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**FAVORABILITY OF PEACH CULTURE EXPRESSED BY THE FUNGUS DEGREE OF ATTACK THAT
 PRODUCES LEAF SPOTTING (*CORYNEUM BEIJERINCKII*) OUDEM**

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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*, *Sphacelotheca* 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 8 cultivars 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 Leaf spotting (*Coryneum beijerinckii*) OUDEM.) is the disease of all stone fruits, the damages produced consist of spotting of the leaves, sot *Coryneum blight* (*Coryneum beijerinckii*) and establish the resistance of the studied cultivars and hybrids. ting 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: Early Redhaven, Hale and those with good resistance, Dixired, Springtime.

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. The peach grows and bears fruit quite well even on sandy soils, especially when a differentiated agricultural technique is applied in terms of planting methods and soil works. In cold, wet soils and exposed to cold currents, the peach suffers, becoming more sensitive to the attack of *Taphrina*, *Sphacelotheca* and *Coryneum*, and in years with cold and wet springs, which follow mild winters, the evolution of pathogens is faster, causing damage big. At the Timișoara Experimental Didactic Base, the varieties proved valuable: Romamer 1, Romamer 2, Regina 2 B, Nectared 2, Nectared 4, Flavortop, A.R.K. 84, N.J.N. 21, N.J.N. 56. Other valuable varieties are: Cora, Delta, Crimsongold, Fantasia. The most widespread actual varieties of peach are: Madeleine (France), Springold (United States of America), Cardinal (United States of America), but it is considered a trend for the expansion of pavias and nectarines, in order to diversify the assortment.

Material and method

Observations and determinations regarding the frequency, intensity and degree of attack in peach leaf spotting, 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 8 peach varieties with linear placement: Champion, Cardinal, Early Redhaven, Springtime, Dixired, Red Top, Michelini, Hale.

or observations or analyzed for each tree 300 leaves, 50 shoots (50 x 3 trees) 100 fruits, in three repetitions.

The interpretation of the results was done by calculating the analysis of the variant, being also analyzed the expression of the character of resistance obtained by correlating the frequency with the intensity of the attack. The observations on the shoots were made during their growth period, shoots being taken from all around the crown of the trees.

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 Early Redhaven, Hale.

Results obtained by sectioning buds were also confirmed by the blooming degree during fruiting phases.

The most resistant buds to frost are the buds situated on the 2nd period of growth and on the branches expected to be more vigorous, which coincides with the results of other researchers.

The varieties Springtime, Dixired showed medium resistance to the attack caused by leaf spotting (*Coryneum beijerinckii*). Frequent risk to frost and hard frost raise important question concerning the distribution per areas and small areas of termophilous species and cultivars.

In 2022, as the buds were totally destroyed, we could monitor the difference between cultivars.

Results and discussions

The degree of attack (GA%) of the *Coryneum beijerinckii* fungus on nectarine peach varieties

Nr	Sociul /hibrid	R I	R II	R III	M e d i a	Media față de Mt.	Dif.	Sem nific atia
1.	Champion	5,5	9,2	8,3	7,6	100	0	-
2.	Cardinal	4,3	2,0	2,06	6,3	82,8	1,3	-
3.	Early Redhaven	2,7	2,1	3,7	3,6	47,3	4,0	xxx
4.	Springtime	3,2	5,2	4,0	4,1	53,9	3,5	xx
5.	Dixired	6,8	8,2	4,8	4,3	56,5	3,3	xx
6.	Red Top	2,4	3,4	7,2	7,2	97,7	0,3	-
7.	Michelini	7,3	6,6	5,5	6,4	84,2	2,1	x
8.	Hale	1,7	5,3	1,2	2,1	27,6	5,5	xxx

The behavior of varetise these diseases is given by the pathogen's mortality, the decrease in the resistance of the host plant, the influence environmental conditions. Compared to hybrids of, peach varieties are more resistant to the attack of pathogens. In 2022, a frost of -5^{0C} on April 8^{rh} surprised the tree in blooming and formed fruit phase, totally effecting generating organs.