

Genetic and physiological factors influencing ground ivy (*Glechoma hederacea* L.) control with 2,4-D. (C05-kohler105447-Oral)

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Abstract:

Ground ivy is a weed commonly found in turf sites. A recent survey of lawn care professionals suggests ground ivy populations respond differently to herbicide application. This study was conducted to determine whether genotypes of ground ivy respond differently to 2,4-D application. Ground ivy was collected from populations at eight locations in the United States and one location in Canada. Genotypes within a population were identified by RAPD analysis and were found to vary in their response to postemergence 2,4-D application. Among populations the OH population was 1.7 times more susceptible to 2,4-D than the NE population. Response differences were maintained between the OH and NE populations when roots were exposed to 2,4-D in solution culture. The addition of an adjuvant to postemergence 2,4-D applications had no effect on injury response of the two populations when compared to 2,4-D alone. These results showed the differential response within and among populations of ground ivy to application of 2,4-D was not due to differential 2,4-D absorption. 2,4-D-resistant ground ivy biotypes contribute to inconsistent ground ivy control.

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