SAFEGUARDING THE WELFARE OF LIVESTOCK GRAZING ON NATURE CONSERVATION SITES

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Nature conservationists frequently use domestic livestock to graze unimproved semi-natural vegetation in order to achieve the ecological objectives that they are seeking for the sites that they manage. This paper reviews the role of the Grazing Animals Project in raising awareness of the factors that affect the health, safety and general welfare of the animals involved in this activity. It also describes the measures being undertaken to ensure that the people charged with the care of grazing livestock on nature reserves are best equipped to deliver the management targets for the land without compromising the well-being of the animals.

Keywords: *animal selection, animal welfare, conservation, disease, grazing, nutrition*

Introduction

Conservation grazing describes the process by which domestic livestock are used to maintain or enhance a wide range of natural habitat types specifically for the benefit of wildlife. A significant proportion of designated Sites of Special Scientific Interest (SSSI) in England have been assessed as being in unfavourable condition, often because of inappropriate grazing regimes based on unsuitable kinds of livestock. Conserving these important habitats and their associated plant and animal species more effectively depends on grazing the remaining areas of semi-natural vegetation more sensitively, something that requires the needs of wildlife to be considered alongside those of livestock production.

This increasing focus on use of grazing regimes to conserve wildlife habitats has implications for animal welfare and consideration must be given to choice of species, breeds, and individual livestock employed for the task. When appropriate selections are made, the animals are likely to enjoy greater freedom and superior health than many reared in modern commercial systems.

The Grazing Animals Project (GAP) is a collaborative organisation comprising many of the leading bodies in the United Kingdom's nature conservation movement that are concerned with managing the nation's wildlife heritage (GAP 2001). It provides an information network through which more effective and more sustainable conservation grazing systems can be promoted. GAP's own questionnaire-based study showed that a majority of the conservation staff who form its membership experience difficulties in operating grazing regimes that fulfil all of their ecological objectives, largely through a lack of suitable grazing animals and sympathetic graziers with whom to work (Small *et al* 1997). GAP recognises the pivotal role of animal welfare in resolving these issues and, as a result of its efforts to promote the well-being of the livestock used in conservation grazing, awareness has been raised and action undertaken.

Welfare issues in conservation grazing

The welfare challenges that unimproved semi-natural habitats can present to grazing livestock are now widely recognised by a conservation sector that relies heavily on public support in order to operate effectively. It is vital to avoid damage to conservation's image resulting from failure to give proper regard to the welfare of livestock on wildlife sites. GAP has therefore concentrated on identifying those physical and ecological features that might pose hazards for livestock or compromise their physiological and mental well-being whilst grazing conservation sites. The main issues that need to be addressed are:

Nutrition: The vegetation in unimproved semi-natural habitats has been found to be nutritionally inferior to that growing on comparable, agriculturally improved sites (Tallowin & Jefferson 1999) and animals grazing on nature reserves will seldom be as productive as they would be on improved fields. Wild plant species are generally less nutritious and less palatable than cultivated species and strains, whilst the soils that they grow on are mostly too shallow, acidic or wet to promote optimal production. Deficiencies in some key minerals, particularly phosphate, have been noted (Tallowin & Jefferson 1999) and could compromise welfare as well as performance. Furthermore, the grazing regimes that conservation objectives demand often militate against optimal livestock nutrition since they are frequently implemented in autumn or winter. This timing, whilst favouring completion of wild plant and insect life cycles, only affords the grazing animal access to over-mature forage that is of lower digestibility and palatability than summer grass. Any livestock confined to these nutritionally challenging situations therefore need to be very efficient converters of forage, an attribute more characteristic of breeds native to the UK than those from continental Europe that now dominate livestock production here (Webster 1988). This problem could be exacerbated by the frequent need to control unpalatable components of the vegetation such as scrub or coarse grasses; the need to get these target species grazed might tempt stock managers to keep animals on a site for too long.

Disease factors: Semi-natural pasture often contains mosaics of woodland, scrub, wetland and mire, a mix of vegetation types that may bring contact with a range of diseases and parasites, including New Forest eye, liver fluke, summer mastitis, flystrike and redwater fever or other tick-borne conditions.

Rough terrain: Rugged topography, such as cliffs, rocky outcrops, screes, and steep slopes, is a feature of many reserves. All animals, especially young stock, risk injury when meeting these situations for the first time. Lameness is the most likely injury, which usually necessitates provision of appropriate handling facilities as diagnosis and treatment often require physical examination. On large sites where there are expanses of open land, the availability of shelter from rain and strong winds for out-wintered livestock or shade from hot sunshine in summer will need to be considered.

Scattered locations: Many wildlife sites comprise isolated parcels of land necessitating livestock to be transported to them via road. Catching, loading and transporting of animals needs to be well planned to minimise stress, particularly where sick or injured animals are involved. Providing appropriate facilities for nursing unwell livestock on remote sites will require additional resources in order to comply with the Department of the Environment, Food and Rural Affairs' (DEFRA) welfare codes (eg MAFF 2000). These advise against transport of sick, injured and, particularly, lame animals.

Wetland: On some wetland sites there may be ditches or tidal marshes with deep channels, where livestock risk drowning. Sites with waterlogged ground need to have some dry land incorporated in the grazing unit to satisfy an animal's need to lie down for rest.

Toxic plants: A number of toxic plant species that are particularly prevalent in unimproved habitats are sometimes eaten by grazing animals, threatening them harm. The main ones are yew (*Taxus baccata*), ragwort (*Senecio spp*.) and bracken *(Pteridium aquilinum*), all of which, as native species, are valid components of the semi-natural plant communities on wildlife sites and often play a significant role in conservation of other wildlife species or contribute to distinctive landscape types. Elimination of these poisonous native plants for welfare reasons is therefore not usually an easy option for reserve managers, so the safety of any livestock they use for grazing depends more on selecting suitable animals and managing them appropriately.

Public access: Dogs need to be properly controlled to stop them from worrying grazing livestock. Although such risks can never be completely eliminated they can be reduced by informing and educating visitors. When setting up new grazing schemes, in particular, full consultations need to be undertaken to avoid acts of vandalism to gates, fences or even the animals themselves.

GAP, whilst working hard to highlight such issues confronting animals that graze semi-natural pastures, has also been actively developing initiatives to help resolve them, recognising that appropriate matching of animal adaptations to the ecology of the site and the husbandry regime has the potential to raise welfare standards above those found in many intensive commercial systems.

Resolving the welfare issues

The need to ensure that the livestock on nature reserves enjoy the highest standards of welfare has become increasingly apparent as conservation grazing has matured into a recognised land-management practice. Successfully achieving this will not only satisfy the concerns of the public, many of whom support the work of conservation charities directly, but will also maximise the effectiveness of the grazing animals in managing the sites. The need for conservation to plan its grazing systems around the relevant statutory welfare codes and to base husbandry routines on the Five Freedoms (Webster 2001) was first recommended in 1999 in *The Lowland Grassland Management Handbook* (Crofts & Jefferson 1999). The Five Freedoms provide a sound rationale for much of this effort, since extra behavioural choice is afforded to animals in extensive grazing systems, where conditions probably resemble the ones under which these species originally evolved. This more natural setting, in which the animal can take control of much of its daily routine, should help to reduce stress, which, in turn, should enhance its behavioural and immune responses. GAP quickly recognised, however, that more detailed and precisely targeted guidance was needed in order to keep abreast of new developments in welfare regulations and to take account of the increasing levels of activity within the conservation grazing sector. In particular, DEFRA's initiative in revising the statutory Codes of Recommendations for farm animal welfare demands a comprehensive review of the guidance available for conservation grazing.

High welfare standards in conservation grazing depend, in the first instance, on careful selection of livestock; the chosen animals must be well adapted to the situations they are placed in and fully able to meet their behavioural and physiological needs.

Finding the best match between the requirements of the animal and the management needs of the site thus depends on knowing as much as possible about the characteristics of different species and breeds of livestock and how suited they are to the ecological features of specific semi-natural habitats. *The Breed Profiles Handbook* (Tolhurst & Oates 2001) answers this need; by presenting information about the relative conservation grazing abilities of a range of

livestock breeds within various ecological contexts, it aims to help site managers and graziers make appropriate choices about the best kind of animals to use for their own specific situations. It also provides details for contacting grazing practitioners who are already familiar with the use of specific breeds in the situations being suggested.

The *Guide to Animal Welfare in Nature Conservation Grazing* (Tolhurst 2001) represents GAP's other main welfare initiative to date. It describes the hazards that confront animals used in conservation grazing projects, and suggests ways that problems can be resolved or ameliorated when setting up or reviewing grazing schemes. It is a free publication based on the collated experience of practitioners. The main recommendation of GAP's Welfare Guide is for a systematic approach to identifying hazards and evaluating the level of risk that they pose. This risk assessment process should facilitate good welfare and help to meet the requirements for a written health plan made in the new welfare codes. A worked example is provided, based on a system trialled for GAP by the Norfolk Wildlife Trust and adaptable for use on any wildlife site.

Assessing risk, however, is not the same as assessing welfare. The hazards identified in the Welfare Guide are all potential properties of either the environment or the grazing regime and, even if eliminated entirely, may not ensure the well-being of all the animals grazing a site. A fully effective programme for safeguarding welfare therefore also requires inclusion of animal-based criteria in the assessment process since these are the ultimate indicators of health and well-being. The GAP Welfare Guide also describes a number of animal-based assessments that will help to monitor welfare adequately.

All this, however, is only the start, since even the best welfare assessment is valueless if the stockperson fails to respond appropriately or promptly. Adequate monitoring has to be accompanied by effective husbandry and together they comprise good stockmanship. GAP has always stressed in its earlier publications the importance of good livestock husbandry as the best means for delivering successful outcomes, and we have now begun to address it more deliberately by production of a 'conservation grazing husbandry handbook', scheduled for publication in 2004.

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