



FACTSHEET

Sheep grazing and heath management

Sheep have been inextricably connected to heath vegetations and their biodiversity. The Dutch heath mainly originates from sheep grazing, so it makes sense that grazing with sheep is the best way to maintain it.

Many types of heath can profit from sheep grazing:

- nutrient-poor drifting sands with vegetations of Grey hair grass (*Corynephorus canescens*) and lichens,
- dry heaths on acid sands to loamy sands with European nightjars (*Caprimulgus europaeus*) and Sand lizards (*Lacerta agilis*),
- wet heaths with Sundew (*Drosera species*) and Inundated club moss (*Sphagnum species*) or Marsh gentian (*Gentiana pneumonanthe*) and Alcon blues (*Maculinea alcon*),
- peat moors with Asphodel (*Narthecium ossifragum*) or Common cotton grass (*Eriophorum angustifolium*)
- nutrient-poor grasslands with Mouse-ear hawkweed (*Hieracium pilosella*) and Heath speedwell (*Veronica officinalis*)
- gradual transitions from heath to high forest
- (temporary) heath arable fields with cereals and arable herbs, buffered and enriched by manure.

A migrating sheep herd connects isolated heath areas by transporting seeds and even small fauna. Therefore, grazing is pre-eminently suitable for small plots of heath and strips of forest that have been cut open as corridors.



Regular heath management

Sheep grazing is highly suitable for regular heath management. It slows down succession and when the grazing intensity is well-planned, the succession can even come to a standstill. Extensive grazing provides a high variation of structure in the vegetation, with sheep tracks, open sandy spots and grassy parts. There is not only a differentiation aboveground, but also a change in the thickness of the litter and humus on and in the soil. The resulting micro mosaics offer the opportunity for a high fauna biodiversity. Besides that, open mineral spots provide new places for germination.

Tree shoots are constantly gnawed at, which keep the heath open. An abundance of grown-out shoots will be cut back by the shepherd while he's herding, or cut off with a brushcutter. This may be necessary in places with a high tree pressure or a disturbed soil profile.



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Heath restoration

Sheep grazing is also very adequate for heath restoration. It can breach encroachment by Purple moor grass (*Molinia caerulea*) or Wavy hair-grass (*Deschampsia flexuosa*) and balance it with other characteristic flora of the required nature type. Additionally, sheep will tidy up thick litter layers locally, through mineralization processes by grazing the vegetation open and the influence of manure and urine. Apart from that, older Common heather (*Calluna vulgaris*) will benefit from heavier grazing by becoming green and vital. The changes help prevent the outbreak of the heather beetle and the arising and course of heath and forest fires. Overgrazing on drifting sands can set back vegetations completely and allow the sand to be blown again.

The vegetation will be grazed differently all over, increasing variation in height, structure and ages of Common heather: partly new shoots, partly dying off, room for grassy vegetations and open sandy spots on and along sheep tracks. Butterflies, birds, reptiles, bees, grasshoppers, ants and other insects that depend on certain plants or structures, will find suitable biotopes to feed, breed and find shelter.



Grazing planning

By phasing areas in space and time by grazing with a well-tuned pressure several times a year, the heath will become rich in structure and varied. The grazing pressure and phasing is registered in the grazing planning. The shepherd can fine-tune the grazing with his dogs or electrical netting.



Sheep are fun

Visitors and nature professionals in heath areas also simply enjoy a peacefully grazing and migrating sheep herd on a biodiverse heath.

The century-old connection of sheep herds with the Dutch heath landscape is valuable for the cultural heritage, and appeals to people's cultural identity. This will enlarge people's appreciation of an area. Besides, many visitors find heath management by animals infinitely more attractive than by machines. Lamb visiting days and coming across the sheep herd in the heath excite all the senses.

Apart from tourism, there are many possibilities for educational activities around sheep grazing. It also provides ample opportunities for nature organisations to profile themselves.



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Grazing versus sod cutting

MYTH: “Sod cutting is better than grazing”

Sod cutting used to happen in the old days almost exclusively on wet heaths, where only the organic layer was dug off. That is not comparable to the current sod cutting, which digs well into the mineral soil to remove as many nutrients as possible. The modern sod cutting for heath restoration does put the succession well back, but this does not outweigh the disadvantages. Sod cutting is expensive, destroys the seed bank, soil life and all the micro-relief, removes valuable (micro)nutrients from the system and ensures that insects and other wildlife will have no shelter for years.

To restore heath from encroachment with Purple moor grass or Wavy hair-grass, a few years of intensive grazing (pressure grazing) is needed to help the unwanted grasses over a threshold and to help Common heather to germinate. Then the grazing pressure can be gradually eased, which will induce a structure rich grassy heath.

Even though sheep grazing is often seen as an expensive (recovery) measure, it's still a lot cheaper than sod cutting, which will also require management afterwards.



Grazing and rare species

MYTH: “With sheep grazing I’ll lose my reptiles / Marsh gentians / nesting birds”

Controlled grazing with sheep actually makes habitats more suitable for reptiles. In the usual short periods of grazing, 2 or 3 times per year, in a few days, only a portion of the vegetation will be grazed. Therefore enough structure and thus shelter remains for reptiles and nesting birds. Compared to other types of management actually mosaic patterns of both higher structures with for example old heather and scattered bushes will appear, as well as lower vegetations with grasses and herbs and open spaces with moss or mineral soil, like along sheep tracks.

Herded grazing means that the shepherd decides where the animals graze. Known places with rare plants and nesting birds can be avoided or fenced off with electrical netting. The variety of herbs and the sheep manure on a grazed heath are actually beneficial for various insects, including Dung beetles (*Geotopus species*), which again benefits birds such as shrikes (*Lanius species*).

Sheep and nutrients

MYTH: “With sheep grazing, I will not get rid of my excess nutrients because they will come out again as manure”

If sheep graze and defecate, much phosphorus (P) is maintained (which is often in short supply). But the amount of nitrogen (N) stored in vegetation and litter is certainly reduced. A part is in fact built into animal biomass, a portion evaporates and some leaches out. Which portion does what depends on many factors, such as soil type. The remaining nutrients are concentrated in limited spots which benefits the variation on a micro scale.

Moreover, heath does not have to be poor. Traditionally there were also nutrient-rich heathlands, with mosaics of heather, grasses and herbs that are beneficial to the abundance and diversity of insects and therefore to birds. But those richer heaths were nearly all mined for forest or farmland over the centuries.

The location of a night enclosure allows to determine where most manure is deposited: preferably not on a poor piece of drifting sand, but rather on a small arable field. This also differentiates on a meso scale and restores gradients in the heath landscape.