

IDENTIFICATION OF *PLUM POX VIRUS* ISOLATES FROM MOLDAVIA REGION, USING PCR/RFLP METHOD

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SUMMARY

This study was conducted to determine the presence of plum pox virus (PPV) (family *Potyviridae*, genus *Potyvirus*) in different regions of Moldavia. The disease mainly affects apricot, plum, and peach. The genus *Potyvirus* was first detected in Bulgaria in 1917; since then, it has spread to most of eastern and central Europe and the Mediterranean basin. In Romania, the PPV is widespread in plum orchards, very limited information about the variability of isolated is known. We collected and investigated twenty PPV samples, who were molecular characterized by targeting (Cter)CP, (Ctre)Nib – (Nter)CP and CI genomic regions with specific PCR markers. RFLP protocol we used distinguished between the two major strains, D and M, based on *Rsa I* polymorphic loci in the (Cter) CP region.

Material and Method: All PPV isolates were collected from field experimental plots of Moldavia areas (Bacau and Vaslui county) based on typical symptoms on leaves. For RNA extraction was used Qiagen One Step Kit, and molecular characterization was confirmed by RT-PCR using pair of primer P1/P2. RFLP method was used to distinguish the D and M strains based on *RsaI* polymorphism located in this genomic section.

Results and Discussions: PPV-infection was detected in all samples. The P1/P2 primers revealed and confirmed the presence of the virus by amplifying the expected 243-bp fragment from the CP gene. Using specific primers, fifteen isolates were identified as PPV-D, five as PPV-M and one revealed the presence of PPV-rec. RFLP analysis confirmed these results by indicating the presences of the *Rsa I* polymorphism in PPV-D strain.

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