

Changes in hydroxamic acid levels of wheat plants induced by aphid feeding

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Seedlings of four wheat cultivars were infested with *Metopolophium dirhodum* nymphs. After aphids had fed for 40 hr on the plants, the levels of the defense metabolite 2,4-dihydroxy-7-methoxy-1,4-benzoxazin-3-one had changed. The changes depended on the cultivar and the portion of the leaf examined. The increase was greater in cultivars Naofen (45.0% at the tip of the leaf, 96.2% at the base where aphids were feeding) and Quilafen (14.7 and 35.8% respectively). The increase was not significant in cultivars Huenufen and Sonka. A simple and sensitive high performance liquid chromatographic method is described for the quantitation of the above benzoxazinone and its demethoxylated analogue using small amounts of plant tissue. © 1989.