The use of feed blocks as supplementation for the upland hill flock: (2) Cost effective lamb production

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ABSTRACT

Under EU organic livestock regulations introduced in 2000, new restrictions were placed on the use of bought-in feedstuffs in hill systems. These reduced the non-organic annual percentage previously allowed in LFAs from 20% to 10% of annual dry matter intake. A further stepping down of these allowances may be introduced ahead of a complete ban in 2005. Bought-in feed supplements must therefore, be used strategically and offer "best value for money" in terms of ewe performance and lamb growth. The economic cost of supplementing the diet of twin-rearing ewes post lambing with either an approved non-organic feed block + half ration of commercial concentrate mix (B+CCM) or full ration commercial concentrate mix (CCM) was investigated. Lambs reared by ewes receiving the B+CCM diet had a greater liveweight gain than those reared by ewes receiving the CCM diet per kg of ewe supplementary feed. The costs in terms of kg lamb liveweight were lower for the B+CCM ewes than the CCM ewes.

Keywords: organic farming; feed blocks; sheep; costs; lamb production

INTRODUCTION

In 2000 new restrictions on the use of bought-in feed for hill flocks in LFAs were introduced by UKROFS from the EU organic livestock regulations. These reduced the non-organic percentage in LFAs from the previously allowed 20% to 10% of annual dry matter intake, with a maximum 25% for daily dry matter intakes. A further reduction in these levels may be introduced ahead of a complete ban in 2005. Under these restrictions non-organic bought-in feed must represent the "best value for money" in terms of ewe performance and lamb growth.

The economic cost of supplementing the diet of hill ewes for six weeks post lambing was investigated in an experiment at ADAS Pwllpeiran between April 2000 and June 2000. Twin bearing Hardy Speckled Face ewes were housed prior to lambing and received a basal diet of hay which was supplemented with either 300g per head per day of a commercial concentrate mix (CCM) or an approved non-organic feed block (B). After lambing ewes and lambs were turned out to grass where they continued to receive either 600g per head per day of CCM or block + 300g CCM (B+CCM) depending on dietary supplement pre-lambing. Ewes were weighed and condition scored prior to lambing, 3 and 6 weeks post lambing. Samples of ewe milk was also taken at 3 and 6 weeks post lambing. Lambs were weighed at birth, 3 and 6 weeks old. Sward heights were also monitored throughout the six week period.

RESULTS

At one week prior to lambing ewes allocated to the CCM diet were significantly heavier than those on the B diet (59.1 *vs*. 54.2 kg respectively, P<0.05). At 3 weeks post lambing, although both groups had lost weight those ewes receiving the CCM diet were still significantly heavier that those receiving the B+CCM diet (49.5 *vs* 45.6 kg respectively, P<0.05). By 6 weeks post lambing there were no differences in liveweight between diet groups, however ewes on the CCM diet had significantly higher body condition scores (2.57 *vs* 1.98 respectively, P<0.001). Dry matter intake of supplementary feed was lower for ewes allocated to the B+CCM diet (0.309 kg/ewe/day) compared to those allocated to the CCM diet (0.501 kg/ewe/day).

Lambs born to ewes receiving the CCM diet were heavier at birth than those born to ewes receiving the B diet (3.48 *vs* 3.19 kg respectively, P<0.057). Daily liveweight gain was significantly greater for lambs suckling ewes on the CCM diet than those suckling ewes on the B+CCM diet (0.2 *vs* 0.18 kg/day, respectively, P<0.05). However, when lamb liveweight gain is calculated based on either kg supplementary feed basis or on cost of supplementary feed, lambs from ewes receiving the B+CCM diet had greater liveweight gain and at a lower cost. For each kg of supplementary feed intake by ewes, lambs from the B+CCM ewes had liveweight gain of 0.5kg whereas lambs from the CCM ewes had a liveweight gain of 0.33kg. In terms of cost, each kg of lamb liveweight from B+CCM ewes cost £0.39 whereas lambs from CCM ewes cost £0.45 per kg of lamb liveweight.

The combination of blocks + some concentrate proved to be the most cost effective supplement in terms of liveweight gain of lambs. Dry matter intakes of dietary supplements were lower for the ewes receiving the B+CCM diet. Lower intakes of such supplements will minimise the possibility of exceeding the 2000 EU livestock regulations on bought-in approved non-organic feed.

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