



Nature conservation

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Nature conservation - farming and economy

A growing number of areas are laid out as nature areas, which are cut or grazed. In Denmark, in the last 20 years, the area with permanent grass including fallow fields has increased from about 200,000 ha to about 400,000 ha.

The agricultural subsidies from EU no longer favour the cultivation of grain crops. The same land subsidies are given for permanent grass on arable land as for growing crops for harvest. If the income from growing grain is low and the cost of the cultivation high it is worthwhile to lay out areas of grass. Grass though, must be cut or grazed at least every second year to maintain subsidies. Therefore the tendency is that sheep farmers are being offered more and more land for grazing.

Grazing with sheep is a good solution for areas that are in danger of being overgrown or turn into shrubby woodland. The areas can be habitat areas as fresh meadows, bogs, marshes, tidal



meadows and heaths, dry grasslands or rocky areas. Sheep can also take care of areas where the invasion of unwanted growth, such as Hogweed (*Heracleum sphondylium* L.), Broom (*Sarothamnus scoparius* (L.) and Japanese Roses (*Rosa rugosa* Thunb.) is becoming a problem. The risk that plant communities are disrupted by nutrient supply increases with the amount of ammonia in the air, which is liberated mainly from pig farms. Sheep grazing may with a proper grazing strategy make a net reduction of nutrients. Nutrient removal is to favour the hardy light demanding plants such as orchids, Bluebell (*Campanula rotundifolia* L.) and *Anemone patens* L. The open natural plant community is vital for insects and other wildlife.

Anemone pratensis L. requires much light and sparse nutrition.

Heifers or dairy cattle have traditionally primarily done landscaping in Denmark. But the heifers' growth and the milk yield on the nutrient-poor areas are too low, and therefore grazing of these areas are abandoned. Only the most hardy beef breeds do well in nature conservation on nutrient-poor areas. As the remaining land is offered to sheep farmers it is important that they evaluate if the land is suited for grazing, before the sheep are led into the fields.

The sheep's reputation as nature conservators

Sheep look decorative in the landscapes and they give the audience a nice experience. Many places, where sheep are grazing, families make small weekend excursions and walk among the sheep enjoying the beautiful surroundings. Sheep can make lawn-like grass areas and they especially look decorative around archaeological memorials. Sheep are also good at removing unwanted plants such as Japanese Roses on beaches and dunes, Hogweed by small rivers and in wetland and Purple Moor-grass (*Molinia Caerulea* (L.)) and broom on moors.



Giant Hogweed eaten and cut down by weaned lambs



Purple Moor-grass gives dead tufts, which suffocates the heather. It requires a great amount of sheep at springtime to fight purple moor-grass before the leaves grow too coarse. (Klosterheden National Forrest District DK may 2007)



Orchids can take being grazed for a couple of years. Hard systematic grazing with sheep can remove the orchids' "competitors" such as giant grasses, herbaceous perennial and scrub.

But botanists are worried about grazing with sheep, because sheep pick out and eat tasty plants without considering that some of the plants are preserved. In case of bad planning the result of sheep grazing is not a fascinating varied flora. There is a risk that sheep may exterminate orchids and other preserved species. Some botanists, though, have good experiences with sheep, which, with good planning and management, can strengthen the preserved plants.

Orchids can take being grazed down for a couple of years but not continuous grazing. An example, told by biologist Jan Steen Andersen, was an area with orchids where many goats and sheep went in and bit down the vegetation for a couple of years. The animals ate the vegetation to the ground, and they also ate the orchids' leaves. The orchids survived well underground. When the sheep had cleared the area of scrub there was light for the orchids, which grew from bulbs and sprouted from seeds and grew many times in number.

If sheep walk on the same area for many years, some of the rare plant species will be kept down. There will only be a carpet of hardy grass species left. Sheep do not trample holes in the grass carpet, which new species can grow out from. If, for instance cattle or horses are let into the field, they can trample holes and make seedbeds for new germination of rare species. This is a good reason to graze the nature areas with different kinds of animals.