



Food Animal Initiative

ENVIRONMENTS FIT FOR ANIMALS FIT FOR THEIR ENVIRONMENT

FAI Technical Datasheet S7 - The benefits of closing the lowland flock - August 2005

Traditionally in the UK we have operated the stratification system for breeding ewes which means that hardy hill ewes are crossed with an upland tup to produce hybrid females which then are sold to the lowland (usually in their second year as gimmers) for breeding. This provides a lift of 15% through what is known as hybrid vigour and removes the need for breeding programmes in lowland flocks. This TDS looks at this benefit compared with the alternative of closing the lowland flock and breeding homebred replacements.

'the facts.....'

The recent FMD outbreak highlighted the large number of movements of animals within the UK. This tendency has been highlighted for other reasons in sheep e.g. enzootic abortion, contagious lymphadenitis, worm resistance and the drive to reduce the number of moves in an animal's life through retailer and other standards due to the potential for welfare issues associated with transport.

There are numerous cases of flocks which have been closed for many years without loss of performance and thus to close the lowland flock is not in itself a problem although it is essential to retain genetic diversity through purchase of new bloodlines or, in a larger flock, to maintain (usually 5) families of different genetics so that selection can be made from within. Often a combination of both is used.

When buying in new bloodlines it is easiest to purchase male lines as they are smaller in number and thus can be carefully screened and quarantined.

Therefore it is now being increasingly debated whether the risk of disease is too great and possibly does not outweigh the benefit of hybrid vigour in the first generation breeding stock. Some lowland flocks have kept back crossbred ewes from the terminal sire cross e.g. Suffolk cross mules for breeding purposes.

In addition the costs of indoor lowland lambing which is the conventional way to give maximum care to ewes and lambs is becoming increasingly prohibitively expensive as labour costs rise. Many breeds of sheep have less problems when allowed to lamb outdoors although it is vital to select for ease of lambing in breeds to be used in this system.

Also purchase price of quality mule type gimmers has been in the order of £90 and these can be produced in the lowlands for considerably less (around £70).



'.... the FAI response!'

We purchased 6 Coopworth rams in 2004 and will use these to breed up the current mule flock. Each ram tupped in the order of 90 ewes without significant loss of condition. The Coopworth was originally a cross between a Border Leicester ram and a Romney ewe. The Coopworth now breeds pure and has been selected in New Zealand for the past 40 years for many of the traits which are now important to us in extensive lowland farming:

- Ability to maintain condition from forage
- Good on their feet
- Protective fleece
- High libido in the rams
- Good mothering ability
- Longevity

There are potential issues such as the conformation of the lambs are not so good as with a terminal sire on the mule. We have found that with careful selection most lambs will meet the required spec and as the selection process proceeds more towards the Coopworth this will improve. Terminal sires will be used on those ewes not required to breed replacements and thus in this instance production will be similar to a classic mule flock.

The future selection programme will concentrate on conformation, lameness, lack of dags, twinning, shorter and tighter fleeces, clean legs and bellies