

Cutting of lowland heathland using a double-chop forage harvester at Trigon, Dorset, England

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SUMMARY

A forage harvester was used to cut swathes of heathland vegetation at a site in southern England to increase habitat heterogeneity. Areas selected were predominantly dry heath or on the margins of humid heath and were cut to ground level. Six years later the cut areas were still clearly visible. In a humid heath area purple moor-grass *Molinia caerulea* had been greatly reduced, heather *Calluna vulgaris* had increased slightly, and open patches of bare ground (important for early successional plants) were present. On dry heath, heather cover was reduced substantially but the shorter and more open sward had allowed lichen communities to develop.

BACKGROUND

Structural diversity is thought to be important for a variety of species associated with lowland heathland. For example, areas of short vegetation or bare ground can provide basking and breeding sites for reptiles such as sand lizard *Lacerta agilis*, foraging areas for birds such as woodlark *Lullula arborea* and foraging and breeding sites for a variety of heathland invertebrates. Many of these species benefit from mature stands of heather *Calluna vulgaris*, being adjacent or nearby (e.g. to provided refugia from predators).

A number of techniques are available to heathland managers in order to enhance the structural diversity of lowland heathland. These techniques include controlled burning, grazing and mechanical cutting. The use of a forage harvester to cut the heathland vegetation at Trigon, Dorset in southern England is described here. Two advantages of using this technique are that the cut material can be removed and used to provide a seed source in heathland restoration projects, and secondly the technique is particularly suitable for creating firebreaks. The management work was carried out by the RSPBs Heathland Project as part of a wider programme of heathland management conducted across the nationally important Dorset Heaths.

Table 1. Percentage cover of different vegetation along a typical 10 m stretch of cut humid heath compared with an uncut area immediately adjacent, Morden Bog and Hyde Heath SSSI

Plant species/bare ground	Cut	Uncut
Purple moor-grass <i>Molinia caerulea</i>	5% (no tussocks)	50% (in tussocks 30cm high)
Heather <i>Calluna vulgaris</i>	50% (average height 15 cm)	40% (average height 30 cm)
bent-grass <i>Agrostis sp.</i>	10%	5%
Bare ground	35%	none
Scots pine <i>Pinus sylvestris</i>	30 pine seedlings	5 mature trees, no seedlings

Table 2. The percentage cover of different vegetation along a typical 10 m stretch of cut dry heath compared with an uncut area immediately adjacent, Morden Bog and Hyde Heath SSSI.

Plant species/bare ground	Cut	Uncut
Purple moor-grass <i>Molinia caerulea</i>	<5% (no tussocks)	none
Heather <i>Calluna vulgaris</i>	25% (average height 15 cm)	80% (average height 45 cm)
lichen <i>Cladonia uncealis</i>	25%	10%
Bare ground	10%	none
Scots pine <i>Pinus sylvestris</i>	2 pine seedlings	4 seedlings
Dwarf gorse <i>Ulex minor</i>	none	10%

ACTION

Heathland forage-harvesting: The site at Trigon covers 42 ha, of which approximately one third is dry heath dominated by heather *Calluna vulgaris*.

Vegetation was cut in 1999 using a double-chop forage harvester. The cutting was part of regular (annual or bi-annual) cutting within the site. The forage-harvester, 3 m wide, was operated using a rear PTO on a standard agricultural tractor. A second tractor towing a high-sided trailer was used alongside to collect the harvested material.

Approximately 1.8 km of driving resulted in a total cut area of one-third of a hectare. The areas selected for cutting were predominantly dry heath or on the margins of humid heath. The forage harvester was set so as to cut at ground level and the total time (for two people) taken to complete the cutting was four hours.

Seed source: The cut material (providing a seed-source of heathland plants) was removed and used on a heathland recreation scheme on an adjacent area of land.

CONSEQUENCES

Six years later, in April 2005, the cut swathes that had been forage-harvested were still clearly visible. The foraged strips still contained bare ground and the heather was clearly shorter.

Percentage cover estimates of different vegetation along a typical 10 m stretch of cut humid heath compared to the uncut area immediately adjacent and along a typical 10 m stretch of cut dry heath compared to the uncut area immediately adjacent, are given in Tables 1 and 2.

Two common lizards *Lacerta (Zootoca) vivipara* were seen basking on the interface between the cut and uncut heather.

Conclusions: Six years later the cut areas were still clearly visible. In the humid heath (compared to adjacent uncut areas) purple moor-grass had been greatly reduced, heather had increased slightly, and open patches of bare ground (important for early successional plants) were present. On the dry heath, heather cover was reduced substantially but the shorter and more open sward had allowed lichen communities to develop.