



Bedfordshire
Cambridgeshire
Northamptonshire
Peterborough

Conservation Grazing

Protecting wildlife
close to home

What is conservation grazing?

Our countryside has been shaped by centuries of livestock grazing. Many plants, butterflies, birds and mammals depend upon the activities of grazing cattle, sheep and ponies in order to survive. Grazing produces a habitat which allows many different plants to grow side by side, and therefore wildlife diversity is usually at its peak in open spaces that are regularly grazed.

In the absence of grazing our open spaces will lose their rich diversity of plants and animals. Small fragile flowers and grasses will disappear as a number of aggressive and competitive woody plants are given the opportunity to out-compete them for water and sunlight.

The main objective of conservation grazing is to maintain the balance between these woody and shrubby plants and the species-rich grassland.



Finding the Right Livestock

The selection of livestock is a primary consideration for conservation grazing, and will be based on an assessment of the animal's nutritional adaptations and abilities. Differences in animal behaviour (browsers or grazers) and differences in animal physiology (ruminants – cattle, sheep or non ruminants – horses) will affect their suitability for different sites.



Shropshire Sheep



Jacob sheep

There is often a preference for using traditional, hardy breeds (e.g. Sheep: Hebridean and Manx Loghtan. Cattle: Beef Shorthorn and Belted Galloway. Ponies: Dartmoor and Exmoor).

Sometimes there is no choice in the animal and breed that can be used on a site and it is a case of working with what is available.

Sheep

Sheep are most frequently used as conservation grazers largely due to their availability, relative inexpensiveness and handling ease. They usually deposit

dung randomly and do not reject the grazing around it. They can therefore, under a high stocking rate, graze swards to an undesirable uniformly low height creating few niches for wildlife. 3cm is the minimum sward height grazed. Their narrow mouth enables them to selectively pick what they eat and they will select and eat flowers. They avoid rough, tall swards and tussocky areas, unlike cattle and horses. Sheep's small hooves and light weight cause relatively little ground disturbance and soil impaction. They are efficient browsers of low scrub, able to remove leaf material completely from selected bushes.

Goats

Goats can either graze or browse but most goats are by preference browsers, eating trees and scrub. Goats may browse more when mixed with sheep. They are very useful for restoration projects where an open site has been overtaken by scrub. They prefer willow, gorse, ash, guelder-rose and will tolerate hazel, oak, alder, wayfaring tree and hawthorn. They dislike birch and conifers and will avoid herbaceous legumes. They will browse to approximately 2 metres.

Cattle

Cattle are generally better than sheep and horses in creating and maintaining a structurally diverse sward of benefit to invertebrates. This is largely due to the way they eat: cattle use their tongue to pull material into the mouth before it is bitten off unlike sheep and horses that tend to nibble. They can eat short grass but they cannot graze as short as sheep and horses. 5-6 cm is minimum sward height grazed. They cannot graze

as selectively as sheep due to their wider mouths and they do not select flowers although they may be eaten.

They trample the ground more significantly which, in moderation, is beneficial as it opens up the sward allowing the establishment of annual plants. Hoof prints can provide the hot microclimate conditions that some insects require. However, overstocking during the winter period can cause severe poaching which can lead to weed infestations (docks, ragwort and thistles). They will eat in tussocky areas and rough, tall swards. They are good at knocking down and opening up tall coarse vegetation such as bracken and scrub and therefore have a useful role in restoration management. Cattle are more expensive to buy and keep. They usually deposit dung randomly but will not graze around it. The rejected vegetation continues to grow and forms tall sward islands amongst shorter turf. This can be valuable feature for insect communities.



Toggenburg goat



Old English longhorn

Horses and Ponies

Horses and ponies graze the shortest and to a similar ground level to rabbits. 2 cm is the minimum sward height grazed. They do not select flowers like sheep and rabbits and they will eat in tussocky areas and rough, tall swards like cattle. They tend to defecate and urinate in specific latrine areas which are never grazed. This causes localised high nutrient levels which become colonised by nutrient demanding, aggressive, undesirable species (e.g. nettles, docks). Like cattle, they trample the ground which, in moderation, is beneficial as it opens up the sward allowing the establishment of annual plants. Hoof prints can provide the hot microclimate conditions that some invertebrates require. However, overstocking during the winter period can cause severe poaching which can lead to weed infestations (docks, ragwort and thistles). The main advantage of grazing with ponies is they are nutritionally adapted to graze on unimproved, species rich grasslands. These pastures are rich in minerals,



Dartmoor pony

high in fibre and low in protein which is the best diet for horses and ponies. Grassland enriched with fertilisers produces lush grazing that can lead to obesity, joint problems in young stock and laminitis, a potentially fatal disease.



Exmoor ponies

Mixed animal grazing

A combination of cattle and sheep, horses and cattle or horses and sheep can provide the maximum structural diversity to the vegetation.

Timing and stocking rates

The nature of the grassland and the type and number of grazing animal available may dictate the timing of grazing. If a grassland is waterlogged it may only be possible to graze it in the summer months. On fertile soils, summer grazing may be essential to reduce the rapid plant growth to maintain a varied plant structure. Winter grazing may be better suited to light and well drained soils where productivity is low (e.g. chalk and limestone soils)

and the biomass accumulated over the summer is relatively low and can be removed fairly easily during the winter by a combination of grazing and cutting. Winter grazing alone may not be sufficient to properly maintain the swards of neutral grasslands. It may be necessary to graze the site for at least part of the summer if increasing sward rankness and scrub encroachment are to be avoided.



Cattle grazing parkland



Late summer grazing with Manx Loghtan

Summer grazing (May to September)

Advantages – Sward productivity is high. Grazing can help control tall herb species such as great willowherb. Helps check development of woody scrub which is more palatable to domestic stock during the summer. The soil moisture content is generally low so there is less chance of poaching.

Disadvantages – A high stock rate removes flowers and reduces the feeding sites for flower feeding invertebrates. Heavy grazing can prevent flowers from setting seed and repeated heavy summer grazing will affect annual and biennial plants.

Recommendations – try to adjust stock rates throughout the summer to prevent overgrazing or undergrazing. This can be measured by aiming for a sward that contains a mixture of long and short vegetation with some plants in flower. Scattered scrub patches can be beneficial for wildlife but make sure they cannot spread and do not cover more than 15% of the grassland. Alternatively, the site could be rotationally grazed by dividing the area into several compartments using permanent or temporary fencing. The animals are moved to new compartments quite regularly once the desired sward height has been reached in that particular compartment. However, this can be less desirable than grazing the whole area – gradual grazing approach – because grazing small compartments can cause quite sudden changes in the sward structure which is deleterious to invertebrates.

Spring grazing

(April and May)

Advantages – spring grazing is useful when the dominant species is particularly palatable (e.g. tor-grass) and spring grazing helps keep scrub seedlings in check.

Disadvantages – repeated and heavy spring grazing when early flowering plants such as green winged orchids and yellow rattle are present can result in the loss of these species from the site. Furthermore, heavy grazing at this time of year will eliminate a significant range of invertebrates. In lowland wet grasslands, heavy grazing can cause extensive trampling of wader's and wildfowl's eggs and chicks.

Recommendations – same as summer grazing.

Autumn grazing

(September to October)

Advantages – most plants would have finished flowering and setting seeds. May help to disperse seeds and establish through trampling. Least damaging time for sensitive insects.

Disadvantages – sward palatability has declined and standing vegetation may be rejected.

Recommendations – use traditional, hardy breeds that are adapted to feed on nutritionally poor vegetation.



Lapwing

Winter grazing (October to April)

Advantages – most grassland herbs are dormant in the winter and so are not directly affected by winter grazing. More vigorous grasses can be weakened. Less damaging to insects that are over-wintering in the base of tussocks. Moderate trampling breaks up the litter layer exposing ground for colonising by annuals the next spring.

Disadvantages – heavy trampling can lead to ground poaching and infestations by weed species which can be irreversible. Does not remove any nutrients by grazing which are locked up in the roots. Heavy grazing will remove all plant litter which can destroy the habitat of many over-wintering insects. Winter herbage is less palatable and of lower nutritional quality so stock may lose condition.

Recommendations – Maintain low stock rate to prevent severe poaching and maintain a varied sward structure with some tussocks present and standing dead seed heads. Traditional, hardy breeds are less likely to lose condition. Sheep may be better than cattle and ponies during the winter where risk of severe poaching is minimised, however in wet sites the sheep are susceptible to foot rot and if the site is excessively scrubby then there are husbandry implications of sheep getting tangled in the scrub. In excessively scrubby sites, cattle and horses are useful for breaking up stands, for example, of bramble and bracken. Placing supplementary food on these stands can assist this process.



Hebridean sheep

Mixed season grazing

Grazing does not have to be restricted to a specific season either. It can be a combination, for example, of spring grazing, then a resting period over the summer followed by autumn grazing, or late summer grazing followed by winter grazing. It is important to be mindful of the advantages and disadvantages of each and adjust stocking rates and duration of grazing accordingly. This type of grazing is preferable to year round grazing in lowland sites (situated below 250m in altitude) because these types of habitat have sensitive periods of the year when grazing is more likely to have a negative impact, for example, in areas where wading birds nest and are vulnerable to trampling between April and early June or areas where wild flowers such as orchids are vulnerable to heavy selective grazing in the summer, particularly by sheep.

Year-round grazing

If a grassland is to be grazed all year round then it is important to be aware of the advantages and disadvantages of grazing in each season. It is best to aim for a stocking rate just sufficient to maintain a varied structured grassland in an average year, rather than the maximum that the grassland can support.

Flexibility in grazing season

Some situations may require a degree of flexibility regarding their grazing season because of physical factors, i.e prolonged summer drought can suppress swards on shallow soils, while excessive wet winter can make low lying grasslands ungrazeable in that season because of poaching. When grazing is prevented during the prescribed season, it is advisable to reinstate livestock as soon as conditions permit rather than abandon the regime altogether for that year, although adjustments may need to be made regarding stocking rate and duration.



Pyramidal Orchid

Stocking levels for sheep and cattle

The purpose of the following general guidelines is to provide stocking levels for sites that are being managed with conservation in mind. The number of stock required to graze an area varies between individual sites and is dependent on a number of factors such as habitat, soil fertility, rainfall, size, topography and livestock breed.

Table 1 provides stocking levels for sheep and cattle for the four main lowland semi natural grasslands. It shows how longer durations with cattle and sheep compensate for

lower numbers of animals in achieving the same overall level of stocking. However, higher stocking rates when the grazing period is reduced (i.e. winter) increases the risk of physical damage to the habitat such as ground poaching and nutrient enrichment, so in most cases it is advisable to have as long a grazing period as possible. As a rough guide, grassland habitats should be grazed for a minimum of 2 months per year, rush pastures for at least 3 months per year and heathland habitats for at least 5-6 months a year.

Provided that the following bullet points are taken into account, **table 1** can be used to establish the initial stocking levels for a new site, based on its plant community. After this time, adjustments can be made to the regime on the basis of actual experience and recorded results. The points to take into account are:

- The amount of rainfall and sunlight varies from year to year and from season to season and this will affect the amount of vegetation available to the animals. For example, the sward carrying capacity will be higher in summer than in winter because the vegetation continues to replace itself while it is being grazed.
- The number of wild herbivores (e.g deer and rabbits) on a site should be taken into account as they may

contribute significantly towards the grazing on site.

- Stocking levels are based on medium sized livestock (i.e sheep – 60kg, examples are Jacob and Wiltshire Horn. Cattle – 600kg, examples are Hereford and Blue-Grey). However, there are bigger and smaller breeds of grazing animals which have different feeding intakes and performance so stocking levels should be adjusted to take this into account. For more information about different breeds and liveweights see 1) in the further reading section on page 14.
- It is important to constantly monitor the site to ensure it is not over-grazed or under-grazed and the stock numbers and duration of grazing should be altered accordingly.

Number of grazing weeks per year	Calcareous grassland		Neutral grassland		Acidic grassland		Wet/marshy grassland	
	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle
6	20	3.5	33	6	16	3	16	3
8	15	2.5	25	5	12	2	12	2
10	12	2	20	4	10	1.5	10	1.5
12	10	1.5	17	3	8	1	8	1
14	8.5	1	14	2.5	7	0.5	7	0.5
16	7.5	1	12.5	2	6	0.5	6	0.5
20	6	0.5	10	1.5	5	0.25	5	0.25
24	5	0.25	8	1	4	0.25	4	
36	3.5	0.25	5.5	0.5	3	0.12	3	
52	2.5	0.12	4	0.15	2	0.06	2	

Table 1 – A guide to stocking levels for lowland grassland (number of animals per hectare).
Source – modified version of Lowland Grassland Management Handbook.





Pregnant horse

Stocking levels for horses

It is recommended that the stocking levels for horses are based slightly lower than cattle (i.e fewer horses per hectare) because of their feeding preferences and habits, for example, they eat more roughage than sheep and cattle and will not eat where they have urinated and defecated creating a smaller grazing area.

Stock Health and Welfare

Stock health is paramount to conservation grazing. Welfare issues must be considered as animal welfare and grazing requirements may conflict. Water, fencing and stock should be inspected daily, preferably twice where possible. The sward condition should be checked weekly and vet inspections at least every 12 months.

Further Reading

- 1) For information about stocking levels and livestock breed weights look at the Rural Development Service Technical Advice Note 33 found on the website www.defra.gov.uk/rds/publications/technical/tan_33.pdf
- 2) For more information about the stock heath and welfare code visit the website www.defra.gov.uk/animalh/welfare/farmed/on-farm.htm
- 3) For more information about conservation grazing and the different breeds available, go to the GAP website on www.grazinganimalsproject.org.uk
- 4) The lowland Grassland Management Handbook by Natural England – www.english-nature.org.uk/pubs/handbooks
- 5) Defra – www.defra.gov.uk
- 6) Natural England – www.naturalengland.org.uk
- 7) Soil Association – www.soilassociation.org/
- 8) GrazeBeds (Local Grazing Scheme) – www.grazebeds.org.uk
- 9) Rare Breed Survival Trust (RBST) – www.rbst.org.uk/
- 10) National Farmers Union (NFU) – www.nfuonline.com
- 11) National Sheep Association (NSA) – www.nationalsheep.org.uk
- 12) Smallholders Online – www.smallholders.org
- 13) Small Shepherds Club – www.smallshepherdsclub.org.uk
- 14) The Sheep Trust – www.thesheeptrust.org
- 15) The 'Nude Ewe' Conservation Wool Project – www.bedslife.org.uk/nude-ewe



GrazeBeds

is a database that is website based and open to all landowners/land-managers and graziers in Bedfordshire, Cambridgeshire and Northamptonshire.

The concept of the grazing scheme is to link landowners/land managers with graziers, and vice-versa to promote the use of grazing as the most appropriate management for important sites for nature conservation. The rationale behind this is that there are an increasing number of acres of land within the countryside which are being under-utilised, and conservation sites are suffering and becoming neglected through under-grazing. Alongside this, many livestock farmers are always in need of extra land for their grazing livestock in order to rest their own pastures.

This website enables landowners and land managers to offer land for grazing and for people with animals to find suitable land by registering on the



Successful match between a grazier's Shetland sheep and a wildlife site that had not been grazed for 6 years'

website for free. The scheme works like a 'match making' service.

Alongside facilitating contact between graziers and landowners in the three counties, the scheme also provides support and solutions to landowners and graziers to help with the re-establishment of grazing animals on the landscape. This is provided through an information directory on, for example, local fencing suppliers and contractors, equipment, vets and shearers.

To find out more about the scheme contact Laura Downton on:
Tel. 01234 364213 Email.
laura.downton@wildlifebcnp.org

To register your land or animals on the website go to

www.grazebeds.org.uk

**For more information
about County Wildlife
Sites (CWS) or
Conservation Grazing
please contact:**



Some pastures are County Wildlife Sites (CWS)

CWS are areas of land recognised as being important for their wildlife. Found on public and private land they play a vital role in the conservation of the UK's natural heritage.

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