

PESTICIDES AND FIELD MARGINS



Introduction

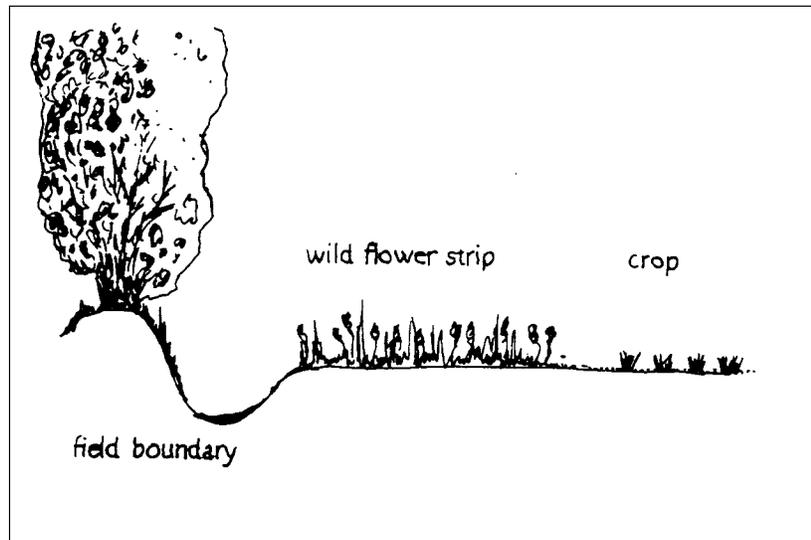
Field margins are often the subject of pesticide application. Many farmers regularly spray out sterile strips between the crop and the field boundary, or spray hedge bottoms to prevent annual weeds invading the crop. However, these methods have been shown to be relatively unsuccessful as ways of controlling weeds and such extensive application of pesticides can be damaging to the environment.

Grass boundary strips

The use of a grass or wild flower strip between the crop and field boundary, however, can help to achieve a field margin that is both agriculturally and environmentally valuable. Although annual weeds can often be controlled by appropriate mowing regimes, perennials such as docks, thistles and nettles cannot. With careful application, herbicides can be used to remove unwanted species, while leaving those that the farmer wishes to retain unharmed.

Herbicides in boundary strip management

There are three basic options for herbicide use on boundary strips.



1. Destroy all the vegetation and recreate the strip, either with natural regeneration or sown margins.

2. Kill some or all of the grass species whilst leaving the broad-leaved plants.

3. Kill some or all of the broad-leaved species leaving the grasses.

However, the choice of herbicide needs to be carefully checked to ensure that it is suitable for use in the particular circumstances.

Herbicide types

Herbicides fall into two broad categories:

- **Total herbicides**, (such as glyphosate). These

completely clear the targeted area of vegetation, regardless of the species present. Some leave no residue in the soil and so planting can follow immediately after spraying, others cause a chemical residue to remain in the soil which may mean some species should not be planted immediately after spraying.

- **Selective herbicides**. These can be divided into two broad types: **selective grass herbicides**, which kill grasses but not broad-

leaved species and **selective broadleaf herbicides** which kill broad-leaved plants but not grasses.

Choosing a suitable herbicide

Herbicides can be selective through the choice of:

- **broadleaf or grass herbicide**
- **application method**, e.g. rope wick applicators can select only those plants of a certain height
- **dose**, e.g. some plants will be safe at 0.5 litres per hectare, but destroyed at 0.75 litres
- **timing** of the application, e.g. Starane is selective for cleavers, but is also damaging to hedges if sprayed when in leaf and has some effect on broad leaved plants. However, it can be used to remove cleavers in early spring before the hedges have come into leaf.

The most appropriate choice of herbicide and application will depend on the individual field margin and the management objectives of the farmer. **Expert advice must therefore be sought** to ensure that the management is suitable.

Herbicide use

What is killed by the herbicide and what remains unharmed will depend on:-

- the **dose** of the herbicide
- the **coverage** of the target species
- the **time** of year
- the **size** of both target and non-target plants
- the **age** of both target and non-target plants
- the **accuracy** of the application to hit only the specified target by using a range of water volumes pressures and surfactants.

Some points to consider

- By law, some herbicides cannot be used within 6m of a source of water. Since field margins are often next to ditches, this is a very important consideration.
- Some herbicides are damaging to hedgerow trees throughout the year, some are not damaging at all and some are only damaging when the trees are in leaf.
- Some non-target species will only remain unharmed if they are above a certain size or age.

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Further Information