

---

## Information and advice note

Updated Jan 2007

For further info, contact Advisory dept, Lodge



# Rush management

---

## **Summary**

- If rush cover exceeds more than one-third of a field's area, its value to breeding waders is reduced.
- There are a number of options available to reduce rush infestations.
- Good sward husbandry reduces opportunities for rush establishment.

## **Wildlife use**

Damp grassland on farmland is a very important breeding habitat for lapwings, curlews, redshanks, snipe, reed buntings and a number of other ground nesting birds. Rushes are often a natural component of such grassland. However, certain species of rush can infest a field to such an extent that waders will be put off breeding in otherwise excellent habitat. Rushes can become particularly prevalent if fields are neglected or the sward is broken through poaching or reseeding. Exposed soil allows rush seeds in the seed bank the chance to establish.

Waders require variety in the sward structure. Taller areas provide cover for concealing nests and chicks while shorter areas are favoured for feeding. In fields with little plant diversity, rushes may be the only taller vegetation present, making them an important feature of the habitat. However, rushes are not essential for breeding waders. The required variations in sward structure may be provided by general plant diversity and a suitable grazing regime.

If rushes become dense, then the field will lack shorter areas for feeding and have a less open aspect. As a general guide, once rush cover exceeds more than one-third of a field's area, its value for breeding waders is reduced. Lapwings, which need good all-round vision, will be put off at lower levels of infestation than curlew and snipe. As well as reducing a field's value to waders, rush infestation will significantly reduce the grazing value of a field.

## ***Practical management***

There are over twenty species of rush in the UK, some of which can be of particular ecological importance. Four species that can be invasive and troublesome on farmland are the tussock-forming soft and hard rushes, and the creeping rushes: articulated and sharp-flowered rush. Perennials of damp and waterlogged fields, these rushes spread through rhizomes and prolific seeding (13000 seeds/flower head), making them rapid colonisers of disturbed habitat. Rushes are tolerant of a wide pH range (e.g. soft rush 3-7, articulated rush 4.5-9) and moderately tolerant of annual cutting, grazing and trampling. Creeping rushes die back in winter and will be eaten more readily by stock than the tussock rushes making them easier to control by grazing. They are also less tolerant of cutting, being readily controlled by a single late summer cut.

Deciding on whether management should be carried out and the most appropriate method will be influenced by:

- Site objectives
- Botanical diversity of the sward
- Feasibility of different options due to the sites wetness and topography
- Relative costs

## **Re-seeding**

There may be a temptation to cultivate the field and start with a new sward, particularly where there is little botanical interest in the existing grassland. However, the ploughing and reseeded of damp grassland in the past has been the catalyst for rush infestation in many fields. Establishment of the sown sward is slow in an unfavourable environment, offering the opportunity for the millions of rush seeds in the seed bank to establish. Attempting another reseed is likely to incur the same problems. Cultivations associated with reseeded may also be damaging to archaeological features.

## **Cutting**

Cutting rushes after the last wader chicks have fledged is an effective first step in managing rushes. The earliest timing will depend on the birds present. Snipe are the latest to breed, but should have fledged by August. Removing cuttings by baling or some other method is desirable, particularly where a lot of vegetation has been cut. Cuttings can mulch down to create new niches for rush regeneration.

Cut rushes as low as possible for the best results. Drum mowers achieve a very low cut, but more robust machinery such as flail mowers will reduce wear in rough terrain. When cutting rushes it is important not to cut too low and scalp the sward, as this will stimulate germination of the seed bank. Leave some of the vegetation uncut around scrapes and very wet areas. A single cut will have little impact on rushes and should be followed by one or a combination of the below:

## **Cutting**

Cutting rushes again around four to eight weeks after the first cut will help reduce rush cover in the following year.

## **Grazing**

In some circumstances, a single cut followed by grazing may be sufficient. Creeping rushes are more readily grazed than tussock rushes. Cattle are generally better than sheep at suppressing rushes. Stock should not be held on fields after they have grazed off non-rush vegetation. As rushes have low nutritional value, stock will lose condition. It also increases the likelihood of poaching.

## **Herbicides**

Herbicides are perhaps best used when restorative measures are required in heavily rush-infested fields. MCPA and Glyphosate are two approved chemicals very effective in managing rushes. However, both are broad-spectrum herbicides that will also kill other non-target plants. MCPA kills many broad-leaved plants while glyphosate is a non-selective herbicide, destroying all vegetation in the sward.

Boom spraying MCPA can be effective in managing rushes. However, this method should only be carried out where there is no botanical interest in the sward. It is also damaging to aquatic habitats. A more appropriate method of applying herbicide is through a contact applicator, such as a weed wiper. There are a variety of designs now available. Advantages of weed wipers include:

- Targeted application of chemical avoids aquatic habitats and non-target vegetation.
- Low volume of herbicide and water used.
- Can be towed with a quad bike, reducing poaching in wet areas
- No spray drift, allowing large working window and safer application.

A significant height differential is required between the rushes and surrounding vegetation so that herbicide can be easily applied to rushes without killing non-target vegetation. This is best achieved by grazing the field quite heavily prior to weed wiping. Mature rushes can be weed wiped, but rush re-growth after cutting is more susceptible to herbicide. As with all pesticides, the label should be read carefully before use.

On large tussocks, the weed wiper may not make contact with the “underside” of the tussock requiring a second application. However, if insufficient time is allowed for the chemical to dry, herbicide may get onto machinery and spread onto the grassland. An experienced operator is essential on species-rich sites to avoid non-target vegetation.

## **Ongoing management**

Ongoing management should be based on careful sward management that avoids poaching and permanently saturated soil.