

BETTER Farm Hill Flocks – Improving output

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The breeding season is under way on the 3 hill flocks involved in the Teagasc BETTER Farm Sheep Programme. For the past three seasons the objective of these producers been to increase the output from their flocks. Output per ewe is a key factor influencing profitability. National figures for Scottish Blackface flocks show that the number of lambs weaned per ewe joined is on average about 0.8. This level of productivity is well below the potential output from a hill flock. Data obtained over a numbers of years from the Teagasc Hill farm in Leenane has shown that it is possible to consistently wean over 1.1 lambs per ewe joined from Scottish Blackface flocks. This is the target that the hill flocks in the BETTER Farm programme are aiming to achieve.

A summary of the key indicators of flock productivity for the BETTER Farm Hill Flocks over the past 3 seasons is presented in Table 1. Prolificacy of Scottish Blackface ewes is highly responsive to increased in live weight prior to mating. The target for hill flocks is to have the ewes with a condition score of 3 at joining. Therefore, correct management during the pre mating period will influence subsequent litter size. Thus it is a worthwhile exercise to handle the flock two months prior to joining to determine the condition of the ewes. Ewes in poor condition should be given access to preferential grazing to meet target condition at joining. By improving management during the early autumn period the flocks in the BETTER Farm Programme have all seen increases in the average litter size for the past 2 seasons.

One area of concern during the past 3 seasons for the hill flocks in the BETTER Farm Programme has been the relatively low percentage of ewes lambing per ewe joined. For a well managed hill flock a target of over 92% of the ewes that are joined with the ram should lamb. However, this target is not always achieved and it is important to determine the causes of this low reproductive rate. During the first two seasons in the programme 2008/09 and 2009/10 the proportion of ewes that lambed per ewe joined was lower than expected. This problem was further compounded during the 2009/10 season as a proportion of ewes were lost during difficult prevailing weather conditions

which included snow drifts. Improvements in ewe weight and condition prior to joining can influence the pregnancy rate of the breeding flock. The fertility levels of the breeding flock will also be influenced by ram. The management of rams during the breeding season requires a sensible approach to minimise the risk of exposing ewes to an infertile/sub fertile ram for prolonged periods. In the absence of using raddle on rams during the breeding season it may be difficult to detect infertile or subfertile ram problems. Although the use of raddle on rams in hill flocks can prove difficult, it is an extremely useful management tool that provides an early indication of potential problems. When the records for each flock in the BETTER Farm Programme were examined issues surrounding the management of rams during the breeding season became apparent.

For example in one of the BETTER farms the effect of a sub fertile ram on the percentage of ewes that lamb is presented in Table 2. On this farm three Scottish Blackface rams were being used in single sire mating. As these rams had either progeny or siblings in the breeding flock it was necessary to manage them separately. It is clear from the data shown in Table 2 that there was no problem for Rams 1 or 2 and by the end of the first 3 weeks they had bred the vast majority of the ewes that they were assigned. However, during this period only 55% of the ewes joined with Ram 3 had actually conceived. This has serious implications for the flock output that year. In this particular case there was no raddle used. As the ram was actually mating ewes each week during the joining period the problem went largely unnoticed, until the last 10 days of the breeding season when a terminal sire breed ram was introduced. Taking a proactive approach to ram management during the breeding season by either, using a group of rams or by rotating rams every 2 to 3 weeks between groups of ewes. This can minimise the negative consequences associated with an infertile or sub fertile ram. This approach has been adopted in some of the BETTER farm flocks.

There is significant scope to increase the level of output from hill flocks, this has been demonstrated on the hill flocks in the BETTER Farm Programme. Improved management in these flocks has resulted in a increased litter size and percentage of ewes lambing. Consequently, during the 2 years it has been possible to increase the number of lambs weaned per ewe joined by 0.14.

Key points

- Litter size in hill flocks can be improved through better management prior to mating
- Ram fertility can be a major issue on some farms and steps must be take to offset the consequences of this.
- Output from hill flocks can be increased

Table 1. Ewe Performance in BETTER Farm hill flocks over the past 3 seasons

	season		
	08/09	09/10	10/11
Litter size	1.18	1.29	1.32
Percentage of ewes lambed	88.2	79.5	95.9
Lambs weaned per ewe joined	0.96	0.92	1.10

Table 2. Cumulative percentage of ewes that had become pregnant to individuals rams at the end of weeks 1, 2 and 3 of the breeding season.

Ram	Week of breeding season		
	1	2	3
Ram 1	19.1	66.0	89.4
Ram 2	29.2	60.4	95.8
Ram 3	11.1	33.3	55.6