Winter Forage Case Study

Robert Anderson, Corskellie

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Corskellie is situated near the village of Rothiemay, in the North East of Scotland. It is a mixed farm extending over 165 hectares (408 acres) of LFA land. The majority of the farm is grassland, with a third of the land used for spring barley production. Robert farms, alongside his parents Michael and Gale Anderson. The family have a large driver in maximise the growth of forage on the holding through tailored application of nutrients and lime, selecting productive seeds suitable for the farms environment, rotational grazing of grass and growing forage crops to out winter livestock.

The Anderson family mixed farming enterprises include, 710 breeding ewes including ewe lambs tupped, 120 suckler cows purchasing of 140 store cattle, and 131 acres of spring barley. The cows are made up of Aberdeen Angus X and Limousin X bred to the Aberdeen Angus, Limousin and Stabiliser bulls. Approximately 34 heifers are retained for future replacements, with the remaining heifers being finished on farm and marketed prime at 17-18 months old. The male progeny are kept entire and finished on farm to be marketed as prime bulls at 14-15 months old.

The sheep are made up of Suffolk,X, Mules, Texel, Lleyn and Lleyn X ewes, these are bred to the Suffolk, Texel, Beltex and Lleyn tups. A proportion of the lambs (approx. 110) are retained as future replacements, these are often tupped as ewe lambs. The majority of the progeny are marketed as prime lamb direct to Woodhead Brothers.

The forage crops grown at Corskellie include fodder beet for the ewes and swift for the cows.

The fodder beet is sown traditionally, where the ground is ploughed, cultivated and sown. The business do not roll the ground after finding better germination results from halting this. The crop is situated in the middle of an arable field, allowing the spring barley stubble to be used as run back for the ewes. The ewes are transitioned to the fodder beet in December, following tupping, where they are strip grazed along a long narrow fence, The triplets are taken off first, four weeks pre lambing, and offered a high energy silage TMR, the twins follow, and then the single bearing ewes.

The swift is sown after the second cut silage is removed from the field in July. Following the silage, the bales are placed on the end riggs of the fields for feeding through the winter. The land is ploughed, cultivated, sown and rolled. The crop is extremely quick growing, with the cattle being introduced at the end of October for winter rationing. The cattle remain on the swift until January when they are housed for calving.

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Swift Crop Yield

The swift was weighed on the 18th October prior to the cattle being moved onto the crop. Two sites were selected randomly across the field to measure. The stems were cut down to an inch from the ground, all leaf and stems were weighed in a bag to get the fresh weight per m2, to then calculated the dry matter yield. Initially we used standard values, but updated these after analysing the crop.

	Expected	Actual
Fresh Weight/ha	5kg/m2 x 10,000 = 50,000t FW/ha	5kg/m2 x 10,000 = 50,000t FW/ha
Dry Matter	13%	8.2%
Dry Matter/ha	50,000 x 13% = 6,500kg DM/ha	50,000 x 8.2% = 4,100kg DM/ha
	6.5 tonnes DM/ha	**4.1 tonnes DM/ha**

Fodder Beet Yield and Allocation

The fodder beet was weighed on the 9th December, prior to the sheep being transitioned onto the crop. The ewes are moved to the crop once the tups are removed, only ewes and gimmers are offered the beet, in lamb ewe lambs remain on grass leys. Initially the sheep are put onto the beet, with a back fence, to aid in teaching them to eat the crop, once all sheep are eating (usually after a week), the back fence is taken down, and they have access to the wider stubble field surrounding the beet.

The yield analysis was carried out on random sites in the field. A five metre strip was measured and beet was picked from either side of the tape, as the rows were 50cm apart, this gave us 25sqm per row. This was repeated five times over the field. A yield was gathered for both varieties, Geronimo and Munro, and both were sent for lab analysis of their dry matter, protein and energy.

The bulb was estimated at 10% dry matter, but on lab analysis the Geronimo was 20.3% dry matter and the Munro was 13.4% dry matter. Which made a large difference to the dry matter and daily allocation of the crop. The yield is back considerably from previous years due to the late sowing after the extremely cold and wet spring in 2021.

	Geronimo	Munro
Dry Matter	20.3%	13.4%
Fresh Weight Yield (bulb)	45.08t/ha	33.6t/ha
Dry Matter Yield (bulb)	9.2t DM/ha	4.5t DM/ha

Watch the growing year of Roberts crops at www.fas.scot/livestock/forage-crops/