

## SHETLAND MONITOR FARM Grass Utilisation/Rotational Grazing

### THE CHALLENGE

Making the most of Shetland short but intense growing season resulting from our long summer daylight hours but short summer and long winter. The grazing season can be late starting but when it does start growing the speed of grass growth can be difficult to keep up with. Grassland utilisation was identified as an area for development at Bigton Farm at our very first meeting

### WHAT WE DID ON FARM

Kirsty and Aimee introduced rotational grazing in year 1 of the Monitor Farm programme, and at the 3<sup>rd</sup> Shetland Monitor Farm meeting in 2017 they explained how the rotational grazing system was working for them. They had split one field into six; and had found that it had worked except for the cows escaping and moving themselves to the next paddock. Each paddock was approx. 2 acres in size.

Because of the good weather that summer they had found that they had too much grass and so had to shut up two of the six paddocks for silage. There was an increase of 20% more grass. Rotational grazing meant the farm could keep 25 cows and calves on 12 acres for 12 weeks. Good existing infrastructure meant that the water supply was easy to put to all six paddocks. They installed 3 new water troughs to ensure adequate water supply.

This excess grass is liable to be fairly typical in Shetland in a good growing season and so the need to take paddocks out for silage will be quite a frequent situation.

At the 9<sup>th</sup> Shetland MF meeting on the 6<sup>th</sup> June 2018 the benefits of introducing rotational grazing and the contribution such a system could make towards business profitability was expounded by the visiting speaker Trevor Cook, Vet and Sheep & Beef Production Consultant from New Zealand.

At this meeting, Trevor drilled down in to techniques for measuring farm cover. In 2018, the cover increased from 1518 kg/dm/ha in April, to 2158 kg/dm/ha in August, which demonstrates the positive impact of rotational grazing.

# THEME REPORT



Following this meeting, Aimee and Kirsty continued to measure their grass swards at key points in the grazing year.

In May 2019, cover was measured at 1746kg/dm/ha, which was a decrease on the cover measured in May 2018 of 2156kg/dm/ha. This was due to additional grazing pressure in May 2019.

Liveweight gains of lambs at grass have been monitored through a Ritchie weigh crate, with lambs averaging 180g a day at grass.

During his visit, Trevor went over some of the key points to think about around profitable livestock farming:

## To make profit from pasture

- Grow lots of pasture
- Utilise over 80% of pasture grown
- **Allocated** the minimum amount of pasture to achieve the production objectives.



## Maximising ewe performance

### The Drivers of High Production

- number of lambs weaned
- weight of lambs
- consistency

### The components of high production and high profit and the drivers of these

- Scanning percentage – fecundity
- Lamb survival
- Lamb growth rate

### Drivers

- Genetics – sets the potential
- Feeding
- Management – expresses the potential

# THEME REPORT



- Animal health

Trevor's message was emphasised further at the next meeting by independent agricultural consultant Michael Blanche who gave the following key messages:

- Grow more grass through management rather than by spending money
- Look at profitability rather than production
- Pasture utilisation is often overlooked
- Managing pasture can increase stocking rate and spread fixed costs
- Rotational grazing will result in higher yields
- Setting up rotational grazing can be easy
- Make sure pH is on target or fertiliser is underutilised

Michael explained that rotational grazing can start with simple shifts over longer periods and depend on your mob sizes, access to water and fencing. He stressed that using rotations will extend the grazing season. Moving stock on at the correct time leave solar panels (leaves) on grass and will bring forward spring growth. In conjunction with rotational grazing you should consider the introduction of winter forage crops such as fodder beet, neeps, kale, hybrid rape

For this visit we went to our Chairman Jamie Leslie's farm at Scholland and had a chance to see the benefits of the rotational grazing Jamie had introduced both on his short-term grassland and on his permanent pasture.

## THE RESULTS

Jamie had been working with rotational grazing for a few years and has been experimenting with crops such as Plantain and now Fodder Beet. During the farm visit Jamie demonstrated how quick it was to put out electric fencing for sheep. He explained that the differences at Hestingott between set stocked area and rotationally grazed areas were an increase in protein and energy levels:

Set: 15.1 Crude Protein	Rotational: 20.8 Crude Protein
Set: 10.4 ME	Rotational: 11.3 ME

Likewise, using rotational grazing with the stirks, with a back fence, resulted in doubling of the stocking rate, plus a third increase in daily liveweight gain from 0.93 to 1.35kg/day

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Following these meetings Kirsty and Aimee are going to discuss increasing ewe numbers to make use of grass potential. It is also hoped to follow up what was discussed at the meeting and increase the use of rotational grazing on the monitor farm. Increase the flock at Bigton from 240 to 300 ewes and gimmers.

## WHAT HAS CHANGED ON FARM

Bigton Farm has started to use Farmax which will allow them to forecast pasture cover and determine feed requirements based on stock policies, liveweight, sales, purchases, and more.

Bigton Farm rotationally grazed 30, year old cattle on 10 acres for 9 weeks, this showed the benefit of rotational grazing as the farm utilised the grass better which meant they could keep more livestock on less acreage. They saw an uplift of clover and increased grass quality. They have seen how good grazing management can improve pasture quality so continue to graze fields down and rotate stock so the grass has time to grow, it is not as intensive as paddock grazing but this form of rotational grazing still allows the quality grass to grow.

We also got the chance to revisit Scholland Farm run by our Chairman Jamie Leslie and see how his use of rotational grazing and growing winter fodder crops is continuing to pay dividends.

One set of results reported by Jamie helped emphasis the benefits of rotational grazing. Following the introduction of rotational grazing on some of his roughest pasture he submitted samples of forage for analysis comparing the original rough pasture with the regrowth following rotational grazing and also comparing that to grass from an improved reseeded silage field. It can be seen that the Regrowth had a similar protein content to the silage field and an energy which although a bit lower than the silage grass was considerably improved compared to the deferred grass.

### **Grass Quality 20/3/2019**

- Brown deferred grass 9.7% CP, 8.8 ME, 48% DM
- Regrowth 22.1% CP, 10.7 ME, 24.2% DM
- Silage field 23.2% CP, 11.1 ME, 24.3% DM

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Jamie further summarised some thoughts he had to the group based on his experience farming on Shetland:

- Don't be afraid to make changes and mistakes
- Any subdivision is better than none
- Consider growing fodder beet and/or other forage crops

## Future Prospects

The ewe flock at Bigton Farm has been increased from 240 at the start of the monitor farm project to 350 at present. In an attempt to reduce lamb losses St Ninian's Isle is being more lightly grazed while trying to improve the utilisation of grassland elsewhere on both Bigton and Toab farms.

Bigton has been trialling rotational grazing and found it easiest to implement in April/ May rather than later in the summer.

They used the plate meter to record dry matter/ha which they found an easy way to start to measure pasture growth, and is encouraging them to record more and better utilise the grass they have.

Provision of water to further grazing paddocks is still a challenge on Bigton so future prospects would be to invest in water infrastructure which would then allow the farm to do more rotational grazing. They are convinced in the benefits not least from when they managed to graze a total of 30 yearling cattle on 10 acres for 2 months

### FACILITATOR CONTACT DETAILS

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