

SEVERITY OF SYMPTOMS OF EUROPEAN STONE FRUIT YELLOW S ON DIFFERENT APRICOT VARIETIES

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Natural endowments and of climatic conditions of Hungary are suitable for growing apricots. Nowadays total area of apricot production is about 5000 ha. The most important apricot producing centers in Hungary are in Transdanubia, Central Hungary, Northern Hungary, Northern and Southern Great Plain.

In these orchards 'yellows' symptoms, progressive necrosis, decline, and eventual death of the trees are present. Apoplexy is one of the most important, dangerous and inevitable diseases of apricots. The annual decay of a producing orchard is between 5-10% in every year, depending on environmental and growing conditions. Apoplexy is a complex disorder. It is difficult to study and treat because there are more pathogens that can cause the typical symptoms together or alone. Recent studies lead to the conclusion that '*Ca. Phytoplasma prunorum*' - associated with European stone fruit yellows (ESFY) disease – is the primary cause of the disease. Symptoms first appear in the beginning or in the middle of the summer. Disease often starts with only a few branches but the whole tree may become affected as the disease progresses. Infected shoots are typically shorter. Early leaf yellowing or growth of latent buds which produce chlorotic leaves usually accompanied by leaf roll followed by early phylloptosis and total decay of the tree. Fruits on diseased branches develop poorly and may fall prematurely. The disease can affect the flowers as well, which also leads to lack of fruit production.

According to the related literature, the rate of symptoms depends on the differences among the vintages, the varieties and the rootstocks. In this study, these factors were compared. Five varieties ('Göncimagyarkajsz', 'Magyarkajsz', 'Tomcot', 'Mandulakajsz', 'Bergeron') were compared in an apricot orchard (Sóskút, Hungary) with myrobalan (*Prunus cerasifera*), wild apricot and plum intergrafted rootstocks. Monitoring has been carried out for three years (2014-2016). 80 trees per varieties was divided into disease categories according to the severity of the symptoms. The statistical tests were carried out from different perspectives. In the first case the effect of rootstocks to the development of symptoms was evaluated within the cultivars. In the second case the effect of varieties grafted onto the same rootstock was

evaluated to the evolution of the symptoms. The effect of the different years was taken into consideration as well.

Summarizing the results on wild apricot rootstock the three varieties often showed significantly more symptoms. Half of the cases trees on myrobalan rootstock no difference was detected. The category of symptomless trees was significantly higher. Plum intergrafted trees were significantly healthier considering more rootstock-scion combinations over 3 years. 'Mandulakajszí' variety was statistically healthier than other varieties on myrobalan and wild apricot rootstocks. 'Tomcot' and 'Magyarkajszí' varieties with myrobalan rootstock, and plum intergrafted 'Bergeron' trees showed significantly more symptoms of apoplexy compared to other varieties. Based on the results only preliminary conclusions can be stated. In order to confirm the results of the survey monitoring should be continued in the following years.