequences in both RNA1 and RNA2, with 98– 94% identity within coat protein gene sequences, and 95– 96% identity within the movement protein. The phylogenetic analyses showed different evolution of both symbiotic viruses and differences in the European isolates. Most of the differences seen were synonymous without changes in the structure of

proteins. The analysis of satellite RNA positive isolates implies a possible correlation between the structure of coat protein gene and presence of RNA3.

Keywords:

coat protein; PEMV-1; PEMV-2;
phylogenetic analysis; satellite RNA

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