

Effect of Combined Stress on the O₂ Scavenging Enzyme Activities in Bean and Poplar Leaves

Julia Jakab^a, István Király^{a,*}, Emil Páldi^b and Ferenc Láng^a

^a Department of Plant Physiology, Eötvös Loránd University, H-1445 Budapest, POB 330, Hungary. Fax: 36-1-2660240. E-mail: ikiraly@ludens.elte.hu

^b Agricultural Research Institute of the Hungarian Academy of Sciences, H-2462 Martonvásár, Hungary

* Author for correspondence and reprint requests

Z. Naturforsch. **54c**, 711–717 (1999); received November 28, 1998/March 11, 1999

Wounding, Drought, Elicitation, Catalase, Peroxidase The activity of O₂-scavenging enzymes in bean leaves in different positions and poplar leaves in different leaf storeys was investigated. The effects of wounding, elicitation and drought and the combination of these treatments at various levels were studied.

Distal bean leaves showed higher responsiveness than those opposite the treated leaves. Poplar leaves above the treated ones proved to be more active than those in lower storeys. A comparison of the interaction of different stress treatments revealed both synergistic and antagonistic effects on the oxidant-generating rate and anti-oxidant synthesis of damaged and non-damaged plant tissues.