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Cultural controls

Definitions

Cultural controls are those management activities that the farmer can choose to carry out that make the environment unfavourable to one or more pests. These activities may not be primarily to control pests (for example planting trees). They may involve making the habitat better for natural enemies of pests, so that there is better biological control, or making the habitat worse for the pest (for example less food or shelter).

Cultural control options can be the most powerful tool that a farmer has to deal with some pests, and the section on 'Factors that increase pest pressure' (in Chapter 3) demonstrates how cultural factors can have significant effects. Pimental (1993) gives an example from the USA where changing rotation practices in corn production was responsible for an increase in losses to pests from 3.5 per cent to 12 per cent despite a 1000-fold increase in pesticide applications. The change from conventional tillage to stubble-retained, minimum tillage is also associated with increased problems with establishment pests such as slugs and wireworms (Stinner and House 1990). These examples illustrate how management methods can have major influences on pest populations, but in an undesirable way. Ideally, cultural controls use management methods such that pest populations are reduced.

The use of some cultural controls is not universally beneficial. For example providing nectar sources for beneficial insects may also provide nectar sources for pests. Rotations that include legumes can massively increase problems with whitefringed weevil (*Naupactus leucoloma*), but, conversely, taking the legume out