

Odporność transgeniczných linii tytoniu na wirus Y ziemniaka (PVY)

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Resistance of transgenic tobacco lines to *Potato Virus Y*

Summary

Potato virus Y (PVY) causes a disease which reduces the quality of raw material as well as the yield. This study on resistance included tobacco transgenic lines belonging to four cultivars modified with three genetic constructions, containing *Lettuce mosaic virus* coat protein gene (LMV CP) and PVY replicase gene used in sense (ROKY1) and antisense (ROKY2) orientation. The plants were inoculated with PVY isolates under greenhouse conditions and tested by DAS-ELISA. The highest effectiveness of antiviral protection was noticed in case of the lines with transgene LMV CP, lower for ROKY2, and the lowest for ROKY1. In following generations, the percentage increase of a number of plants resistant to PVY was observed within the lines containing transgene LMV CP. Cultivar MN 944 showed to be the best genetic background for that transgene, while cultivar AC Gayed for transgene ROKY.

Key words:

transgenic tobacco, *Potato virus Y* (PVY), *Lettuce mosaic virus* coat protein gene, PVY replicase gene

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