

A year at Killochries Fold

The inspiration this year has been the excellent book "Grass-Fed Cattle" by Julius Ruechel.

Julius has made us look more closely at the natural life cycle of our cattle; to look at the time the local prey animals calve and timing our calving to fit this cycle. In past years we have started calving outside in mid March and perhaps, losing, out of eighty cows, two calves due to foul weather. As early spring calving was hard on both cattle and people the move to calving on fresh grass (late spring or early summer) has been highly advantageous for the cow and easier on the stock-people.

For the cow, it is the most favourable time of year for her to face the stress of labour, meet the nutritional needs of her calf and prepare for rebreeding. The days are longer and weather conditions more favourable for the new born calf.

Calving on fresh grass and good genetic-selection practices virtually eliminate calving difficulties, calf mortality, calf disease and calving-related deaths.

By calving late spring or early summer the cows have been able to replenish their condition on the new grass, prior to calving. This natural drop in condition (condition score) over the winter prolongs the life of the cow and puts her on a rising plain prior to calving.

Post calving the cow's physiology changes as the bulk of her nutritional intake changes from replenishing her fat reserves to meeting the lactation needs of her new born.

Calving late spring or early summer will give the highest probability of conception within eighty-five days of calving.

In the past we have weaned our spring born Highland calves in October. We have weighed them at weaning and been pleased with the results only to be disappointed by their lack of growth over the winter from weaning to one year old. The separation from their mothers was never without stress and the first wintering of these calves involved costs and labour without seeing much commercial benefit.

To over feed these calves on grains is not only expensive but upsets the natural maturing cycle of the males by putting excessive fat on the testicles making them sub or infertile and in the case of the females, deposits fat in their mammary glands reducing their lifelong milk production. These fat deposits, unlike fat deposits on mature cattle, have a lifelong effect on these animals that is not reversible through losing weight.

Our practice this year has been to allow the calves to stay on their mothers until the early grass appears in the spring before weaning. The resulting weaning has been a zero stress event with the calves being moved onto

new grass and the cows able to recover their body condition before calving again. The target was for the cows to go into the winter with a body score of seven and reduce over the winter to five before recovering, on the new grass back to a body score of seven before calving. (Body score is out of ten, ten being the fattest with one being the leanest).



Black Highlander with her dun calf after they cleaned up the rank area.

Bull calves

The calves that ran in the main group were the heifers and the steers. The bull calves were kept in a separate group as they were gaining maturity and could, possibly serve the heifers.

All the bull calves that were kept had an Igenity Beef, DNA score above the average of the Highland bulls registered, by the Society, during 2021. All the other bull calves, who scored below the average, were castrated as soon as the DNA results, from tissue tagging, were returned, to us, from Neogen.

This above average DNA score did not necessary mean, the selected group would make good bulls, as their locomotion, conformance to breed standard etc. would be the final judge of selection. However, it was decided that to select a bull calf with a below average DNA made no sense.

Running in a separate group, the thirteen selected bull calves ran all winter with their mother under the same system as the main group.

As the bull calf starts his sexual development at about 45% of his mature weight, allowing him to spend the winter, still being able to access his mother's milk and with access to grass. He will have the protection of his mother's antibodies and be able to mature at a natural pace before the compensatory gain kicks in when he is weaned onto the fresh spring grass.



Wintering on the Moor

Next to and above us at Killochries is a council owned moorland with a two thousand acre section tenanted by a local sheep farmer.

A long time ago, the employed gamekeepers managed the area as a grouse shoot with the heather managed and the moor muir burned. In more recent years the farm has been run as an extensive sheep farm and with the restrictions on muir burning and selective grazing by the sheep, large areas of heather have become overgrown and rank.

Previous grazing prescriptions using cattle only allowed cattle on the moor during the summer months. This had little incentive for the cattle farmer as he would have plenty and better grass, during the summer on the lower ground when his cows had a high nutritional need due to lactation.

The concern was that, during the winter, commercial cattle would require feed rings with the resulting damage the cows would do in the feed area.

After a discussion with SAC (Scottish Agricultural College) and Nature Scotland it was considered that Highlanders could survive the winter on the moor without hay or silage provided a low impact, tracked vehicle was available to feed cattle cobs in a different area each day.

The cobs were fed in the areas most needing attention that encouraged the cattle to tramp and eat the rank heather, allowing regrowth and producing a mosaic of desirable vegetation that encourages bio-diversity.

It was also agreed that rank areas would be cut and the cattle fed on the cut areas to tramp in the heather seed and through their dung improve the biodiversity on the moor.

Through their dung the Highlanders provided a new food source, from the bottom of the food chain, right up to the birds of prey.

(A hill cow produces, each year twenty five per cent of her body weight, in invertebrate life. A five hundred Kg Highlander will produce on hundred and twenty-five Kg of invertebrate life in a season)



Softrak with mounted cob feeder.

Cows with their calves at foot were put out the moor in October. The mounted snacker on the Softrak was filled with cattle cobs from a silo and the cobs dispatched to the cows at the rate of 2.5 Kg @ cow @ day. No supplementary feeding was given to the calves.

The cows and calves were carefully monitored to check their condition as the cows were lactating well into the winter.

No cows lost more the two points on their condition score and although the calves' daily live weight was small, it was better than the results we had with October weaning and supplementary feeding.

Health was excellent with coats clean and shining all winter.

As the new grass on the lower pastures arrived in the spring, the calves were weaned and you could visually see the compensatory gain that Highlanders are so renowned for.

As for the moor, with the new supply of invertebrate, birds and insects arrive and fresh young grass became plentiful for the sheep flock. Cattle were removed before the ground nesting birds arrived and soon, we hope, to once again see a healthy population of grouse and various birds of prey.



Highlanders with calves at foot, feeding on cut areas



Softrak cutting rank heather



Rank heather being trampled and grazed



Note: We were able to buy the Softrak at a special price and while it is useful to have the front mounted mower, for feeding with the mounted snacker the ATV on tracks is a more economical option and as it has suspension it gives a better ride and should be less expensive to maintain.

A NOTE FROM JULIUS RUECHEL ABOUT CREEP FEEDING AND BULL FEED TRIALS

"Creep feeding gives calves access to supplemental feed (usually grain) during winter by allowing them to crawl under a divider fence designed to prevent cows from reaching the creep feeding bunks. This grain is typically fed free-choice to the calves in the hope that the extra feed will increase their weight gain, but because the grain is available, the calves stop competing with the adults at the haystack or stop the effort to dig for grass under the snow. Instead, they tend to gorge themselves on the grain, risking depositing fat in their developing mammary glands and scrotums at the expense of future milk production and fertility. Calves that are not creep fed will experience compensatory gain on the lush grass the following spring and will catch up to their creep fed counterparts, but at a fraction of cost per pound of weight gain. Bull calves are often fed at bull test stations after they are weaned (or are simply placed on high grain diets at home) in order to test their ability to gain on feed. These high-grain diets typically coincide with their critical sexual development phase. Consequently, they risk forming fat cells in their scrotums, which negatively affect scrotum temperature and compromise their fertility for the remainder of their lives. With this feed practise, an extremely masculine bull whose growth is naturally slowed by his hormone production may be discounted in favour of a less fertile bull that does not have an adequate hormone balance to limit his growth. There is more than one show-champion bull that landed in a hamburger grinder without producing any calves because of infertility. High-grain diet, feed-trial gains are not an indication of the bull's ability to produce low-maintenance, highly profitable fertile offspring and profitable pasture gains on grass"