

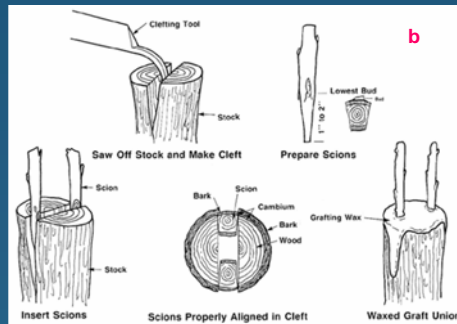
# ALMOND (*Prunus dulcis*, syn. *Amygdalus communis*) AS A HOST OF PLUM POX VIRUS

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The interest to almond (*Prunus dulcis*) growing increased in Bulgaria during the first decade of the 21<sup>st</sup> century. The investigation was realized during the 2007 – 2010 and it aimed to check the susceptibility of the species *Prunus dulcis* to Plum pox virus (PPV).

The research was focused on the susceptibility of almond shoots grafted in the crown of plum tree (*Prunus domestica*) infected by PPV.



## MATERIAL AND METHODS

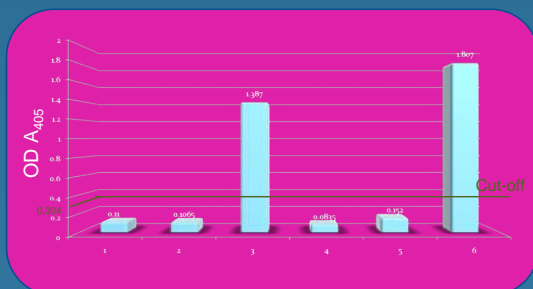
The research was focused on the susceptibility of almond shoots (1a) grafted in the crown of plum tree (*Prunus domestica* L.) (1b; 2) infected by PPV. This tree had a role of a permanent infectious donor for the almond shoots developed after the grafting.

Leaf samples were taken from grafted plum tree, grafted almond shoots, and from the almond mother tree nearby the infected by PPV plum.

The samples were analyzed for PPV infection through routine DAS ELISA (LOEWE GmbH kits) and IC-RT-PCR according to Wetzler *et al.* (1992) with universal PPV primers and the same Anty PPV IgG, used in DAS ELISA tests.

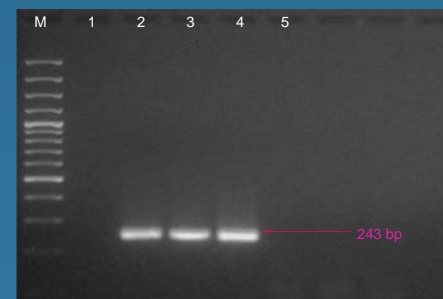
## RESULTS

The symptoms of plum pox were clearly manifested on the leaves of the plum tree (1b, 3). PPV in the infectious donor was confirmed by routine DAS ELISA. In the same time the leaves of almond shoots (1a) remain without symptoms of plum pox and the results obtained by DAS ELISA were negative. PPV was detected in the same almond sample by means of IC-RT-PCR. PPV was not found in the leaf samples taken from the almond mother tree grown in the same area nearby PPV-infected plum trees.



DAS-ELISA of leaf samples

1—leaf from almond mother tree, 2—leaf from almond shoots, 3—leaf of plum tree, 4—buffer control, 5—negative control, 6—positive control



IC-RT-PCR of leaf samples

M-100bp DNA ladder, 1—leaf from almond tree, 2—leaf from almond shoots, 3—leaf from plum tree, 4—positive control, 5—negative control

## CONCLUSION

PPV was detected in the almond shoots sample by the used PCR method as well as in the plum sample. The infectious plum rootstock is capable to transmit PPV to the healthy almond scions. IC-RT-PCR is more sensitive and reliable method than bioassay and serology methods for detection and identification of PPV virus strains.