

Mass Spectra of Pesticides with Retention Indices

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Article

Persistence, distribution and dislodgeable residues of 2, 4-d following its application to turfgrass

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Abstract

In growth room studies, total recoverable 2, 4-D residues on or in turfgrass (Kentucky bluegrass, *Poa pratensis*) declined from 92% of that originally applied, to less than 66% by day 15. Although a high proportion of the applied chemical remained associated with the leaf surface under growth room conditions, only 10% was dislodged by vigorous mechanical wiping of the leaf surfaces with moistened cheese-cloth. In field studies with 1 kg acid equivalent (a.e.) ha⁻¹, less than 5% of the chemical originally applied could be dislodged with a cheese-cloth wipe at day 0. Disappearance of dislodgeable residues was very rapid. Less than 0.01% of the applied chemical was dislodgeable after 1 day in turf that received 18 mm of rainfall 1 h after spraying. Residues in turfgrass that received no rainfall required 7 days to dissipate to the same level. In a study in which the clippings were not removed, the disappearance of dislodgeable residues, when the turf was mowed at 3, 7, and 11 days after application, was nearly as rapid as in unmowed turf. In turf treated with 2.24 kg a.e. ha⁻¹ of liquid or granular formulations, dislodgeable residues were less than 1% by days 5 and 3, respectively.

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