

Field Lab Notes: Cutting Rushes

Managing Rushes Without Chemicals



Cutting Rushes

The Managing Rushes without Chemicals Field Lab is running over multiple locations throughout Scotland to find out the best ways that rushes can be managed. It aims to:

- **Improve productivity** (carry more livestock and produce more silage or hay)
- **Invest in grassland for long-term production** (reduce the costs associated with reseeding and short-term weed control measures)
- **Improve wading bird habitat where appropriate** (improve biodiversity, and potentially provide an additional source of income as part of an agri-environmental scheme)

Cutting is a crucial element of rush control that has been a topic at all our meetings. This report describes the different types of cutting, as well as different cutting strategies. Cutting should be carried out alongside the grassland management essentials of drainage, soil structure, soil pH, and soil fertility that are all needed to reduce rushes in the long term.

Cutting will:

- Prevent rush plants from setting and spreading seed
- Allow light to get into the sward, giving more productive grasses and clover a chance to grow and compete
- Make spreading lime and applying nutrients much easier

Toppers and mowers

Rushes can be cut using a topper or a mower. The type of cutting equipment you choose will depend on several things, including availability, budget, how level or rough a field is, how bad the rushes are, and what machinery you already have. You don't have to buy cutting equipment – it should be available for hire through co-operatives like the machinery ring. For areas that are wetter, smaller, or less accessible, smaller machinery pulled by a quad bike will be a better option than a topper or mower pulled by a tractor.

Disc mowers tend to work better on flatter ground, and where there are fewer rushes. Flail mowers and rotary blade toppers are more effective on rougher ground, and where there are more rushes. They will mulch the cuttings, and can use more power (and so cost more).



Disc mower at work on a lighter infestation



Topping demo at a Field Lab meeting

Cutting and grazing

We found that tight grazing, both before and after cutting, was a good way of controlling young rush plants that emerged – provided there aren't too many. Cattle are better than sheep: they are less selective grazers, and so are more likely to eat the young rush plants. We also found that trampling by grazing cattle helped break up rush root clumps, which helped the grass and clover in the sward get some space and light, and compete with the rushes. This



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was best in drier conditions: heavy stocking, particularly with cattle, in wet conditions will lead to poaching, and could make your rush problem worse.

Cutting and leaving

If the amount of rushes in your field is not too bad, then rushes that have been cut can be left to rot into the ground as a lower cost option than removing. A flail mower is a good option for cutting and leaving, as it chops and mulches the stems, and leaves fewer clumps. If there are a lot of rushes in the field, then leaving cut rushes on the surface will form a thick mulch. This can smother the grass and clover underneath, making them less competitive, with the counter-productive effect that rush growth is encouraged.



Cutting, baling, and removing

Removing cut rushes (especially when there are a lot) allows light and air into the sward, and helps dry the soil out. Cutting closer to the ground, if possible and practical, will help the grasses and clover in the sward compete with the rushes. Removing cut rushes will also remove any rush seeds that have set, which could be an issue if your field is part of an agri-environment scheme with cutting date restrictions.

Cut rushes can provide good bedding. Be aware that if the rushes had already set seed by the time they were cut, there is a good chance that the resulting livestock manure will contain viable seeds that could germinate when the manure is spread on land, and create a rush problem somewhere else.

Timing

The field lab groups identified two key timings for topping: early summer and mid-winter. Cutting in the summer should prevent the rushes from setting seed. Cutting in the winter when the ground is frozen (by a heavy frost) can let machinery get on without damaging the soil, and will also promote winter kill of cut rush stems. One group found that a flail mower was better than a rotary mower, as it opened up the stems more to frost damage. Another group found that topping with dual wheels on both the back and front of the tractor minimised soil damage when it was wet.



Timing is also important for wildlife. Later summer cutting allows grasses and flowers to set seed, helping to maintain a diverse, species-rich sward of grass, herbs, and flowers. Later summer cutting is also better for wading birds, as they nest on the ground from early to mid-summer.

The wading bird options in AECS not allow cutting from April – August. Some field lab participants reported that they successfully managed to reduce rushes by topping outwith this period.

Conclusion

Cutting is a really important part of any rush management strategy. Doing it at the right time will prevent rush plants from seeding, allow grass and clover to compete, and when done repeatedly over multiple seasons can exhaust rush plants and deplete their root systems. When carried out with the grassland management essentials of drainage, soil structure, soil pH, and soil fertility, cutting can dramatically reduce heavy rush infestations.

