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# DISEASES OF STONE FRUIT TREES IN KOSOVA

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**SUMMARY** - The stone fruit industry in Kosova is based on large plantations and small orchards. The main crops are plum and cherry trees, but other stone fruit trees are also cultivated. This paper presents the main diseases of stone fruits in Kosova, i.e. *Phyllosticta prunicola*, *Monilinia laxa* and PPV.

**Key words:** Kosova, stone fruit diseases, *Phyllosticta prunicola*, *Monilinia laxa*, PPV

**RESUME** - Au Kosovo, la culture des espèces fruitières à noyau est basée sur de grandes plantations et de petits vergers. Les essences principales sont le prunier et les cerisiers, mais d'autres rosacées à noyau sont également cultivées. Dans le présent travail, on passe en revue les principales maladies qui affectent ces espèces au Kosovo, à savoir *Phyllosticta prunicola*, *Monilinia laxa* et le PPV.

**Mots-clés:** Kosovo, maladies des espèces fruitières à noyau, *Phyllosticta prunicola*, *Monilinia laxa*, PPV

## INTRODUCTION

The fruit tree industry has been developed in Kosova since long time. Total land surface cultivated with fruit crops is about 10,000 ha. The main fruit-growing areas with large plantations are located in Gjakova, Peja, Ferizaj, Prizren, Gjilan and Malisheva. There are also many small private orchards with an average size of nearly 0.5-2 ha.

Sour cherry is the stone fruit species grown specially in the big farms (Gjakova, Gjilan, Ferizaj and Klina). Other stone fruit species are grown in small orchards or in some gardens, near houses.

Over the last ten years, orchards and plantations, which were already unproductive in many cases have been abandoned and destroyed. Actually, stone fruit orchards are affected by infections with weeds, pests and diseases. There is an immediate need for pesticides in the local market for pest and disease control.

Concerning diseases caused by viruses and virus-like agents, there are no studies carried out locally, except some observations for sharka. Concerning fungal diseases, some data from local studies are available.

The objective of this paper is to present the main diseases of stone fruits and the possibility of further studies of viral diseases: spreading, host range and transmission by specific vectors. In particular, data on *Phyllosticta prunicola* and *Monilinia laxa* are reported hereinafter.

## MAIN DISEASES OF STONE FRUITS

***Phyllosticta prunicola*** (Opiz.) Wr.  
(Leaf Holes and Fruit Spots of Apricot)

*Phyllosticta prunicola* has recently been spreading on apricot causing leaf holes and fruit spots in some regions of Kosova. This fungus can infect sweet cherries, sour cherries and plums also (Table 1).

Disease symptoms appear with holes on apricot leaves and with brown lesions on fruits. Average number of lesions is from 7 up to 22 on leaves with an average diameter of 2-7 mm.

The pathogen forms pycnidia on the leaf, fruit lesions and on media. Average size of pycnidia on potato dextrose agar (PDA) is 300.2 x 302.1 µm, whereas the average size of pycnidiospores is 6.3 x 3.1 µm.

*Ph. prunicola* grows well on a number of media. There was an abundant formation of aerial mycelia at constant temperature of 21°C (cumulative growth from 1-12 days) on PDA with a diameter of 51.2 mm. Maximum spore production was obtained on PDA and MA.

***Monilinia laxa*** (Ader. & Ruhl.) Honey ex Whetzel.  
(Blossom and Brown Rot of Stone Fruit)

Symptoms of brown rot of stone fruits (sweet cherries, sour cherries, plums, peaches, apricot) caused by *Monilinia laxa* are found on freshly infected and mummified fruits. Spread of this pathogen during summer is carried out by conidia, which are carried by the wind. After germination under moisture conditions, it penetrates in the plant tissues through wounds made by insects or mechanical injuries. On the basis of local observations, average size of conidia was 23 x 10.3 µm.

Conidia from mummified fruits germinate in high relative humidity conditions (100%) and in the presence of water drop. Conidia of *M. laxa* on peach juice, germinate up to 100% rate after 6 hr of incubation.

### Sharka caused by *Plum pox virus* (PPV)

PPV is widespread in plums and other stone fruit trees in Kosova, causing shrinking and wilting of fruits on the most susceptible plum cultivars ("Pozhega"). Clear-cut symptoms of disease appear also on leaves usually as pale green rings.

Table 1. Diseases of stone fruits in Kosova

Fungal diseases
<i>Armillaria mellea</i> (Armillaria Root Rot, shoestring Root Rot)
<i>Blumeriella jaapii</i> ( <i>Coccomyces hiemalis</i> )(Cherry Leaf Spot)
<i>Monilinia laxa</i> (Blossom and Brown Rot of Stone Fruit)
<i>Polystigma rubrum</i> (Red Leaf Spot of Plum)
<i>Phoma pomorum</i> , <i>Phoma prunicola</i> (Phoma Leaf Spot)
<i>Podosphaera tridactyla</i> (Powdery Mildew of Plum)
<i>Phyllosticta prunicola</i> (Leaf Holes and Fruit Spots of Apricot)
<i>Rosellinia necatrix</i> (Rosellinia Root Rot, Dematophora Root Rot)
<i>Sphaerotheca pannosa</i> (Powdery Mildew of Peach and Roses)
<i>Stigmia carpophila</i> (Shothole-Coryneum Blight)
<i>Taphrina deformans</i> (Leaf Curl of Peach)
<i>Taphrina pruni</i> (Plum Pocket)
<i>Tranzschelia pruni-spinosae</i> (Plum Rust)
<i>Valsa leucostoma</i> (Anamorph: <i>Cytospora leucostoma</i> ) (Leucostoma Canker)
Bacterial diseases
<i>Agrobacterium tumefaciens</i> (Crown Gall of pome fruits and grapevine)
<i>Pseudomonas syringae</i> pv. <i>mors-prunorum</i> (Bacterial Canker and Gummosis of Stone Fruits)
<i>Pseudomonas syringae</i> pv. <i>persicae</i> (Bacterial Blight of Peaches)
Virus diseases
<i>Prunus necrotic ringspot virus</i> (PNRSV)
<i>Plum pox virus</i> (PPV)
Phytoplasma diseases
Peach yellows
Light infection, Medium infection, Heavy infection

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