

## ESTABLISHING THE DEGREE OF ATTACK OF THE FUNGUS THAT PRODUCES LEAF SPOTTING (*CORYNEUM BEIJERINCKII*) OUDEM IN THE PEACH PLANTATION

**Abstract:** The peach is one of the most valuable cultivated fruit species that stands out for its early fruiting, high production potential, superior fruit quality. Peach culture is precocious, it bears fruit from the 2nd to 3rd year after planting, and it has high fertility. The peach, being a demanding species for heat and soil, occupied modest areas, being designated especially as an isolated tree in vineyards. Being resistant to drought, the peach is, along with the apricot, among the few species that do well in the lowland area. In cold, wet soils and exposed to cold currents, the peach suffers, becoming more sensitive to the attack of *Taphrina*, *Sphaelotheca* and *Coryneum*, and in years with cold and wet springs, which follow mild winters, the evolution of pathogens is faster, causing damage big. Research focused on 12 cultivars and 7 hybrids of peach tree and on their response to the attack by some main pathogens. We present research data on the attack by the fungus causing *Coryneum blight* (*Coryneum beijerinckii*) and establish the resistance of the studied cultivars and hybrids. Leaf spotting (*Coryneum beijerinckii*) OUDEM is the disease of all stone fruits, the damages produced consist of spotting of the leaves, spotting and reduced fruit production. The attack manifests itself on leaves, fruits and young shoots. In the months of May and June, circular spots appear on the leaves near which the tissues brown, detach from the rest of the limb and fall and the leaf takes on a wrinkled appearance. Punctiform formations can be observed on the fruits, around which a dark purple-red halo is formed. The spots stand out slightly, which makes the fruits rough to the touch. The fruits are deformed and fall before ripening. The behavior of the cultivars in the presence of the pathogen is given by the resistance of the host plant to the pathogen in correlation with environmental factors. We could see that, compared to peach hybrids, peach cultivars are more resistant to pathogen attack. Analyzing the sensitivity of cultivars depending on pathogen symptomatology, we could point out a decrease of the attack depending on leaf age: young leaves are more attacked than old ones. Attack intensity is the variable that defines cultivar sensitivity. Varieties attacked by the fungus *Coryneum beijerinckii* show medium, good and very good resistance. Among those with very good resistance are the varieties: Norton 609-1, ARK 109, Durbin nectarine, and those with good resistance are the hybrids: B8 R7 T15, D2 R4 T12, HFS R3 P5, Cora, ARK 90 and ARK 107 varieties. Romamer 2, ARK 114, ARK 145, Amay fire, Hardiret, Suntree nectarine and HCR P7, 1+F5 R3 P2 hybrids proved to be less resistant. We could see that, compared to peach hybrids, peach cultivars are more resistant to pathogen attack. Analyzing the sensitivity of cultivars depending on pathogen symptomatology, we could point out a decrease of the attack depending on leaf age: young leaves are more attacked than old ones. Attack intensity is the variable that defines cultivar sensitivity. Varieties attacked by the fungus *Coryneum beijerinckii* show medium, good and very good resistance.

### INTRODUCTION

The peach, being a demanding species for heat and soil, occupied modest areas, being designated especially as an isolated tree in vineyards. Being resistant to drought, the peach is, along with the apricot, among the few species that do well in the plain area, even in the dry steppe, provided that it is provided with sheltered places, because it is sensitive to frost. It also exploits in a particularly profitable way the sloping lands, with favorable exposure, in hilly areas and hills in the vineyards.

### MATERIAL AND METHOD

Observations and determinations regarding the frequency, intensity and degree of attack in peach leaf spotting, moniliosis, or carried out at the nursery at the Experimental Didactic Base of the University of Life Sciences "King Mihai I from Timișoara. The experience includes a number of 12 nectarine peach varieties with linear placement: Romamer 2, ARK 109, ARK 114, ARK 145, ARK 90, Cora, Hardiret, Norton 609 - 1, Durbin nectarine, Suntree nectarine, ARK 107, May fire and 5 hybrids: HCR 3 P 7, D2 R4 T12, HFS R3 P5, B8 R7 T15, 1 + F R3 P2. For observations or analyzed for each tree 300 leaves, 50 shoots (50 x 3 trees) 100 fruits, in three repetitions.

### RESULTS OBTAINED

From the research carried out, under the conditions of the 2021-2022 climatic year, on a number of 17 nectarine peach varieties and hybrids regarding their behavior to leaf spot attack. To establish the way of behavior in field conditions of the nectarine varieties, the scoring based on the The results obtained regarding the degree of attack of the *Coryneum beijerinckii* fungus on nectarine peach varieties are shown in table 1. The degree of attack was very significantly reduced in the varieties ARK 109, ARK 145, Norton 609-1. The behavior of varieties to these diseases is given by the pathogen's mortality, the decrease in the resistance of the host plant, the influence of environmental conditions.

### CONCLUSIONS

The study of the behavior of the *Coryneum beijerinckii* fungus infection reveals the fact that the symptoms appeared only on the leaves, the highest sensitivity to this fungus was shown by the variety ARK 145 followed by the variety May fire and among the hybrids 1 + F5 R3 P2 varieties: Norton 609-1, ARK 109, Durbin nectarine had very good resistance to the attack of leaf spotting (*Coryneum beijerinckii*). The varieties and hybrids: ARK 90, ARK 107, Cora, Hardiret, HFS R3 P5, D2 R4 T12 had good resistance to the The varieties and hybrids: ARK 114, ARK 145, Suntree nectarine, HFS R3 P5, 1 + FS R3 P2 and May fire showed medium resistance to the attack caused by leaf spotting (*Coryneum beijerinckii*).

**Acknowledgement:** text

