

NITHSDALE MONITOR FARM Strip Grazing Kale/ Swede Crop For Ewes

The Clonhie community group were interested in having a look at options for reducing the costs of wintering the Clonhie ewe flock. A kale and swede crop was established in a 3.7ha field in early June 2017 to strip graze ewes on from tuppung through to lambing time.



Field ploughed in early June



Kale & Swede crop in August



Mid-January



Ewes strip grazing in February

THE CHALLENGE

Winter nutrition is both a cost and a challenge for every flock including Clonhie. Like most sheep producers, Andrew was in the habit of set stocking the flock over most of the fields during the winter period, which meant feeding the ewes concentrates in February and March because, just as the ewes' requirement for nutrition increased, the grass in all the fields ran out. The community group thought that a forage crop could be a good and cheaper option to see the Clonhie flock through the winter period.

It was decided to establish a mixed kale and swede crop in early June 2017 and to compare the cost of this with all grass winter grazing and traditional set stocking in previous years.

WHAT WE DID ON FARM

The kale and swede crop was established by ploughing, lime application of 2t/acre, discing, seeding with the seed mixed into the fertiliser and harrowing then rolled in. The crop established and grew very well reaching 10tDM/ha in December.

The crop was strip grazed by 290 of the leaner ewes from 10th January to scanning, with a run back onto a neighbouring field. Assuming analysis of 12ME for the crop the ewes were

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allocated 1m² per head per day [@ 90% utilisation this is 0.9kgDM/hd/day]. Andrew moved the fence every 5 days.

After scanning 372 ewes were put onto the kale and swede crop with a run back onto another field. It was calculated that there was going to be a shortfall of forage to get the flock through to lambing time so additional silage was offered in a ring feeder to spin the forage crop out and they were fed 0.3kg concentrate/head/day i.e. the same as those on the all grass wintering trial.

ALLOCATION OF THE CROP

The actual winter schedule worked out as follows :-

- Assumed kale and swede crop is 12ME. Allocated 1m²/hd/day [~0.9kgDM/hd/day]
- Fence moved every 5 days until scanning
- Before scanning 290 leaner ewes on kale and swede crop with run back onto a grass field
- After scanning 372 ewes on kale and swede with run back onto another field BUT
 - Calculated had a shortfall [options the same as for deferred grazing group]
 - Offer silage to those on the kale & swede crop to spin it out a bit. [✓ - chose this option]
 - Also fed 0.3kg/hd/day concentrates for 30 days before lambing. [✓ - chose this option too]

THE RESULTS

1. The ewes were in much better Body Condition Score [BCS] than in previous years.
2. At lambing time they also had more colostrum and milk than in previous years.
3. It's just a pity the atrocious weather in April 2018 meant lambs really struggled to get established outside.
4. Although a great crop was grown which fed the ewes through until March, utilising it was more challenging, as moving the electric fence was a much more difficult job in the kale and swede crop than on the grazing paddocks, especially in winter conditions.

A total of 9 tonnes of sheep concentrates were purchased for the whole flock in 2018 [9kg/ewe], about half of what had been purchased in 2017.

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KALE AND SWEDE COSTS

Seed	£420
Fertiliser, lime, slug pellets	£1,093
Cultivations	<u>£500</u>
Total	£2,013
Total cost/ha (acre)	£544/ha (£218/ac)

On 5th December crop was measured at 6.7kg/m² @ 15% dry matter
 = 6.7kg X 0.15 = 1.005kg DM / m²
 = 1.005 X 10000 kgDM / ha =10050kgDM/ha
 = 10tDM/ha. [total crop = 10t/ha X 3.7ha = 37t DM]

Cost/kg DM grown

Kale and swede crop costs = £544/10t = £54.40/t DM.

OR

5.44p/kgDM [= 90days @ 5.44p/hd/day = £4.90/hd]

Cost of concentrates purchased @ £220/t => ~22p/kg as purchased

OR

26p/kgDM [@85%DM]

Cost for deferred grazing was very low p /kgDM. [no fertiliser was applied for the grass wintering trial and electric fencing [cost depreciated over 5 years], and time to shift it is required for both all grass wintering and strip grazing of the forage crop]

Comparison of costs per head from 1st January to end April

	Set stocking	All Grass Wintering 2018.	2019	Strip Grazed Forage 2018.
Establish forage crop	0	0	0	4.90
E-fencing & time moving it	0	0.50	0.50	0.50
Forage hay/silage fed	4.00	0	0	0.50
Concentrates fed*	4.40	2.20	1.20	2.20
Total cost [£/head]	8.40	2.70	1.70	8.10
Spring grass availability	Poor, slow & late	Good & earlier		Good & earlier - also provides good entry for grass reseed to improve farm swards

*- all concentrates valued at £220/t purchase price

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WHAT HAS CHANGED ON FARM

This trial has demonstrated the value of a grazing forage crop to over winter the flock on a small area thus resting a larger proportion of the farm to provide improved [quantity and quality] spring grazing and savings on feed costs through lambing time.

Due to the success of this trial Andrew plans to continue to use forage crops as and when possible at Clonhie. Being able to concentrate large numbers of ewes on a small area of forage crops makes it easier to rest the other fields [used at tugging time] for spring/lambing time management to provide the feed needed in April.

Because of the very late spring and extreme grass shortage in 2018 no forage crop was established in 2018. However, Andrew really missed having a forage crop during the 2018/19 winter and is keen to use a forage crop in future years. As it turns out Andrew has been offered the grazing of a forage catch crop locally for winter 2019/20 so he has no need to establish one at Clonhie himself this year [2019].

Whether he has a forage crop on farm or not Andrew will not be going back to set stocking.

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