

Field Lab Notes: Seed Mixtures

Managing Rushes Without Chemicals



Grass seed mixtures

The Managing Rushes without Chemicals Field Lab is running over several 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)

Grass seed mixes have been a popular topic at the field lab meetings. This report details the grass and clover species suitable for more marginal land (prone to rushes). Most of the species below are more persistent, and suitable for a longer term ley. Before reseeding it is important that the grassland management essentials of drainage, soil structure, pH, and soil nutrient status are addressed, to improve the success of the reseed.

Reseeding

Reseeding is carried out to improve productivity. Highly productive grass and clover species are not as persistent, and so may be killed out in more marginal situations. This allows weeds such as rushes to establish, ultimately decreasing productivity. This is why highly productive species are not described below.

Grass and clover species



Perennial ryegrass (*Lolium perenne*)



Timothy (*Phleum pratense*)



Rough-stalked meadowgrass (*Poa trivialis*)

Perennial ryegrass

A major component of most seed mixtures, it has a big seed and establishes quickly. Varieties are categorised according to heading date and ploidy (i.e. tetraploid or diploid). Later heading varieties and diploids are more persistent but less productive; earlier heading varieties and tetraploids are less persistent but more productive. In marginal situations late and intermediate heading diploid varieties are more suitable.



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Timothy

A nutritious and highly palatable grass well adapted to moist soils with high organic matter. Its high palatability can lead it to being selectively grazed out by sheep at high stocking rates.

Rough-stalked meadowgrass

Suitable for damp conditions, it can also improve sward density. It may outcompete more productive grass species, and so should only be considered for poorer, wetter, growing conditions.



Meadow fescue (*Festuca pratensis*)



White clover (*Trifolium repens*)



Alsike clover (*Trifolium hybridum*)

Meadow fescue

Slow to establish, and so can be competed out, if included in a mix with other species that establish very easily (i.e. productive ryegrasses). Like Timothy, it is suitable for damp conditions.

White clover

Very palatable with a high feed value for livestock. Varieties are categorised by leaf size into small-, medium-, and large-leaved varieties. Small-leaved varieties are the most persistent. Including medium-leaved varieties in a mix will increase productivity. Clover fixes nitrogen, boosting the growth of companion grasses. Maintaining phosphate and potash at moderate status is important to maximise clover productivity and nitrogen fixation.

Alsike clover

Suited to wet, acidic soil. It is not persistent and will only last for a couple of years. If alsike clover is included in a long-term sward then it should be oversown every few years.

Conclusion

A persistent seed mix with the most appropriate varieties should be used when reseeding, and a reseed should ideally be carried out in the spring, in suitable conditions. The grassland management essentials of drainage, soil structure, pH, and soil nutrient status must be addressed before reseeding.

