

## 2.2 Cattle Grazing

### Introduction

Cattle graze swards differently to sheep goats and horses. They use their tongue to tear vegetation and this, together with their size, gives some important benefits in natural vegetation management systems;

Some of the benefits of using cattle in natural vegetation management systems includes;

- Less selective grazing
- Greater ability to remove low digestibility biomass

Trampling helps to create bare ground and 'open up' dense swards



These factors combine to provide a range of potential benefits

- Cattle can help to control invasive grasses such as mat grass (*Nardus stricta*) and purple moor-grass (*Molinia caerulea*)
- The use of distinct grazing and lying areas lead to an uneven distribution of grazing over the sward increasing biodiversity by creating a greater variation of sward structure
- Trampling can lead to the creation of disturbed soil patches which offers opportunities for species such as heather (*Calluna vulgaris*) to germinate
- Breaking of woody material can also maintain the plant in an early stage of growth. Cattle can have a positive effect on invertebrate populations through their dung

Care should however be taken on bogs and fens where trampling can be detrimental to mosses and sensitive bog communities.

### Grazing strategies

The optimal grazing strategy for cattle will be dependent on the type of vegetation being grazed, on the maturity of the vegetation community and the class of stock being used.

- A sucker cow plus calf is equivalent to 1 livestock unit (LU). Whilst a growing heifer is 0.6 LU. Stocking rates for heather moorland are typically 0.1 to 0.3 LU/ha. Thus 1 cow per 5 ha or 1 yearling per 3 ha is typical
- Current modelling scenarios suggest that the optimum environmental enhancement might be achieved by summer grazing with cattle every 3 to 5 years

- Research has indicated that indigenous breeds perform better than continental stock when grazing rough pastures and dwarf shrub heaths

### **Performance**

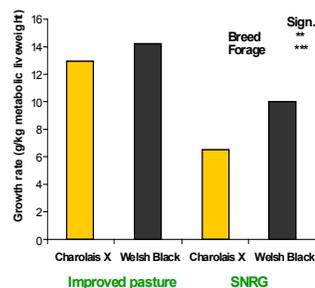
In recent studies at ADAS Pwllpeiran, growing heifers (calving at 3 years old) were turned out onto *Nardus* dominated pasture. Daily liveweight gains were adequate for this class of animal (about 0.5kg /day) over the 2 month summer grazing period but varied significantly between years during the four-year trial.

In another study carried out by IGER at ADAS Pwllpeiran, yearling heifers have been used to graze areas dominated by rank *Molinia*. The results demonstrate that grazing such swards by cattle in the summer can lead to sward changes which in turn improve animal performance in subsequent years.

### **Effect of breed**

Trials at IGER at Bronydd Mawr compared the performance of Welsh Black and continental cross steers on both improved and semi natural rough grazings. Performance was similar on improved pasture but the indigenous breed achieved a significant advantage over the continental cattle on the rough grazing.

**Effect of breed and vegetation type on growth of steers aged 9 months**



### **Animal welfare**

Grazing cattle on hill pastures can present particular health and welfare challenges.

- **Red Water Fever** (Babesiosis) is a potentially fatal tick borne disease. Cattle bred on infected farms have some degree of immunity, however if cattle are brought into an infected area the risk is high. Moving infected cattle to a clean area may also set up a focus of infection in the clean area. Control is generally achieved by using tick control products
- **Louping Ill** is also becoming a further tick related problem in cattle and it is thought that cattle play an important role in maintenance of the virus. A vaccine is available
- **Liver fluke** is a problem for cattle on wet moorland and a treatment and prevention programme should be developed as part of the herd health plan

- Further welfare issues include the **provision of water and shelter** for cattle
- **Fencing** may also be required to enclose the area which cattle are required to graze

### **Grazing Systems**

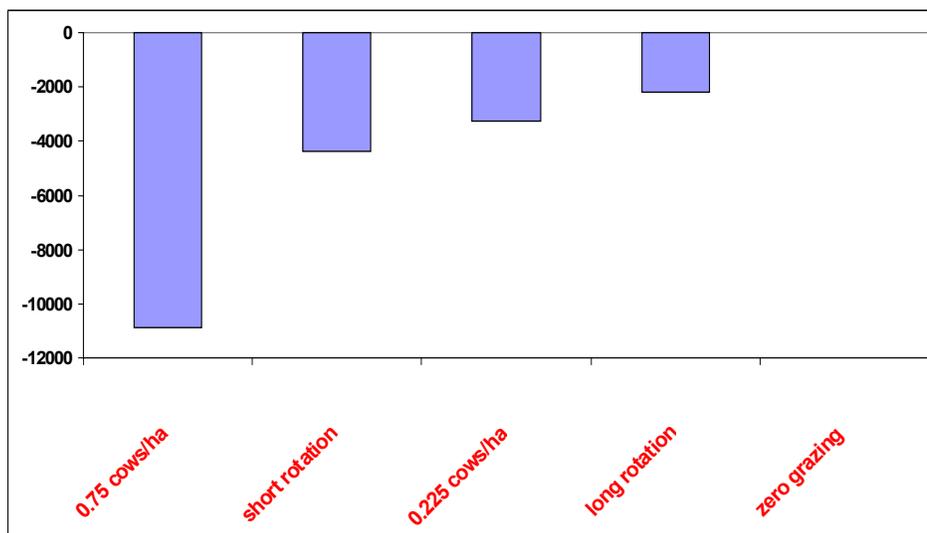
In the main, cattle grazing of hill pastures is only beneficial during the summer months. This has major implications for the maintenance of animals for the remainder of the year. In addition, the bulling strategy may be compromised by grazing heifers or cows with calves at foot on hill pastures.

Studies at IGER Bronydd Mawr have demonstrated that including summer grazing on *Molinia*-dominated pastures within a finishing system for beef cattle can have a positive impact on the quality of the final meat product without incurring negative impacts on cattle performance.

### **Financial implications**

The results of modelling the financial implications of different cattle grazing regimes on a 200ha moor showed that without additional funding through CAP and agri-environmental schemes, grazing of cattle would not be economic. Net margins would be negative. Even grazing cattle on a long term rotation of one year on and one year off would require some £10/ha just to break even.

### **Net margin without SPS & HLS: £/yr**



**Additional financial considerations which need to be taken into account include**

- Fencing costs
- Water provision
- Handling provision
- Transport/Movement (including .TB testing)
- Appropriate animal husbandry skills

***Other sources of information***

See Fact sheet 2 Overview

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