

LOCHABER MONITOR FARM Rotation Grazing with Minimal Capital Investment

THE CHALLENGE

Strone Farm currently rents land in Inverness-shire for summering cattle as there is not enough grass at home. Grazing is all currently managed on a set stocking basis

Rotational grazing is a method that is becoming more popular on low ground farms due to the improvement in grass utilisation it causes. However, most systems rely on splitting up fields and require a potentially large capital investment in fencing and water supplies.

The challenge was to see if it would be possible at Strone to design a rotational grazing system with

- Minimal capital investment required
- Would replace the need for the business to rent extra grass off farm
- Does not impact on the existing silage area cropped at Strone

The main benefits would be a saving rent, plus time in travelling to rented grass some distance away from the farm.

WHAT WE DID ON FARM

The project brought up Lorna Galloway, a grassland specialist, and held a Monitor Farm meeting at Dalilea Farm in Lochaber, where John MacAulay had already tried a rotational grazing system and we could demonstrate and explore rotational grazing techniques.

We then drew up a plan for a rotational grazing system on Strone that needed to handle at least 30 cows, plus their calves for the summer months.

Two blocks of fields were identified:

Block one is close to the steading and extends to 11.4 ha. It is currently split up into 3 fields. It is currently grazed by around 12 young stock over with summer, along with tups. Sheep are also graze the field closest to steading if required.

Block two is seasonal grazing located 4 miles from the steading. It extends to 15.1 ha and again is currently split into 3 fields. It is set stocked by 15 dry cows over the summer, with silage made on one field.

THEME REPORT



Each field already has an existing water supply.

Block One:

Block two



How does rotational grazing work in practice?

- The key to rotational grazing is the concept of allowing the grass to have a grazing break to recover. Aim should be for a 21 day break. To minimise capital investment, a system of four fields grazed in a seven day rotation will provide that 21 day rest period.
- Assessing grass heights is also important. The principle at Strone will be to put the stock into the field at a grass height of 8cm and take them out at a grass height of 4cm. During peak grass growth, it should also be possible to take out one of the paddocks for a silage crop as required to manage the grass and avoid waste and furthermore, mitigating the loss of a silage field from the existing system.
- At Strone there are other fields nearby that can act as a buffer in the shoulder seasons should grass growth be slower and the grazing break need to be extended to meet the 8cm grass height target on entry.

Capital investment required

- On the Strone blocks above, the decision was to split one of the fields into two parts to create 4 fields in each rotational grazing block.
- We would use electric fencing and ensure that both sides of the field have access to water. The maps above show the fencing required as a red dotted line
- The capital investment required is a total of 460m of 2 wire electric fencing at £2/m, plus energiser's is estimated at around £1,100.

THEME REPORT



Alternative fields will need to be found for the dry cows, young stock and tups which currently graze these blocks for part of the year. However, the buffer areas and other fields nearby are available, so this shuffling of stock about is not seen as a huge problem. Especially as the dry cows can handle some rougher vegetation.

Results

Based on the land available, a calculation was made to see what stock these areas would support to see if the proposal was practical.

	Strone Block	Seasonal Block
Total size of block (ha)	11.4	15
Target pre-graze cover is 8cm (kg DM per ha)	2500	2500
Target residual cover is 4cm (kg DM per ha)	1500	1500
Available feed (kg DM) per rotation	11400	15000
No of paddocks	4	4
Potential available feed per paddock (kg/DM)	2850	3750
Utilisation rate	70%	70%
Realistic available feed per paddock (kg/DM)	1995	2625
Average weight of stock (kg) (Cows at 700kg, with calf at 300kg)	500	500
Allocation (% of body weight)	2%	2%
Daily feed allocation for individual (kg DM/day)	10	10
Realistic Number of feeds per paddock	200	263
Shifting frequency (days)	7	7
No of animals each paddock can support for this time period and within this rotation	29	38
Total number of cows and calves combined	67	

At Strone a simple system, requiring a capital investment of around £1,100 should summer over 30 cows with calves at foot resulting in the rented ground in Inverness-shire no longer required so consequents in savings in rent, fuel and time, while not impacting too severely on silage production for the winter months.

This scenario was costed using a simple partial budget technique, with the results below showing the financial benefit of adopting this system.

THEME REPORT



Extra Costs	£
Electric fencing spread over 5 years	220
Time for shifting fences (1 hr/week for 16 weeks)	192
	412

Costs Saved	£
Example rent for 30 summering cows	1050
Haulage to Inverness & back	800
	1850

Extra Benefit **1438**

Extra Loss **0**

There is no question that rotational grazing techniques can offer a substantial improvement in grass utilisation and stocking density in fields, even in the west of Scotland. There is an untapped resource here and this work will hopefully encourage other farmers and crofter to give it a try.

Full rotational/paddock grazing systems are perhaps too capital and labour intensive for hill farms. However simpler systems using a smaller number of fields, utilising existing field structures as much as possible to minimise capital investment are a real practical option.

FACILITATOR CONTACT DETAILS

Niall Campbell & Morven MacArthur
SAC Consulting
Glencruitten Road, Oban, PA34 4DW
01631 563 093.

