Techno-grazing beef & sheep on upland farms

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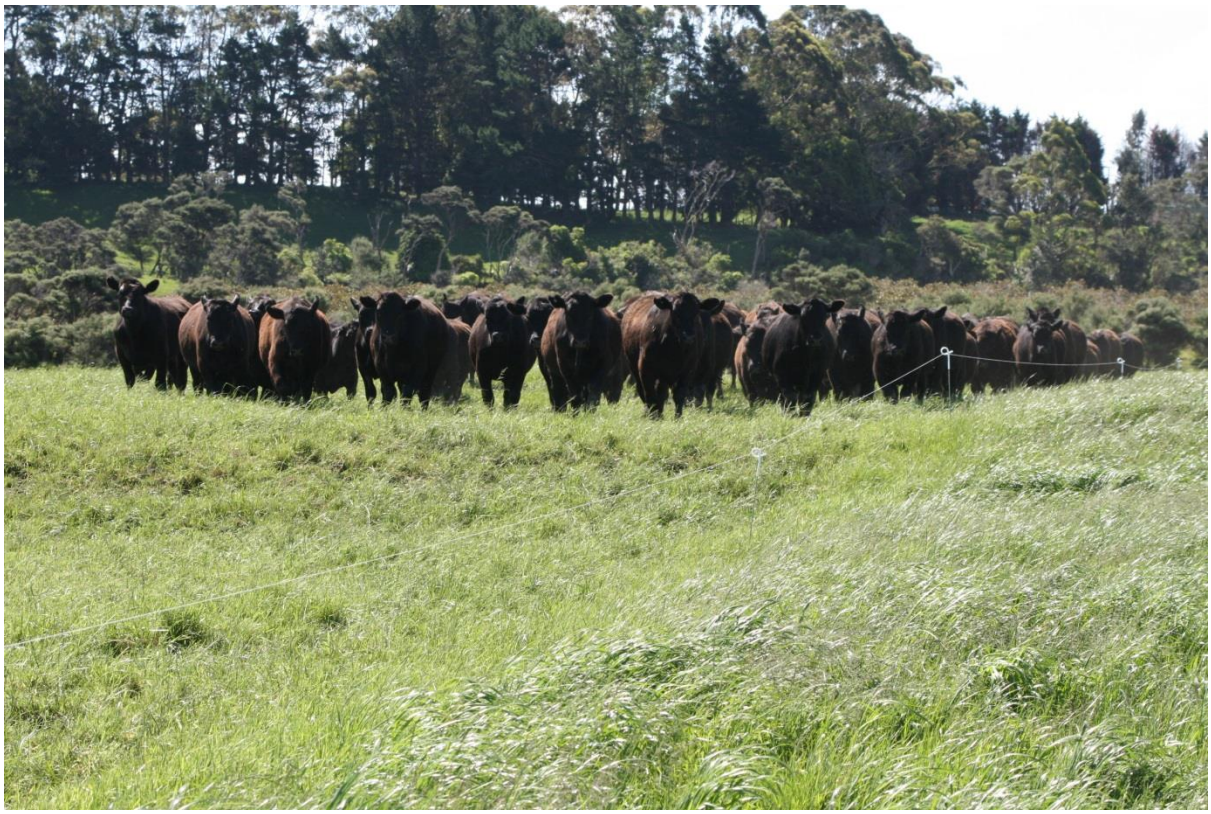

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Introduction

Being bought up on a farm and helping my father from a young age there has always been a passion for farming in myself, the farm is a simple farm I guess where there is only one breed of sheep which is a tregaron type welsh ewe. We then breed our own replacements and sell the rest of the lambs either for breeding on the fat, the farm is seeing changes with myself and brother been working out for a number of years and bringing back new ideas, and are looking forward to seeing the first crop of lambs we'll be having out of the aberfield rams.

Also being a traditional farm we keep 40 Welsh black spring calving cows and for the first year have introduced a stabilizer bull. My father has been showing a similar trend with his beef and sheep system and that is to breed our own replacements and only buying the bulls or rams in.

We therefore farm approximately 510 acers, 150 of which is rented and isn't joining the home farm and a further 60 acers is off holding which leaves us with around 300 acer ring fenced. Which makes life a lot easier to manage, after saying that I do enjoy the thinking time that we have going to these other block of land.

The farms aim is to maximize production from grass buy using as little concentrates as possible and also keeping the labour down. We lamb everything outside we do offer energy blocks and sugar beet pellets for around three to four weeks prior to lambing and then until the grass fills there need.

Reseeding and growing brassica isn't something that we do often enough in my mind but with a bit of luck we will have a plan on paper that we will hopefully stick to and improve the farm as we go along.

With a family farm with two sons from a pretty young age we understood that we would have to expand in order to make the farm profitable for both of us and secure a living for my parents, but living in a competitive area where ground doesn't come up for sale/rent often or even when it does there asking for ridiculous prices , the only option we had was to intensify the home farm and produce more from less.

Why New Zealand

With New Zealand being the creator of the techno system it was the go to place to really understand and see how it all worked. Understanding that there climate was at times easier or better for livestock and grass production I was a bit apprehensive with what I was going to get told by these farmers. Also another big reason I wanted to visit New Zealand was the scale that they run with such little amount of labour used, the biggest thing I realised on and kept on popping up in the conversation was to keep everything simple.

And keeping things simple doesn't mean your not a good job what it does mean is everyone knows what they have to do and is easy enough to hand the work over to your neighbour such a thing you get rushed into hospital. They defiantly don't take any passengers and cull very hard but all of this pays off now due the fact with a month of being over there I never saw a foot trimmer or a foot bath .

Another aspect why New Zealand was the chosen country was the fact that they don't anything half heartedly and if I was going to see the system in full swing this was the place.

Techno grazing

Techno grazing is therefore a grazing method where you allow your stock to have the right amount of feed that you want to give them, and your able to feed budget your sheep or cattle through the period that's ahead of them. For example when going into winter you would try and build cover to see your livestock out until spring. And knowing how much grass u have gives you an indicator of much grass you can allow your livestock to have or even to give yourself that extra few weeks to plan ahead and think about supplementing the stock.

Therefore techno grazing is where you have a big field or a number of smaller field to make a sizable area. Then you equally measure out cells, the fences that fence off these cells are electric fence and most of which are is high tensile wire. Making that the cells are the same is a vital part in order to make the rotation run as smoothly as possible. When planning the cells out it is important to bear in mind where the best places are not only to graze and rotate but is also convenient to get the water to.

Water is a vital part of any grazing method whether its sub division or techno grazing. Stock seem to stay close to their water supply and camp the night close to the tank. And when sheep urinate 70% of their urine at night it then means that they are fertilising more around the tanks. Most cells are around the one hectare mark but that comes totally down to how many sheep/beef you want to run on the area. It's pointless allowing too much of a cell if your livestock are going to be in the cell for any longer than three days because by this stage you are harming the grass and reducing growth because the third day after the first graze the plant is trying to grow again and you're still grazing it which reduces the time for the plant to grow back again.

Another reason why it is important to get the cells to the right size is because if you have a rough guide what kind of stock you are going to be running on this block and a rough number you can then calculate how often you want to shift the stock, it may not be worth you to move dry hogs every day because maybe you don't want them to grow so much, or you might be able to squeeze your fat ewes in order to maintain more grass for stock that needs it such as thin ewes.

There are three key points in order to make this operation work, and this grazing method is a big commitment and needs to be done right,

1. Grass Grows Grass - cover height needs to be correct for the grass to photosynthesise and grow.

2. Grass needs adequate rest time between grazing events to recover.

3. Grazing time or "on time" should not exceed three days.

<u>Key times to start</u>

There are two key point in a year when you are able to start the techno/ rotational grazing method without it being to stressful on your stock. These two periods are in the autumn before tupping, this allowing you to wean ewes off lambs earlier and to being able to mob pressure the dry ewes and therefore build yourself covers before you start rotating. The second key time is around a month after the lambs are born and are old enough to follow there mothers

with ease, by this time grass is well underway and are starting to have a surplus of grass, which you are then able to make silage on.

To make better use of grass doesn't always mean going into techno . techno at this point of tie is the best way to grow and to utilise grass at the best cost effective way but in order to start utilising grass better it starts with dub division and mob pressure.

Infrastructure

In order to make the system flow as easily as possible the ground must be planned out correctly and of course it is easier to make this system work on a niche ae flat square fields. But this doesn't mean that it wont work on upland farm. The key factor is that each cell is the same size. Its important that you have a way of getting back to the first cell without having to walk through all the cells to get there such as rotor , many farm over in New Zealand had lanes in which they could walk sheep down all the way to the yards without having to go through any paddock, this saved a lot of time and also was very beneficial for the farmer especially at peak times such as shearing where he could store the stock on the lanes over night.

So then in an ideal situation you'd have a square field where you would put a semi permanent high tensile wire down the middle in order to make a lane , each post would be gps mapped and then to create the cell they would use poly wire, and because the posts are gps mapped it is easy to calibrate the cells to the right size.

Allowance and cost

The cost varies depending on how easy it is for water to be introduced in the system and water is the most expensive bit to add but is a vital component

and is obviously is a animal welfare issue. Providing clean water from a trough prevents the risk of sheep picking up fluke from brooks and so on its estimated that it costs on average between £200 to £400 a hectare which yes I guess isn't cheap but you are able to pull everything out of the ground and sell them if needs be. I am aware that some farmers that set it up on there own are able to set it up for just over a hundred pound a hectare.

There are ways of cutting cost but by cutting cost you don't always have the same result, that could be that the system doesn't run as smoothly as it should be or the fact that your not growing or utilising the peak about of grass as you would of if you would have had a professionals advice .BY using the techno grazing you provide the stock with the amount of grass that you want them to have, allowing you to decide on how fast you want hem to grow. This is done by calculating out the amount that they need for maintenance and then providing them the extra feed for them to grow.

This is done by knowing the weight of the animal and the demand that they may have such as the need they have for maintenance and also if there in lactation. So for example ;

100 dry hogs weighing 50kg need 2% of there body weight (50kg) in kg of dry matter, 2% of 50kg is 1kg of dry matter is what one hog needs. Times that by a 100 hogs is 100kg/dm.

Rest period

The rest period plays a huge role in order to the rotation to work. Massey University has been trailing out different rest periods for the last 6 years, and now have the data to back there data up. The trial was aimed for the student to find out which was the best rest period not only for grass growth but also for animal production. The trials were based on a rest period of 16days, 48days and also 72days all of which had the same area with the same pH level, and the same weigh of ewes going to the same start cover.

Therefore what they discovered was that by tightening the cell that there in enables the cells ahead of them more time to grow which then leaded on to actually growing more grass. The 72day rest period grew a tone more

grass than the 16 day rest period, and the as imagined the 48 day rest was the happy medium.

The paddocks where 0.8 of a hectare and had 16 Romney cross ewe weighing between 60-65kg, interestingly the 16day rotation failed to carry the 16 ewes through the winter time on this rotation on five years out of the total six years of trailing. What the students thoughts where all though the figures show that the 72 say rotation grew more grass and produced more to the hectare, they did feel that there was more stress on the animal to perform due to the fact that they are having under there daily requirements for the first few cells.

Reflection

Coming back from New Zealand I was still standing on the fence with the whole techno system, it definitely encourage me to do more rotational grazing, and go the further mile to make sure that I do the rotational grazing to the best of my ability, but something was telling me that techno was a step to far. From what I seem over in NZ the techno worked well but most of those farms where finishing farm where they would buy store lambs or bulls in to finish on a grass system depending whether or not they had the grass for the animals, but the handful of farms that I managed to find that were breeding farms where hard to find. As farmers a lot of how we decide to farm is based on what we see with our eyesight instead of what as such pays. We tend to keep a strong ewe lamb on for breeding rather than the slightly smaller because of the fact that she's bigger and looks more powerful completely ruling out the fact that the slightly smaller one is a better size ewe and easier to maintain, and that she might carry the same if not better genetics . We grow mainly rye grass leys because of how good it looks in a field in stead of a mixed species ley that looks scruffy in a way, totally ruling the fact that its healthier and has the ability of growing as much if not more kg of dry matter per hectare.

I took agriculture in high school as one of my subjects and I remember the teacher asking us how many of us scan sheep and keep a record of how man ewes g to the ram and then figure out how much lambs we loose by the time it comes to selling. And ill admit at the time I felt quite well as many other student didn't scan there sheep and we did and I was able to figure out the

percentage that we scan at, lambs born, lambs marked and then on to lambs sold. Only do I now realise that we've been miss lead we've been looking at production per head and we get all exited when we scan at a high percentage but we've actually taken the wrong approach. Yes its still important to try and achieve these high scanning and so on but what we should actually look on instead of production per head is production per hectare. Because I could be feeling grate with myself scanning at let's say 2% but if I was able to keep double the amount of ewes to a hectare it and scan at 1.4 I would still produce more lambs per hectare and produce more kg of meat per hectare.

So my conclusion is it doesn't matter how good your grazing system looks the main thing is that you have one, the first step is always the hardest one and things can only get better from there on.