Sanitary status of stone fruit industry in the Mediterranean countries: Cyprus

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Deciduous fruit trees orchards in Cyprus amount to 9,300 ha, more than a half of it being almond. These tree crops are economically important and a major source of revenue for people living in mountainous areas. In recent years, the cultivation of some early fruiting cultivars has expanded in the plains.

Historically, the cultivation of stone fruit trees, was restricted to the mountainous areas, in very small fields with often only a few trees per grower. Due to this fact, little attention was paid to their sanitary status. The situation has changed rapidly after the expansion of some cultivars in the semimountainous areas and into the plains. Indeed, attention was paid after the discovery of plum pox virus (PPV) in 1982.

PPV is the main problem of stone fruit cultivation rendering some heavily infected areas unsuitable for growing valuable stone fruit cultivars, especially the early fruiting ones. It is not known when PPV was actually introduced into Cyprus or from where, but it is certain that sharka was established for many years. After its detection in 1982 in the western part of the island, a visual orchard survey was done. The main foci of the disease were found to be established partly in semimountainous, but mainly in the mountainous areas of Troodos, where traditionally stone fruits were cultivated. In the semimountainous and plain areas, apricot was mostly affected, whereas in the mountainous areas, it was peach and plum.

The disease was found also in a variety collection of free-and cling-stoned peaches also. A variety collection of apricots and plums, belonging to the Department of Agriculture and established in 1979 from budwood imported from Spain and Italy, was found heavily infected by PPV three years after planting. The cultivars suffering with heavy damages were early varieties of apricot (Tyrinth, Kouron) and yellow flesh peach (Pullards, Canning varieties), and the plum variety "President". On the apricot variety "Tyrinth", severe fruit deformations developed, rendering the fruit crop unmarketable. "Kouron", a very early apricot variety, exhibited severe fruit deformations with internal gum deposits, and fruit drop. The peach variety "Pullards", a very late cultivar, showed severe fruit deformation and

leaves with yellow ring flecking. As for the plums, the variety "President" had defoliation and fruit drop. Very often more than 50% of the crop had fallen on the orchard floor.

After the discovery of PPV attempts were made to control the situation. The first effort was to establish foundation orchards free from PPV. Trees free of PPV were selected by visual examination. Then, beginning in 1986, all selected trees were assayed by ELISA.

In order to supplement the variety collections, with important varieties, lost due to the infection by PPV, new certified materials were introduced and established in insect-proof screenhouses. All trees were tested yearly for PPV and prunus necrotic ringspot virus (PNRSV). From this material, new mother plantations were established in isolated blocks.

Information about other virus diseases occurring in stone fruits was not available. From a few observations appeared that PNRSV was very widespread. This was verified by ELISA. However, prune dwarf virus (PDV) was rarely found.