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 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 Farm Innovation Grant project 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 (Precision Grazing Ltd) who was first introduced to the system whilst managing a station in the Manawatu, NZ. The station operated 170 Ha of TechnoGrazing™ systems, stocked with bulls, steers and calves. The annual production target was 1600kgLW/Ha/Year from pasture, in comparision top third UK 16-24 month beef finishers acheive 550kg/LW/Ha/Year (AHDB Stocktake, 2015).

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.

The innovative infrastructure means cells as little as 0.05Ha can be accuratly created to allow 100 day winter rotation lengths. In periods of rapid pasture growth cell area is increased to reduce the rotation length. The investment in infrastructure can be justified by improvements in grass quality and utilisation leading to increased production.

The TechnoGrazing™ system

Modern and refined infrastructure forms the basis of the TechnoGrazing™ systems. Strong, Fibreglass posts and quick-attach, portable water troughs allow for time efficient animal movements. Before entering a TechnoGrazing™ system, livestock spend time in a small training paddock with electric fences. This has proven to work with animals appearing quiet and contented.

Existing TechnoGrazing™ systems in New Zealand have demonstrated sustainable increases in production, up to 2-3 times 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 composition and utilisation. Strategically targeted grass covers and paddock recovery periods have resulted in higher quality feed and subsequently led to increased stocking rates of 4 - 6 Livestock Units (LU)/ ha for cattle and 3.8LU/Ha for ewes and lambs.

During the visit AHDB saw that the two systems stocked with cattle were on a 24-day rotation with 40 steers being moved every 36 hours in 0.4Ha cells. The third system stocked with 240 twin ewes had just been constructed and was being grazed on a 20-day rotation, with 48h shifts through 0.85Ha cells to set up a grazing wedge. To move the animals the cell or lane fence is simply pegged down and stock cross over it. Grass covers are measured weekly by a rising plate meter.

Summary

Given the volatility in the price of imported protein sources and the need for improved on-farm efficiency, pasture-based production is a topic of interest for 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