Rotational grazing systems

This project examines changes in profitability and sustainability that arise from implementing rotational grazing systems that are optimal for a particular farm and the changing seasonal conditions.

There are a range of practical reasons to promote rotational grazing systems in the beef grazing sector in the North Coast region of NSW, including reductions in the reliance and costs of fertiliser use and to improve resilience to seasonal variability and climatic extremes.

This project is establishing three 100ha focus farms across the North Coast region. The participating producers are implementing relevant infrastructure, sub-division fencing and watering points, to set up a grazing system that matches the aims of the producer with optimal pasture production and carrying capacities.

Table 1 defines and describes some of the types of rotational grazing regimes, but ultimately any regime needs to match stocking rates to carrying capacity.

<table>
<thead>
<tr>
<th>Grazing Management</th>
<th>The practice of grazing an existing or newly established pasture to maintain and/or improve its desirable perennial species composition, ecological health and longevity.</th>
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<tbody>
<tr>
<td>Ad hoc rotational grazing (includes slow rotational)</td>
<td>Involves little planning in the way stock are spread over a property or moved from paddock to paddock. Often a conservative stocking rate is used with grazing extended for a specific period e.g.calving.</td>
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<tr>
<td>Fast Rotational Grazing</td>
<td>A paddock is grazed with higher stocking rates and rested for extended periods for pasture recovery. Grazing time varies with paddock size. Adequate water supply is critical for such a system.</td>
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<tr>
<td>Tactical Grazing</td>
<td>The property is divided into a large number of paddocks ('cells') which are sized to permit high stocking density of grazing animals for a determined or calculated short period and the grazing periods are determined by specific limited goals.</td>
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Table 1: Different types of grazing management

Data on animals, soil, pasture and finances were benchmarked prior to any changes and are being measured through the project and reported on annually.

Beef cattle properties in the Kempsey, Grafton and Lismore regions were selected through an Expressions of Interest process to provide opportunities to compare and contrast the results from different properties. Each production system is different in its scale and management. One focus farm was established in the 2019/20 financial year and two additional focus farms are in the process of being established in the 2020/21 financial year.
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Project Overview

Phase 1: Establish demonstration farms
The field demonstrations are being established on three commercial beef grazing properties, representing:
- A variety of soil landscapes and soil types
- A variety of pasture species and pasture composition
- A variety of grazing management systems
The sites will be rotationally grazed based on proven grazing intervals for the dominant species in the pasture, e.g. 4.5 leaves for Setaria and Rhodes Grass leaving a residual of 100mm.

Phase 2: Monitoring
Monitoring of the demonstration sites will include:

Soils Sampling and Testing
- Soil chemistry
- Soil carbon
- Micronutrients
- Soil structure
- Soil biota
Soils are sampled at the beginning of the project and annually.

Pasture Measurements
- Pasture yield
- Pasture quality
Pastures will be sampled seasonally.

Grazing Management Records
Property Managers are recording the following information and submitting monthly demonstration:
- Number and class of cattle within the grazing system
- Movement of cattle throughout the rotational grazing system
- Weight of cattle
- Rainfall data

Monitor financial performance
- Cost of production will be measured
- Any income or expenses will be recorded

Phase 3: Field Days and results
Field days will be offered as properties implement their changed practices and sufficient data is available. North Coast Local Land Services will be sharing project findings to assist other landholders understand potential for financial, production and sustainability gains that arise from different grazing regimes. To be notified when these, and other field days are scheduled, add your self to our distribution list - North Coast Local Land Services (list-manage.com)

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