BETTER Farms Sheep Programme ~ Lowland flocks

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The Teagasc BETTER Farm Sheep Programme was established in the autumn of 2008. The objective of the programme is to establish focal points for the on-farm implementation, development and evaluation of technology that is relevant to the sheep sector. The four lowland flocks involved in the BETTER Farm Sheep Programme are, David Mc Laughlin Co. Donegal, John Curley Co. Roscommon, John Kelly Co. Wicklow and Brendan O' Sullivan Co. Kerry. These farmers have focused on improving the physical and financial performance of their flocks through exploiting the available technology developed in the Sheep Research Programme. These flocks can provide focal points for discussion and producer groups, visits can be arranged in conjunction with the Teagasc Advisory service.

The lowland producers involved in the BETTER Farm Programme are preparing for lambing which is the busiest part of their season. At lambing each of these farmers tag all lambs at birth and record the following: birth weight, breed, sex, lambing assistance, mortality and link each lamb to its mother, thus allowing for a complete performance recording. Lambing in the 4 lowland BETTER Farms is due to commence on the 25th of February, 2nd March, 8th March and the 10th March respectively. Lambing takes place indoors for all of the flocks, consequently requiring good facilities, including an adequate number of lambing pens. Three of the flocks have altered their lambing facilities over the past few seasons to accommodate changes in flock size and/or housing arrangements.

The grazing plan for each of the flocks will be determined largely by their closing strategy last winter, the stocking rate on each of the farms and grass availability at turnout.

This year the number of ewes due to lamb has increased for each of the flocks from last year (+ 7 to 25 %) and scanned litter size is also higher (+ 0.1). The litter size, lamb mortality and lambing spread for 2010 are presented in Table 1 and lamb birth weight and assistance at lambing for 2010 are presented in Table 2. Each of the flocks has a target of keeping total lamb mortality, which includes dead born lambs, to less than 10%. Although the level of mortality at lambing (dead born or died at lambing)

was quite low there was significant variation among the flocks. The bulk of the mortality occurred within the first 2 weeks after birth. Last year the prevailing weather conditions during March and April contributed to the overall mortality. For example, on one of the farms 3.5 % of the total lamb mortality occurred during a single cold night with heavy rain/hail in late March when lambs were lost outdoors as a result of hypothermia. The lambing spread for the flocks last year was more compact than previous seasons with over 90% of the ewes lambing within in 6 weeks or less

Lamb birth weight, as influenced by litter size, is presented in Table 2. The target birth weight for singles, twins and triplets is 6, 5 and 4 kg respectively. These targets were achieved on three of the farms. Lamb birth weight is influenced by plane of nutrition in mid and late pregnancy and by season of shearing. Previous studies from Athenry have shown that shearing at housing can increase lamb birth weight by 0.6 kg. Further studies at Athenry have shown that a 0.5 kg increase in birth weight results in an increase of 1.7 kg in weight at weaning. This is one of the easiest changes that can be made in flock management that will result in an improvement in lamb performance.

The flocks in BETTER Farm programme used the scan results along with the mating information (raddle marks) to group ewes according to litter size and expected lambing date. This information along with forage analysis was used to devise their concentrate feeding programme for late pregnancy which will focus on achieving target lamb birth weights.

During lambing in 2010 each of the farmers's recorded any assistance that was required at lambing. The percentage of ewes that were assisted at lambing is presented in Table 2. There was considerable variation among flocks in the number of ewes that required assistance, with as low as 1.2% being recorded.

Changes in the flocks for the coming season

A number of changes have been made for the coming season in the lowland BETTER Farm sheep flocks. For one of the flocks the decision was taken last autumn to revise the winter housing arrangements and management. For the previous seasons ewes were housed unshorn and managed on straw bedded sheds. To reduce costs (long term) a slatted cattle shed which was unused for the past few winters was converted to provide housing for 85 % of the flock. In addition ewes were shorn after housing to

improve lamb birth weight. The focus for this flock is to continue to finish all lambs from grazed grass offered as the sole diet, only lambs reared as triplet received concentrate supplementation pre weaning; this has been achieved over the past 2 seasons.

Ewe of lambs have been joined in two of the flocks involved in the BETTER Farm Sheep Programme over the past few seasons to increase flock productivity and reduce the cost of maintaining replacements. For both of these flocks the ewe lambs were joined 1 to 2 weeks later than the main flock to spread the intensity of the lambing period. Consequently mature ewes will still be lambing at the same time as these yearling ewes thus providing an opportunity to cross foster multiple birth lambs onto mature ewes. Lambs from these yearling ewes will receive up to 300 g of concentrate supplementation from 3 weeks to weaning. Yearling ewes rearing single lambs will receive no supplementation at turnout whilst those rearing multiples will receive 0.5 kg concentrate per day for a few weeks.

For one of these flocks the plan is to increase flock size (thereby stocking rate) considerably over the coming seasons. To achieve this a large number of ewe lambs were purchased last august, over 200 of these are due to lamb from March onward. A study has been undertaken on this farm to evaluate the effect of season of shearing and ram breed on the performance of yearling ewes, including lambing difficulty/mortality and lamb growth rate.

The focus on 3 of the farms is to reduce concentrate supplementation through improved grassland management. The overall aim is to finish more lambs from a grass only diet which has already been achieved on one of the BETTER Farms to date.

Conclusions:

1. Over 90% of ewes lambed within a period of 6 weeks or less
2. Major variation among flocks in assistance at lambing
3. Low lamb mortality is being achieved
4. Scanned litter size has increased
5. Number of ewes lambing in these flocks has increased – up to 25%

Table 1 Lowland Flocks lambing details - 2010 season

	Farm			
	1	2	3	4
Litter size	1.75	1.83	1.75	1.76
Mortality at birth (%)	1.3	5.3	2.5	6.3
Total mortality to weaning (%)	5.1	11.5	5.5	10
Duration of lambing season[§] (weeks)	6	6	5	5

[§] Weeks to get to 90% of ewes lambed

Table 2. Lamb birth weight (kg) and assistance at lambing - 2010 season

	Farm			
	1	2	3	4
Single	5.9	6.1	5.6	6.5
Twin	4.9	4.9	4.4	5.2
Triplet	4.2	4.1	4.0	4.2
Ewes assisted at lambing (%)	1.2	14.7	29.4	46.6