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SCREENING FOR HEAT-RESISTANCE OF POLLEN IN PROGENY OF VIRUS-INFECTED TOMATO GENOTYPES

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The reaction of the male gametophyte of virus-infected tomato plants is differentiated under conditions of high temperature. At the same time, information on the heat resistance of the progeny of these genotypes is limited. The aim of the research was to study the effect of high temperature on the variability of the male gametophyte of the progeny of plants infected with TMV (*Tobacco Mosaic Virus*) or TAV (*Tomato Aspermy Virus*).

An assessment of the thermal resistance of the male gametophyte of healthy plants and progeny of virus-infected plants revealed, on average, the highest level of this trait in control plants – 62.5%. The level of the thermal resistance in TMV/TAV progeny was lower, by 13.3% and 22.2 %, respectively. Differences in the length of pollen tubes were also established between the control and experimental variants. In TMV/TAV progeny, as in the case of pollen viability, a decrease in the length of pollen tubes was observed by 32.9% and 28.4%, respectively, compared to the control. This result can probably be determined by the lower growth rate of the pollen tubes in these genotypes.

It has been established that the male gametophyte of control plants and progeny of virus-infected plants of varieties Mihaela, Rufina and the wild species *S. pimpinellifolium* combines a high level of heat resistance of pollen viability and pollen tubes length, which suggests the prospect of their use in further research.

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