

TechnoGrazing™ in South West England

TechnoGrazing™ is a cell-based, rotational grazing system that was developed in New Zealand over 30 years ago. This innovative method of grazing has since been adopted in Australia and North and South America. TechnoGrazing™ systems use semi-permanent, flexible electric fences to construct lanes and cells designed to provide easily adjustable rotation lengths while ensuring that animal movements are time efficient.



Benefits of rotational grazing

Research has shown that by implementing a rotational grazing system, grass utilisation can be as high as 80%, compared to 50% in a set stocking grazing system. This can enable greater stocking rates, leading to increased production in terms of kg of liveweight gain per ha and subsequently, improve margins. Although many producers acknowledge the benefits of managed grazing, the adoption is very limited on UK beef and sheep farms. This is often due to perception of high labour requirements and uncertainty of how to manage the system.



The project

Based on this, AHDB Beef & Lamb are funding a project through the Farm Innovation™ Grant that will investigate the potential of the TechnoGrazing™ system on three trial farms (two beef and one sheep) in South West England. The project is being coordinated by James Daniel, who discovered the system while managing a large grass-based beef bull unit near Whanganui on the North Island of New Zealand. The farm operates 170 ha of TechnoGrazing™ systems, stocked with bulls, steers and calves. The annual production target is 1600 kg liveweight per ha per year.

The three trial farms involved in the TechnoGrazing™ project have each allocated one field to the project. Field sizes vary from five ha to just over 12 ha and were mapped with GPS before the fencing was set up. The TechnoGrazing™ systems were designed to provide lanes with equal areas. Specific “node” posts in each lane form the corners of each cell, which allow the lanes to be accurately sub-divided.

The exact layout is based on:

- ⇒ Known or estimated grass growth
- ⇒ Weight/type of stock
- ⇒ Required daily liveweight gain
- ⇒ Available labour.

Cell area can be as little as 0.05 ha to allow for long winter rotations. The level of labour input needs to be considered when establishing cell boundaries as increases in cell numbers increases time and labour inputs. This can be balanced out with improvements in grass quality and subsequent improved liveweight gains.



The TechnoGrazing™ system

Modern and refined infrastructure forms the basis of the TechnoGrazing™ systems. Strong, carbon fibre posts and quick-attach, portable water troughs allow for time efficient animal movements. Before entering a TechnoGrazing™ system, livestock spend time in a training paddock surrounded by an electrically charged boundary fence. This has proven to work, as fences within the TechnoGrazing™ system run at 2,500-3,000 volts, well below the 3,500-4,500 volts often advised and yet contain stock effectively.

Existing TechnoGrazing™ systems in New Zealand have demonstrated sustainable increases in production, up to double that achieved under set-stocking. Additional benefits include improved sward composition, increased organic matter, reduced water run-off and increased personal productivity.

How are the farms getting on?

The systems have been in place since early March and on a recent visit by AHDB Beef & Lamb, James noted that improvements are already being seen in pasture utilisation within individual paddocks on each of the trial farms. Strategically targeted grass covers and paddock recovery periods have resulted in higher quality feed and subsequently led to increased stocking rates of 4-5.8 livestock units (LU)/ ha for cattle and 3.8 LU/ha for ewes and lambs. Inorganic nitrogen fertiliser has been used in minimal amounts (50 kg N/ha).

During the visit James saw that the two systems stocked with cattle were on a 24-day rotation, with animals being allowed to graze two cells every 36 hours. The third system with ewes and lambs had just constructed the system, which was being grazed on a 20-day rotation, with animals given three cells every 48 hours to set up the grass wedge. To move the animals the cell or lane fence is simply pegged and stock cross over it. Grass covers are measured weekly by a rising plate meter, the results are analysed and rotation length altered by increasing or reducing either the number of cells allocated or the time stock graze it.



Summary

Given the volatility in the price of imported protein sources and the need for improved on-farm efficiencies, pasture-based production is a topic of interest for grassland producers. AHDB Beef & Lamb aims to discover and demonstrate the role that TechnoGrazing™ could play in improving productivity and increasing competitiveness for grass-based production systems.



The results of this project will be available later in the year.

For more information on rotational grazing see the BRP manual [Planning Grazing Strategies for Better Returns](#)