giving nature a home

Information note:
Rush management

Summary

- Dense infestations of rush reduce a field's value for breeding waders
- As a rough guide, rush management should be considered when infestations cover more than one-third of a field's area
- Good sward husbandry reduces opportunities for rush establishment

Wildlife use

Damp grassland on farmland is the main breeding habitat for wading birds such as lapwing, curlew, redshank and snipe. Rushes are often a natural component of such grassland. However, certain species of rush can form extensive dense stands, particularly when fields are poached or neglected. When this happens, waders can be put off breeding in otherwise suitable habitat.

Breeding waders generally require a mixture of tall vegetation to help camouflage nests and chicks, and shorter vegetation for feeding. If rush infestations become very dense, they reduce the extent of short open vegetation for feeding and also the ability of nesting birds to spot approaching danger early.

Rushes can help provide taller vegetation, but they are not essential: an extensive grazing regime that maintains some taller vegetation will be more critical.

As a general guide, management should be considered when infestations cover more than one-third of a field's area. Lapwings, which need good all-round vision, are put off breeding at lower levels of infestation than curlew and snipe. As well as reducing a field's value to waders, rush infestation significantly reduces the grazing value of a field.

Rush management has opened up large areas of a rush dominated field, with resulting increases in breeding waders

Practical management

There are over twenty species of rush in the UK, some of which are of particular ecological importance. Four species that can be invasive and troublesome on farmland are two tussock-forming rushes: soft and hard rush; and two creeping rushes: articulated and sharp-flowered rush. Perennials of damp and waterlogged fields, these rushes spread though rhizomes and prolific seeding (13,000 seeds/ flower head), making them rapid colonisers of disturbed habitat. Rushes are tolerant of a wide pH range (e.g. soft rush 3 to 7, articulated rush 4.5 to 9) and moderately tolerant of annual cutting, grazing and trampling.

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

- Site objectives eg priority species using the field, how it fits in with the farming system.
- Botanical diversity of the sward
- Feasibility of different options due to the sites wetness and topography
- Relative costs

Cutting

Creeping rushes are particularly susceptible to cutting and can be readily controlled by a single late summer cut. Tussock forming species are more tolerant of cutting, and need to be cut a second, or even third time in the same season to make much impact (herbicides are likely to be better option for these species). The earliest timing for cutting will depend on the birds present. Snipe are generally the latest wading bird to breed, but should have fledged by August. Removing cuttings from the field is desirable, particularly where there is a lot of cut vegetation, as cuttings can mulch down to create new niches for rushes to regenerate.

Cut rushes as low as possible for the best results. Drum mowers achieve a very low cut, but on rough terrain, more robust machinery eg flail mowers will be necessary. Try to avoid scalping the sward, as this will stimulate rush germination in the soil seed bank. Leave vegetation uncut in wet areas rather than poach the ground.

Grazing

Creeping rushes die back in winter and will be eaten more readily by stock than the tussock rushes. In some circumstances, a single cut followed by grazing may be sufficient to control creeping rushes. Cattle and hardy pony types are generally better than sheep at suppressing rushes. Stock should not be held on fields with little but rush to eat as they low nutritional value. It is important to avoid poaching damage in wet rush-prone land as rushes are quick to colonise bare ground.

Herbicides

MCPA and glyphosate are two approved chemicals very effective in managing rushes. However, both are broad-spectrum herbicides that kill non-target plants. MCPA kills many broad-leafed plants while glyphosate destroys all vegetation.

One of various weed wipers on the market

Boom spraying MCPA can be effective in managing rushes, but this method is not appropriate where there is valuable plant diversity in sward. MCPA is also damaging to aquatic habitats, so great care is needed with this application method.

A more appropriate method of applying both herbicides is through a contact applicator, such as a weed wiper. There are a variety of

designs 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 other vegetation to prevent herbicide contact with non-target vegetation. This is best achieved by grazing the field heavily just prior to weed wiping. Mature rushes can be weed wiped, but the weed wiper may not make contact with the 'underside' of large tussocks, requiring repeat application. An experienced operator is essential on plant-rich sites to avoid non-target vegetation – such as herbicide getting onto the wheels. Young rush re-growth after cutting is easier to weed wipe and more susceptible to herbicide, so cutting is a worthwhile first step in dense stands. As with all pesticides, the label should be read carefully before use.

Re-seeding

There may be a temptation to cultivate a heavily rush infested field and start with a new sward, particularly where there is little botanical interest in the existing grassland. However, the ploughing and reseeding of wet 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 soil seed bank to establish. Attempting another reseed is likely to incur the same problems. It will be better to encourage a dense, permanent sward that inhibits the establishment of rushes.

Ongoing management

Ongoing management should be based on sward management that avoids poaching and tackles rush before dense infestation develops.

Contact us

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