

Using forage brassicas for finishing lambs at Kenmure



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Stuart McWhirter, Kenmure Farm

Kenmure Farm lies along the Tarff River near the village of Kirkcowan in South West Scotland. Stuart McWhirter farms 1300 acres in partnership with younger brother John and his mother Hazel. The land is a combination of hill, rough grazing and improved grassland. With a range of land types and productivity Stuart focuses heavily on improving the better quality land with highly productive grass species and soil fertility and uses rotational grazing as a means to utilise more grass.

The McWhirter family farm 110 Spring calving cows and 800 ewes. Cows are Simmental and Aberdeen angus cross cows bred to Charolais and Aberdeen angus bulls. Heifers are retained for replacements and remaining progeny sold as stores at approx. 12 months through Castle Douglas market.

Ewes are a combination of Cheviot and Scotch Mules bred to a combination of Leicester, Cheviot and terminal Texel sires. All lambs are sold finished from grass or forage crops with female replacements kept for breeding.



Stuart has been using forage crops for the last ten years to fatten lambs. The forage rape and stubble turnip mix is direct drilled into sprayed off pasture with that field then returned to a grass ley the following year. Stuart usually splits the field of forage crop into 4 or 6 blocks and adds lambs which are typically over 37kg to finish at approximately 43kg liveweight.

Stuart finds the direct drilling works well as it is a quicker turnaround than full cultivations given the amount of stones on his fields and it gives a more stable base to the crop to prevent poaching and keep lambs clean. With the dry weather during June and July 2021 the direct drilling worked well as more moisture was retained at drilling with Stuart claiming this is the best crop he has ever grown.



The combination of spitfire forage rape and stubble turnips are fast growing providing a nice combination of palatable leaf and stem and bulbs which lambs often go back to. Utilisation of this brassica combination is high, allows Stuart to get lambs off grass to build covers for tugging and provides an early entry to establish the new ley the following spring.

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Crop Yield

The forage crop at Kenmure was weighed on the 5th October prior to lambs being moved onto the crop to graze. Sites were selected randomly across the field, with a 1m² quadrant used to measure out each plot. The bulbs and forage rape plants were removed from each site and weighed in a feed bag to get the freshweight per m², an average FW yield was taken from all plots. The dry matter yield was calculated by:



$$\text{A) Freshweight kg/m}^2 \times 10,000 = \text{FW yield kg/ha} \\ 7 \times 10,000 = 70,000$$

$$\text{B) FW Yield} \times \text{Expected Dry matter \% of crop} \\ 70,000 \times 0.074 = 5180\text{kg DM/ha}$$

$$\text{Total crop yield} = 5.1 \text{ tonnes DM/ha}$$

Forage Feed Budget

A budget has been prepared based on an average liveweight of 38kg for the group of lambs which will graze the forage crop. Some assumptions have been made for this feed budget:

- ♦ daily liveweight gain of 200g/day
- ♦ suitable weight and grade for slaughter at 43kg.
- ♦ lambs will require approximately 25 days on crop to achieve this
- ♦ 85% utilisation of crop
- ♦ 100% of diet is supplied from brassica crop (grass available on field edges)

The table shows a breakdown of the grazing days available for each 1 ha block of crop. With a daily intake of 1.5kg DM each 1ha block should feed 115 lambs for 25 days to achieve 43kg liveweight. The total field should therefore enable Stuart to finish approx. 368 lambs. Allowance should be made for graduating increases in daily intake as lambs grow and crop losses if grazing over a longer period of time.

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| A) Crop Area Available | 3.2 ha |
| B) Yield tDM/ha | 5.1 |
| C) Total Feed Available t/DM (A x B) | 16.3 |
| D) Utilisable Feed Available tDM/ha (85% utilised) (C/100 x 85%) | 13.8 |
| E) Daily Requirement per lamb (4% of liveweight) | 1.5 |
| F) No of grazing days on 3.2 ha (D/E) | 9200 |
| G) Grazing days per Ha | 2875 |



The total growing cost for this crop was £251/ha, which equates to a cost of £2.18 per lamb for 25 days grazing.