

Black Grouse Management on Farmland

SUMMARY

- **Ensure a mosaic of heather heights is available to provide nest sites, feeding and cover.**
- **Manage grazing on white hill to create a sward with some areas more than 30cm high.**
- **Retain existing boggy areas and enhance them by ditch blocking.**
- **Look for opportunities to create and expand native woodland.**
- **Avoid disturbing or damaging lek sites.**
- **Retain upland meadows that are rich in wild flowers.**
- **Retain or add arable areas in the uplands and retain arable stubbles over winter.**
- **Remove redundant fences, mark necessary ones and site new fences sensitively in black grouse areas.**
- **Year round predator control can improve black grouse productivity.**

Status of black grouse in the UK

Black grouse were once widespread in the UK. In Scotland they are now one of our fastest declining bird species. Black grouse are currently a red listed species of high conservation concern with their own National Species Action Plan.

Distribution in Scotland

Black grouse generally inhabit the altitudinal range of 200-550m. The Scottish stronghold for black grouse is in the central and eastern Highlands, in particular Perthshire, however, they are widely distributed in suitable habitats across the Scottish uplands.



From the New Atlas of Breeding Birds in Britain and Ireland: 1988-1991. (D W Gibbons, J B Reid & R A Chapman) BTO, SOC, IWC. Published in 1993 by T & A D Poyser, London.
Black grouse range has contracted since this Atlas was produced particularly in England and Wales.

Black grouse ecology & habitat requirements

Black grouse generally require a mosaic of moorland, grassland, mire and woodland.

Unlike other British gamebirds, black grouse and capercaillie gather at traditional lek sites to display and mock fight at dusk and dawn. Black grouse lek sites typically have short vegetation and good all round visibility. In bye fields are often used, as are tracks, grassy moorland flushes and recently burnt heather. The cock which dominates the centre of the lek, will generally be the one selected by greyhens to mate with when they attend the lek in late April and early May. Lekking intensity is greatest at this time but black grouse can frequently be seen at lek sites at other times of year.

After mating, the hens will select a nest site, typically heather of over 40cm in height and incubate the eggs alone. They will generally nest within 1.5km of the lek site they attend. When the chicks hatch in around mid June the hen will lead them to insect rich habitat where they will feed themselves. Chick rearing areas are typically under 50ha in size, and hens are faithful to these areas, generally returning each year to rear their young. Brood areas are rich in insects on which chicks are dependent for the first couple of weeks after which they will move onto adult food-plants. Insects eaten include the caterpillars of moths, butterflies and sawflies. Flies, ants and beetles are also taken. Mires, species rich flushes, grassland and moorland rich in blaeberry and bog myrtle are all potential brood habitats. Chicks will usually stay with the hen until September.

Heather and blaeberry are eaten throughout the year by adult birds with heather being particularly important in winter. In spring, black grouse will feed heavily on larch and bog cotton buds to get into good breeding condition. In summer a range of herbs are taken from moorland flushes, herb rich rough grazing, and meadows. Seed heads of rushes, grasses and sedges are also eaten in autumn as well as a range of berries such as blaeberry, cowberry, and crowberry. In winter, particularly if snow cover is prolonged, black grouse feed in trees eating the buds and catkins of birch, alder and willow, and berries from rowan, hawthorn and juniper.

Black grouse habitats are not identical across Scotland. In western Scotland, the remaining black grouse are found predominantly around forestry plantations, while in southern, eastern and parts of northern Scotland, they are mostly associated with the edge of moors managed for red grouse shooting and their neighbouring woodland or forestry plantations. The semi-natural Scots pine of the Scottish Highlands is also a classic habitat for black grouse.



Targeting management

Counting displaying cocks at lek sites in spring offers the best way of finding out how many black grouse cocks are in an area, and where important populations of birds are located. The organisations listed under Further Information at the end of this note may be able to help with information on black grouse distribution in your area.

Radio tracking studies show that cocks are faithful to an area of between 250-700ha around the lek site they attend, so management is best targeted in the suitable habitat of up to 700ha around the lek.

Hens typically migrate in their first year from the lek site where they were reared, to join other lekking groups. Radio tracking studies in the Pennines show that hens will travel up to 30km to join other lekking groups (Warren, P. & Baines, D. 2002). If lekking groups become too isolated to allow genetic exchange via hen dispersal they will be at an increased risk of extinction. Maintaining connectivity between lekking groups is therefore important.

In order for black grouse management to be effective, the limiting factors on the population must be identified and addressed. There would be no point, for example in planting additional broadleaves for black grouse conservation where they are not in short supply locally.

Managing for black grouse

Work at a landscape scale with neighbouring units where possible.

Grazing

- Manage rough grazing on hill ground to create a sward with some areas of over 30cm in height to provide a mosaic of open and dense vegetation. Avoid letting vegetation become uniformly tall and dense as this can impede chick movement.
- Allow plants to flower and seed.
- Retain upland meadows that are rich in wild flowers.

Moorland

- Retain some areas of heather of over 40cm in height to provide nest sites.
- Create a mosaic of heather ages and structure by controlling sheep, deer and cattle grazing. This mosaic will provide opportunities for young nutritious heather shoots and blaeberry to grow, whilst providing cover from predators and bad weather, as well as opportunities for nesting.
- Muirburn or heather swiping can also create the patchwork of long and short heather favoured by black grouse.

Wetlands

- Retain existing boggy areas and flushes, which are a rich source of invertebrates for chick rearing.
- Enhance areas of wet heath and upland bog by blocking drains and ditches.

Woodland

- Create and expand native woodland in open landscapes. Plant small woods of 1-5ha of birch, willow, hawthorn, rowan, alder, Scots Pine and larch to provide an additional source of food and a potential refuge from predators. Design woodlands with uneven edges to maximise the edge preferred by black grouse. Encourage scrub along the external edges of woodland.
- Larger woodlands may be used for breeding if the planting density is low enough to maintain vegetation suitable for chick rearing and adult feeding, in particular heather and blaeberry. A high percentage (ideally over 40%) of open ground will be needed to keep woodland suitable for brood rearing once it is mature. Maximise the woodland edge available through your woodland design and encourage scrub along it.

Forestry

- Thin forest edges adjacent to moorlands
- Use muirburn or heather swiping to create the patchwork of long and short heather favoured by black grouse.

Lek sites

- Avoid disturbing lek sites, particularly from mid March to end of May and avoid damaging them.
- Keep lek site vegetation short.
- Avoid planting trees within 100m of lek sites to maintain good all round visibility.
- Avoid erecting fences near lek sites.

Arable crops

- Retain arable stubbles over winter.
- Plant arable crops such as turnips with patches of weeds in the uplands. These will have wider biodiversity benefits (e.g. farmland birds) as well as being attractive to black grouse.

Additional threats to Black Grouse

Fences

Deer fence collisions are a significant cause of black grouse mortality. Deer fences are particularly dangerous next to lek sites. Deer fences are also dangerous where they cross flight lines, brood rearing areas or knolls and ridges.

In areas where black grouse are known to be present

- redundant deer fences should be removed.
- deer fences should only be used where there are no other viable means of deer control.
- where deer fences are necessary they should be marked with wooden droppers, chestnut paling or UV stabilised orange barrier netting and well sited to reduce the risk of collisions by using dead ground as far as possible.

Stock fences can also cause mortalities.

- redundant fences in black grouse areas should be removed.
- stock fences near lek sites should be marked and sited as above.

Predation

Whilst predation is not the main driver behind black grouse declines, predation can cause local losses where black grouse numbers are low. Carrion/hooded crows and foxes are the main legally controllable predators of black grouse.

- year-round legal predator control can be effective in improving breeding success and productivity.

Sources of funding for black grouse management

- Land Management Contracts administered by Scottish Executive Environmental and Rural Affairs Department.
- The scheme will include a range of operations/prescriptions, which can help black grouse.

Further information

Visit www.blackgrouse.info to find out more about work to help black grouse across the UK as part of the ambitious UK Biodiversity Action Plan.

Dumfries & Galloway Black Grouse Recovery Project 01556 670478

Scottish Agricultural College (SAC) Conservation Services.
Farming and Wildlife Advisory Group (FWAG).
RSPB Scotland.
Game Conservancy Trust.

RSPB Scotland Offices in Black Grouse Areas
Scotland Headquarters.
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North Scotland Regional Office.
01463 715000
East Scotland Regional Office.
01224 624824
South and West Scotland Regional Office.
0141 5764100

References

Warren, P. & Baines, D., 2002.
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Wildlife Biology 8, 129-35.

Callandine J., 2002.
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(Unpublished Report for RSPB Scotland).

Thanks to Sandra MacLean, Argyll & Bute Black Grouse Group

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www.blackgrouse.info/recovery/argyllbute.htm

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