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NITHSDALE MONITOR FARM All Grass Wintering for Ewes

The Clonhie community group were interested in having a look at options for reducing the costs of wintering the Clonhie ewe flock.



Andrew discussing the paddocks.



Today's ration 11.3ME; 20% protein.



Grazed paddocks recovering quickly

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. Rhidian explained that the grass was also slow in growing in the spring due to over grazing through the winter/spring period, leading to feeding further concentrates until late April, even May in a late spring.

If there is a cheaper way to feed ewes during winter, which also encourages earlier and improved spring grass growth Andrew and the Management Group were keen to see it in action.

WHAT WE DID ON FARM

All grass wintering, where selected fields are shut off and grass growth saved for future grazing, was introduced as a cheap and efficient way of feeding ewes through the winter period between tugging and lambing time.

Rhidian Jones of RjLivestock System Ltd helped Andrew to select suitable fields to allocate for the all grass wintering trial. These fields totalling 26ha, were grazed down hard and shut off in late August 2017. No fertiliser was applied on these fields. After tugging time, a proportion

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of the Clonhie flock was paddock grazed around these fields from mid- December until late March.

Rhidian's calculations, assuming grass was 10ME, on 5th December were as follows :-

- 26 hectares with average cover of 3,137 kgDM/ha [average plate meter reading in first week of December]
- Available DM = 3,137 – 1,250 (residual) = 1,887 kgDM/ha available to graze
- 1887 X 26 hectares = 49,062 kgDM x 80% utilisation = 39,250 kgDM
- 39,250/1.25 = 31,400 feeding days
- so will feed 314 ewes an average of 1.25kgDM/hd/day for ~100 days

The actual winter schedule worked out as follows :-

- 22nd December 570 ewes on deferred grazing paddocks for 45 days. Grass budget as follows:-
 - 570 x 1.25 kgDM/hd/day x 2 days = 1425 kgDM required every 2 days
 - Available DM = 3,137 – 1,250 = 1,887 kgDM/ha
 - 1425/1887 = 0.75 hectares [~1.9 acres] for 2 day paddocks
- Scanned ewes at end of January and grass analysis was 11.2ME and 20.8% protein!
- 260 ewes [multiples & lean singles] grazed after scanning. BUT
 - Calculated we had 35 days grazing available – ie about 20 days shortfall. Options included
 - Eke out with silage and/or concentrates on paddocks.
 - Graze to lower residuals as fields not needed at lambing.
 - Finish grass then feed silage/concentrates on sacrifice area.
 - Keep monitoring regrowth and go back to graze regrowth again. [✓ - did this option]
 - Feed 0.3kg/hd/day concentrates for 30days before lambing. [✓ did this option]

This system is totally flexible with many different options available for supplementing the grass / forage available for the flock. Other options on some farms would include housing ewes, if buildings available, to rest grass further and to make use of forage conserved when plentiful in summer.

Ewes were moved to lambing fields 25th March & hard feeding was ceased. Lambing started on 1st April

THE RESULTS

These ewes were in much better body condition score than in previous years. At lambing time, they seemed to have more colostrum and milk than in previous years. It's just a pity

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the weather in April 2018 was terrible and the lambs really struggled to get established outside.

Grass regrowth of grazed paddocks was phenomenal, and we began to understand that it is the rest after grazing that is essential to regrowth. All the early grazed paddocks were grazed a second time at a reduced stocking rate, or for a shorter time, and we managed to spin out the grazing available beyond what we thought was possible.

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

2018 was a particularly cold and late spring, coupled with the fact that a lot of lime had been spread on Clonhie grazing fields so this made comparison of spring growth from 2017 to 2018 difficult.

CALCULATIONS FOR WINTER SEASON 2018/19

As there was no kale/swede crop established in 2018 plans had to be made to winter the flock on grass alone throughout the winter of 2018/19. 2018 had been a very challenging year with a very cold and late spring, followed by a dry summer, which does not suit the ground conditions at Clonhie. As a result, grass covers in September were an average of just 1978 kgDM/ha on Clonhie and 2143 kgDM/ha on Glengar, compared with 2521 in September 2017. The target for this time of year is 2500kgDM/ha.

Calculations for grazing supply available and demand required for the livestock showed a considerable gap to be filled. Please see the calculation tables below:

The estimated gap was calculated to be $344,128 - 391,148 = 47,000$ kg DM

The 60 tonnes fresh weight of silage in the pit is equivalent to 21 tonnes DM @ 35% DM, which reduces to deficit to 26,000kg

Ewes were paddock grazed from August right through tugging to try and make best use of the forage available on farm and reduce the need to purchase feed.

Further options to reduce the deficit included :

- Feed Purchases
 - 50 tonnes of fodder beet
 - 20 tonnes of concentrates
- Reduce livestock demand
 - Send more livestock off farm or for longer
 - Sell lambs earlier

330 store lambs were sold in August to provide further [~20,000kg DM] grazing for the flock

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SUPPLY CALCULATIONS

SUPPLY [for sheep & cattle only]	Av kgDM/ha in Sept 2018	Residual kgDM/ha	kgDM/ha available	Total Available
CLONHIE [76 effective ha]	1978	1250	728 kgDM/ha	55,275
GLENGAR [48 effective ha]	2143	1250	893 kgDM/ha	42,983
Still to Grow				
Effective ha	Month	Av. Pasture Growth rate [kgDM/ha/day]	No of Days	Extra DM growth
174.05	Sept	30	16	83,544
174.05	Oct	20	31	107,911
174.05	Nov	10	30	52,215
174.05	Dec	5	31	26,978
174.05	Jan	0	31	0
174.05	Feb	5	28	24,367
174.05	Mar	10	31	80,933
174.05	April	20	5	17,405
Winter grass growth				393,353
Total grazing available				491,611
TOTAL AVAILABLE			@ 70% utilisation	344,128

DEMAND CALCULATIONS

DEMAND	No	kgDM/hd/day	days	Total
Ewes to tugging	735	1.75	57	73,316
Ewes at tugging time	735	2	34	49,980
Ewes Tugging to scanning	735	1.25	42	38,588
Ewes Scanning to lambing	735	1.5	70	77,175
Gimmers to tugging	105	1.75	57	10,474
Gmrs at tugging	105	2	34	7,140
Gmrs tugging to scanning	105	1.5	42	6,615
Gmrs scanning to lambing	105	1.5	70	11,025
Gmrs go to wintering	170	2	35	11,900
Gmrs after return	170	1.5	88	22,440
Ewe Hoggs	330	1.25	10	4,125
Ewe Hoggs	330	1	46	15,180
Lambs	370	1	14	5,180
Lambs	485	1	30	14,550
Lambs	100	1	30	3,000
Cows	21	12	90	22,680
Cows	21	5	120	12,600
Calves	16	5	56	4,480
Other Cattle	5	10	14	700
TOTAL DEMAND				391,148

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In spring 2019 the ewes were once again in good condition for lambing and had ample supply of good colostrum for their lambs, which is a significant improvement on pre 2018 performance.

In the event the 2018/19 winter was mild and regrowth was excellent for most of the winter leading to increased supply for the livestock at Clonhie in Spring 2019.

Total concentrate purchased for the flock in spring 2019 was 4t ewe rolls & 1t feed blocks ie 5kg/head. So just over half of the feed purchased per head in 2018, and roughly a quarter of that fed in 2017. Andrew is pleased to have found a way of feeding the flock at much less cost per head than on the previous set stocking system on the farm. The much improved and earlier spring grass growth is also a real bonus for the flock and farm profitability. Andrew will not be returning to the set stocking policy.

Scanning percentage was not so good in 2019 but this was put down to the poorer summer 2018 grazing season where ewes did not get the chance to fully recover after weaning, coupled with liver fluke Trichlabendazole resistance, which was discovered just before tupping time – a little late for all the ewes to properly regain body condition scores to ensure normal pregnancy rates.

For cost comparison of All Grass Wintering, Forage Crop and Set Stocking please see the Nithsdale Kale & Swede crop theme report.

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