Sustainable management of slugs in commercial fields: assessing the potential for targeting control measures

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Abstract

Slug damage to cereal crops in the UK caused primarily by the grey field slug (Deroceras reticulatum) is of increasing concern to farmers following removal of methiocarb from the market and stewardship guidelines introduced for metaldehyde. This study assesses whether the discontinuous (patchy) distribution of slugs can be exploited by targeting control measures only at areas of fields with high slug densities, reducing the amount of pesticide used. Grey field slug numbers and crop damage were assessed throughout a growing season at spatially referenced points on a square grid in five cereal fields. The location of patches with high slug densities were found to be stable where populations were sufficiently large to allow detection using refuge traps. No consistent correlation between post-emergence plant damage and slug numbers within patches was recorded. It was concluded that although slug patches were sufficiently stable in time and space to support targeting of control measures, damage assessment may not offer a viable method of defining current location of patches.

Keywords: *Deroceras reticulatum*, discontinuous distribution, patch stability, damage, sustainable molluscicide use

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