The influence of the attack of Taphrina deformans (Berk.) Tul. (peach leaf curl) on the activity of krebs cycle dehydrogenases in different sorts of peach

MANOLIU Al. - Biological Research Institute Iasi CIOBANU Rodica - Universitatea "AL. I. Cuza" Iasi CÂRDEI E. - Station for Pomiculture Miroslava – Iasi

The fungus Taphrina deformans is the agent of peach leaf curl, a worldwide disease of peach potentially devastating to both crop yields and trees longevity. Generally, the pathogen agents produced structural, morphoanatomical, physiological and biochemical modifications in host plant. In this paper we present the influence of the attack of the fungus Taphrina deformans on the activity of Krebs cycle dehydrogenases: glucose-6-phosphate dehydrogenase, α-cetoglutarate dehydrogenase, isocitrate dehydrogenase, malate dehydrogenase, in Redhaven and Redskin sorts of peach from experimental field, Miroslava Station Pomiculture. The determinations was effectued from healthy and infected leaves, beeing to put in evidence the differentiation in connection with the presence or the absence of the attack. The activity of glucoso-6-phosphate dehydrogenase at Redhaven sort had the highest value in healthy leaves, excepting the activity registered in de 2. 06. 2007, when the enzyme had higher values in infected leaves. At Redskin sort the activity of glucoso-6-phosphate dehydrogenase was higher in infected leaves, excepting 14. 05. 2007 and 23. 06. 2007, when the activity was more intense in healthy leaves. The activity of isocitrate dehydrogenase at Redhaven sort had higher values in healthy leaves at 14. 05. 2007, 23. 05. 2007 and 2. 06. 2007, and at 11. 06. 2007, 19. 06. 2007 and 23. 06. 2007 the activity of this enzyme was increasing in infected leaves. At Redskin sort, in healthy leaves, the activity of isocitrate dehydrogenase had higher values at: 14. 05. 2007, 23. 05. 2007, 2. 06. 2007 and smaller values at: 11. 06. 2007, 19. 06. 2007, 23. 06. 2007, comparative with in infected leaves. The activity of α -cetoglutarate dehydrogenase at Redhaven sort was higher in infected leaves at 23. 05. 2007, 2. 06. 2007 and 11. 06. 2007, and in the healthy leaves at 14. 05. 2007, 19. 06. 2007, 23. 06. 2007. At Redskin sort, the activity of this enzyme had higher values in infected leaves excepting 14. 05. 2007 and 19.06.2007, when the values was higher in healthy leaves. The activity of malate dehydrogenase at Redhaven sort was higher in the infected leaves, excepting 14. 05. 2007, when the activity was highest in healthy leaves; at Redskin sort it was observed that the malate dehydrogenase had a more intense activity in the infected leaves, excepting 14. 05. 2007 and 25. 05. 2007, when the activity was higher in healthy leaves.