

# Costs and benefits of hydroxamic acids-related resistance in winter wheat against the bird cherry-oat aphid, *Rhopalosiphum padi* L.

Gianoli, E.

Papp, M.

Niemeyer, H. M.

Estimations of infestation by the bird cherry-oat aphid (*Rhopalosiphum padi*) as well as measurements of grain yield in 26 Hungarian winter wheat cultivars under field conditions were correlated with the concentration of hydroxamic acids (Hx) in seedlings of those cultivars. The significant inverse relationship between infestation ratings and Hx levels in wheat showed that Hx, despite their decreased accumulation at later plant phenological stages, may be able to confer resistance against aphid infestation in the field. Since no significant relationship was found between grain yield and Hx levels in plants it is suggested that Hx accumulation does not impose a cost to the plant in terms of yield. These findings support earlier claims stressing the potential of Hx as breeding targets for aphid resistance in wheat.