



Finishing hill lambs outdoors

Frank Campion,
Teagasc Animal and
Grassland Research and
Innovation Programme,
Athenry.



The hill sheep sector plays a key role in the economic health of rural economies and the maintenance of the natural landscape in many of Ireland's most rural and scenic areas. However, the sector is restrained by comparatively low levels of lamb output and weak markets for hill lambs. Selling lambs as stores is currently the main outlet for hill producers to sell lambs and relies on the confidence of lamb buyers that their systems can finish these types of lambs profitably.

Recent work carried out in Teagasc by Michael Diskin and Noel Claffey has shown that hill-bred lambs respond to improved nutrition post-weaning when offered high concentrate diets. This work also highlighted the potential to maximize carcass gain from grazed grass, prior to lambs being finished indoors. Clear blueprints and targets for finishing lambs arose from this work and are used frequently by farmers and lamb buyers when considering finishing

hill-bred store lambs (Table 1).

Further work is required on the performance of hill-bred lambs using pasture swards and how the performance of these swards and the animals grazing them compares to using forage crops. The use of forage crops for finishing lambs is an attractive option for producers and lamb finishers in certain areas of the country, but information about the performance of lambs on these crops is limited.

With this in mind, a new research project has begun in Teagasc Athenry, to quantify the differences in crop yield potential and carrying capacity from a selection of forages when used in store lamb finishing systems and how these compare to finishing lambs

on grazed grass or indoors on ad-lib concentrates.

Treatments

In August 2019 purebred Scottish Blackface and crossbred Scottish Blackface entire and castrate male lambs were purchased and assigned to one of six treatments:

- Lambs housed indoors and offered ad-lib concentrates.
- Lambs grazed in-situ on permanent pasture swards.
- Lambs grazed in-situ on newly re-seeded pasture swards.
- Lambs grazed in-situ on forage rape.
- Lambs grazed in-situ on kale.
- Lambs grazed in-situ on hybrid brassica.

Table 1. Suggested minimum drafting weights for male lambs finished on an all-concentrate diet.

Breed	Gender	Target carcass weight (kg)	Expected KO%	Min drafting weight (kg)
SB	Wether	18	45	38
SB	Ram	20	43	43
TXSB	Wether	21	47	42
TXSB	Ram	23	46	47

Each treatment was allocated 66 lambs based on liveweight (ranging from 2kg to 39kg liveweight), sex (entire male or castrate) and breed. Lambs remained on grass swards outdoors until the experiment began at the end of October. At the time of writing, the first year of the experiment is still ongoing, so results are limited. Regular performance assessments are taking place, including the collection of lamb liveweights, condition scores, dag scores and lameness records, alongside the collection of carcase data including carcase weights and muscle and fat scores.

Swards

The swards for the re-seeded pasture, kale, forage rape and hybrid brassica treatments were all sown on July 12. The land was cultivated using a disc harrow and then power harrowed. A two-way mix of Abergain and Aberchoice were used for the grass sward and picked based on the Teagasc Pasture Profit Index. The varieties of kale, forage rape, redstart are listed in Table 2, alongside some of the performance figures for the forage crops this year.

While not fully analyzed yet, crop yields for the kale, forage rape and hybrid brassica are disappointing and the reasons for this are still being investigated. The method of sowing, high levels of rainfall during August and September and a major issue with weeds following establishment are all contributory factors.

Pre-grazing heights for the grass treatments to-date are averaging 9cm and are being grazed to 3.5cm-4cm. Wet weather has made grazing out the re-seeded pastures difficult at times, with temporary fences being used to try maximize utilization, while reducing ground damage. Lambs are being strip grazed through the forage crops with a new area given every two days.

The area being allocated is based on the crop yield, utilization and the predicted lamb intake. Lambs have continuous access to straw as a supplementary forage source and also to ensure there is sufficient forage in the diet to maintain rumen function. This is the start of a long-term study and it will take a couple of years for a clear message to emerge as to how the use of forage crops for finishing hill-bred store lambs compares to the other systems out there.



Table 2: Initial analysis of forage crop yields and utilisation of crops grazed as December 6

	Variety	Fresh Yield (Kg)	DM %	DM Yield (Kg)	Utilised %
Kale	Maris Kestrel	9.5	14.1	1.4	80
Forage Rape	Stego	13.8	14.2	2	83
Hybrid Brassica	Redstart	14.8	13.7	2	76