

CREATING SPECIES-RICH CHALK GRASSLAND



This advisory note provides step by step guidance on the processes and costs involved in creating species rich chalk grassland on arable land.

These figures are “farmer costs” and will be higher if contractors are used. The range of costs is given as guidance only as much will depend upon factors such as soil type, distance of site from main holding, area to be worked, type and age of machinery used.

Preparation

Treat with herbicide for couch and other weeds (either pre- or post-harvest) and remove all straw to ensure a clean stubble. Depending upon the site, it may then be desirable to leave the land fallow or as setaside for a season in order to ensure a clean seed bed.

Cost: £13.70 to £26.00 per hectare

Spraying (12 m boom, 100 l/ha) @ £4.30 - £10/ha with 4 - 5 l/ha Glyphosate @ £2.10 - £3.00/l plus 0.5 l/ha adjuvant @ £2/l

Cultivation

Cultivate initially to encourage germination of weed species and then a second time to create the finished seed bed. Stubble cultivations tend to be more effective than disc harrowing, though a combination of the two may be most appropriate.

Cost: £12.65 to £17.75 per hectare (x 2)

Disc harrowing @ £12.65 – 13.50/ha and stubble cultivation @ £17.50 – 17.75/ha

Rolling

Small seeds need good contact with the soil so they don't dry out. Use Cambridge rollers immediately after broadcasting.

Cost: £8.40 to £10.50 per hectare

Topping

Top the sward (no lower than 20 cm if yellow rattle is present – see over) at least three times during its first season to control weeds and encourage grasses to tiller.

Cost: £8.50 to £20.00 per hectare (x 3)

Total cost in Year 1 = £72.90 to £132.00 per ha

Annual Higher Level Stewardship grant = £280.00 to £500.00 per ha

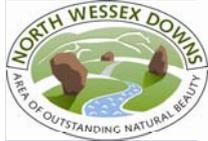
HD7 – Arable reversion by natural regeneration (to protect archaeology) @ £500/ha/yr

HE10 – Floristically enhanced grass margins @ £485/ha/yr

HJ3 – Arable reversion to unfertilised grassland to prevent erosion or run-off @ £280/ha/yr

HK8 – Creation of species-rich semi-natural grassland @ £280/ha/yr





Although in certain cases it may be preferable to allow the sward to develop by natural regeneration, in most situations it will be necessary to introduce seed of native grasses, sedges and/or wildflowers. The selection of an appropriate seed mix and/or source is a crucial factor and wherever possible specialist advice should be sought.



Suitable seed mixes include:

- Seed that has been specially harvested from an existing species-rich chalk or limestone grassland site.
- Commercially available grass and wildflower mixes, which comprise a range of native species typically found in chalk grassland. It is very important that the wildflower element at least is grown from stock of English origin. The mix should include yellow rattle which will impede grass growth and thus allow wildflowers space to establish.

Wherever possible the former should be used.

Seed costs: £90 to £900 per hectare

Specially harvested seed @ £25.00 - £45.00/kg

Commercial grass & wildflower seed mix @ £9.50 - £30.00/kg minimum (depends largely upon species and proportion of wildflower seed)

These seeds need light and moisture to germinate and so should ideally be broadcast using a fertiliser spinner or similar in early autumn (usually first two weeks of September). With commercially grown seed it may be possible to use a conventional seed drill with the coulters removed so that seed drops onto the soil surface. Germination rates will be compromised if seed is buried or allowed to dry out.

The recommended seed rate is around 18 to 20 kg/ha, with at least 1 kg/ha of wildflower seed if option 2 is selected.

Cost: £5.25 to £18.10 per hectare

Broadcasting @ £5.25 - £13.50/ha and "drilling" (no coulters) @ £15.40 - £18.10/ha

Total cost = £95.25 to £918.10 per hectare

Higher Level Stewardship grant = Up to 100% of costs

GS – Native seed mix @ 100% of costs

For more detailed technical guidance please contact your local Rural Development Service office for Technical Advice Notes 21, 24 and 25 or Flora Locale for copies of relevant Advisory Notes and/or see the Online Library on their website (www.floralocale.org).

Sources: Farm Management Handbook, 35th ed Sept 2004;
Agricultural Budgeting and Costing Book, 60th ed, May 2005; CAAV Guide to Costings, October 2005; pers. comms.
Prepared by Jemma Batten on behalf of North Wessex Downs AONB © 2005. Photographs © Jemma Batten

