

## 2.3 Mixed grazing

### Introduction

Many moorland habitats have been degraded through sheep-only grazing in the hills and uplands. This has been due to:

- high stocking levels of sheep
- their selective grazing habits

**Sheep** use a shearing/biting process to remove vegetation which allows them to select particular plant parts as well as specific plants. As a result sheep can utilise swards as low as 3cm.

**Cattle** use their tongue to tear off vegetation, making them less selective in the plants they take. This also means that cattle prefer swards where the minimum sward height is 5cm.

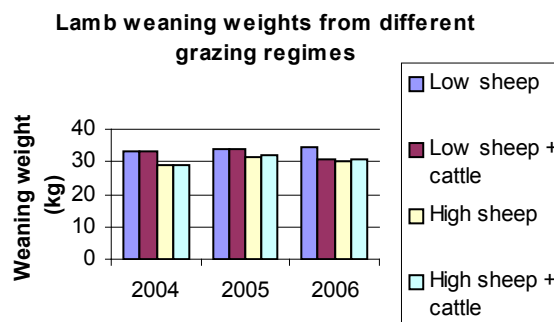
**A combination of cattle and sheep grazing** offers a number of benefits:

- There will be more variation in sward structure potentially leading to greater biodiversity due to differences in grazing behaviour
- The different stock types will consume different plants or plant parts, thus overall plant utilisation will be improved
- Parasite problems will be diluted allowing improved animal performance
- Rejection areas which are not grazed, particularly through dunging, will be reduced

### Management Options

Although mixed grazing is advocated as being beneficial for hill pastures, the question remains as to what is the best management option. What management option is chosen will depend on the vegetation, the habitat objectives and the stock availability.

On *Molinia*/heather dominant swards at ADAS Redesdale, (Northumberland), the addition of dry suckler cows during the summer, in combination with annual sheep grazing with either low (0.66 ewes/ha) or high (1.5 ewes/ha) sheep stock rates did not compromise lamb growth rates, showing that the 2 species were not competing for the same food source.



## Getting the cattle numbers right

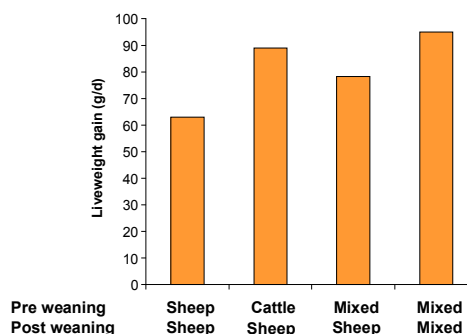
Over the four year period of experimental mixed grazing at ADAS Redesdale, the *Molinia*<sup>1</sup> dominated heather moorland was closely monitored weekly and cattle were removed once they started to graze the heather.

The number of grazing days each summer reduced over a four year period. In the first two years of summer grazing cattle averaged 64 days on the pasture. This dropped to 42 days in year 3 and in year 4 it dropped again to only 28 days. This was because initially, when cattle were introduced for the first time in very many years, they were presented with a reservoir of accumulated biomass. But this biomass was removed quickly. Hence, continual annual summer grazing with cattle proved unsustainable at the stocking rates imposed and it was concluded that cattle grazing one summer in every 3 to 5 years may prove optimum. This would also be a more practical recommendation as cattle numbers required annually would be effectively reduced.

Similarly at Pwllpeiran (West Wales) on a *Nardus*<sup>2</sup> dominated sward, when the first year yearling heifers were introduced cattle performance was similar whether they were grazing alone or with an additional 1.0 ewes per ha. However in subsequent years, the additional stocking with sheep reduced cattle performance by about 25%.

In trials at IGER Bronydd Mawr, the use of cattle on swards subsequently used for weaned lambs, gave significant increases in lamb growth rate even when used in mixed grazing systems. The benefit was attributed to reductions in parasitic worm burdens and beneficial changes to the sward structure.

### Effects of previous grazing on lamb growth post-weaning



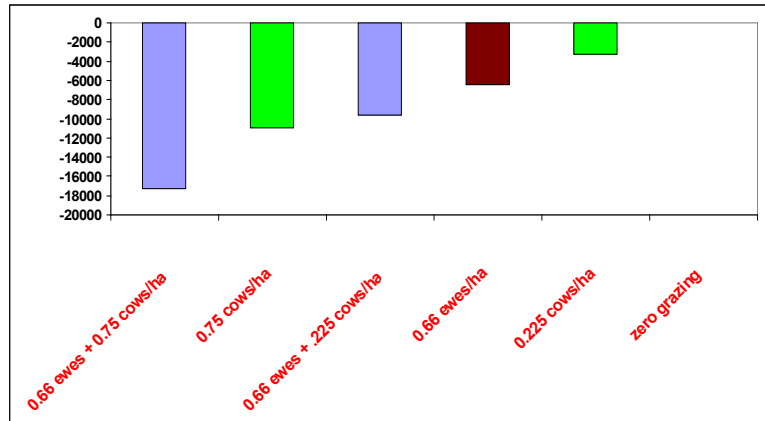
<sup>1</sup> *Molinia caerulea* = purple moor-grass

<sup>2</sup> *Nardus stricta* = mat grass

## Financial Performance

Modelling the financial implications of mixed grazing systems on a typical 200ha hill farm suggests that the inclusion of cattle will have a negative effect on net farm margin without any agri-environmental compensation.

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



Thus despite environmental and productivity benefits from mixed grazing, at current commodity prices, there remain no strong financial incentives for including cattle in annual grazing management strategies. Some additional financial incentive would thus be required on most hill farms.

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