

End of season ground cover

Retain adequate groundcover at the end of dry season by:

- knowing your groundcover needs for your land types, soils and higher risk areas (e.g. frontage country, riparian areas and slopes), and
- assessing land condition and pasture availability, in each paddock at the end of the wet season and adjusting stocking rates

Please note that photo monitoring ([video link](#)) is recommended for all practices.

Farm systems

We recommended you assess your specific farming circumstances before changing any management practices. You can find a list of extension providers at the end of this information.

[FutureBeef](#) is an excellent resource for beef growers, providing information on all aspects of the cattle enterprise. It is a collaborative program for northern Australian beef growers with partners DAFF, Northern Territory Department of Resources - Primary Industry, Department of Agriculture and Food Western Australia and Meat & Livestock Australia.

Water quality

A number of studies have shown that the minimum groundcover required to minimise runoff and sediment loss is at least 40%. On some erodible soils ground cover more than 60% needs to be maintained. These levels of ground cover not only minimise runoff and soil erosion but also contribute to improved soil health and the quality of water runoff (14G).

Fitzroy

A study in the Nogoia catchment showed that grazing systems in native pastures should maintain more than 50% groundcover to maintain the quality of water runoff (17G).

Costs and benefits

Fencing & wet season spelling

There are currently no applicable case study examples of the economic impacts (positive or negative) of retaining adequate groundcover at the end of the dry season. However, case studies of adjusting stocking rates, as a consideration of groundcover and pasture availability, can be found under the document: stock paddocks based on long term carrying capacity for your land types.

In general terms, there are economic benefits for your business by maintaining natural ecological conditions which assist in weed management, healthy water and nutrient cycles, and prevent erosion, salinity and runoff.

Assessing pasture condition in combination with long term carrying capacity, allows for effective management of pasture in a sustainable way. When the demand for forage exceeds supply it can result in both short and long term costs. The short term cost to profitability is directly reduced by the added cost of supplementary feed and forced sale of below optimum condition cattle. Long term costs include the costs of regeneration, stocking rates and the potential for a reduction in long term carrying capacity.

Regional studies

The following case studies and research projects show how adjusting stocking rates in a grazing land management system may optimise land condition and provide a viable investment opportunity.

Wet Tropics

In 2004, a small study in the Tully-Murray region assessed the farms of 20 graziers holding 212ha of land each and 10 mixed farmers holding 163ha of land each (16G). Results showed that matching average stocking rates to pasture carrying capacity led to an increase in profitability as well as a small reduction in sediment runoff. Profitability in this case was measured as an increase in the gross margin or net profit after variable costs were deducted.

Long term grazing trial in Burdekin

A 14 year grazing trial in the upper Burdekin showed that moderate stocking rates, at long term carrying capacity (LTCC) were more profitable, provided a constant annual gross margin and a lower level of risk, as compared with a heavy stocking rate (stocked at twice LTCC).

The trial demonstrated that pasture condition was maintained or improved under moderate stocking but declined under a heavy stocking rate (at twice LTCC). Stocking rates in the heavy stocking treatments also had to be reduced in dry years due to a loss in carrying capacity. Heavy stocking had the most variable profitability with a negative gross margin in a number of years and a loss in carrying capacity. Heavy stocking rates could only be maintained in dry years through the use of supplementary feeding.

After 14 years, variable stocking based on available pasture, with or without the use of the Southern Oscillation Index, was no more profitable than moderate stocking and had greater environmental and economic risk. The high profits in good seasons were cancelled out in drier years due to forced sales and reduced animal condition and product value. Pasture condition was also adversely affected by heavy stocking rates preceding drier years.

These specific trial outcomes were dependent on variables such as rainfall, interest rates, the cost of supplement feed and the existence of a price premium for better condition animals (15G). It should be noted that the change in the economic value of the land condition was not accounted for in this trial.

Long term grazing trial in Burnett-Mary

In a long term stocking rate trial in the Burnett Mary on black speargrass, annual live weight gains per animal were consistently higher at light stocking rates and decreased with increasing stocking rate. A range of practices were investigated including legume-over sowing on native pasture with spring-burning and supplementary feeding. It was concluded that average pasture utilisation rates of 30% were the most sustainable management practice (3G & 8G).

The heavy stocking rate treatments of about 60% pasture utilisation provided the greatest economic returns, but this was to the detriment of the pasture. Therefore the heavy stocking was not considered a viable long-term business option. Sustaining these heavy stocking rates would require supplementary feeding, spelling of pastures and or reduced stocking rates. Profitability of a grazing business can be greatly affected by cost variables (3G) so it is recommended that you assess your current and specific business circumstances.

Grazing economic tools

Breedcow and dynama software

The Breedcow and Dynama package has been the industry standard tool for evaluating beef cattle businesses and management options since 1988. Its uses include herd growth projection, cash flow budgeting (including projections on property purchase), financial counselling, research evaluation, analysis and improvement of herd productivity, and a demonstration of the impact of changed husbandry practices on herd structure, turnoff and financial outcome. It has also been used to 'test' drought destocking and restocking strategies, and work through the consequences of disease eradication campaigns for individual producers.

Website: http://www.daff.qld.gov.au/16_6886.htm

Phone: 13 25 23 (DAFF for the cost of a local call)

Better decisions in the business of beef

This two-day workshop is based on using Breedcow and Dynama software to evaluate beef businesses and identify opportunities for improved performance. Key components are:

- comparing profitability of different turnoff options, husbandry and grazing practices
- estimating future profit, cash flow, indebtedness and net worth based on herd projections under various scenarios
- comparing cattle purchase options for fattening or backgrounding
- comparing sales options for drought or cash relief
- evaluating investment opportunities using discounted cash flow analysis

Business EDGE

This two-day workshop, delivered by MLA EDGE network provides finance and business management training to beef producers.

Website: www.mla.com.au

Phone: 3620 5200

Email: businessedge@jkconnections.com.au

Rural profit system

This is a four-step program for graziers or mixed farmers, delivered by RCS. The first step of the program is focussed on holistic integrated management with goals of increased sustainability and profits. Participants control the extent of their learning by determining how many of the programs steps they complete.

Website: www.rcs.au.com

Phone: 1800 356 004

Email: info@rcs.au.com

Extension services

BreedingEDGE

This workshop, delivered by the Department of Agriculture, Fisheries and Forestry for MLA EDGE network. Its focus is on helping landholders to develop or improve a breeding program and looks at six key areas:

- examining a properties current situation
- reproduction
- genetics
- setting breeding objectives
- livestock selection
- managing the herd to capture benefits

Website: www.mla.com.au

Phone: 3620 5200 (MLA) 13 23 25 (DAFF for the cost of a local call)

Email: beef@daff.qld.gov.au

Commercial operators accreditation

Under Agricultural Chemicals Distribution Control Act 1966, operators may require a license in before the ground-application of herbicides. This legislation is enforced by Biosecurity Queensland.

Phone: 13 25 23 (DAFF)

Grazing BMP

The Grazing BMP was developed by the Department of Agriculture, Fisheries and Forestry, the Fitzroy Basin Association and AgForce Queensland. The program is a voluntary, industry led process which assists graziers to identify improved practices which can improve the profitability of their business.

Website: www.bmpgrazing.com.au

Phone: 4999 3800 (Fitzroy Basin Association) 3236 3100 (Agforce)

Grazing land management EDGE

This is a three-day workshop, delivered by the Department of Agriculture, Fisheries and Forestry for MLA EDGE network. The workshops are regionally targeted, providing landholders with a practical and planned approach for improving the productivity and sustainability of their land. It looks in particular at:

- long-term stocking rate calculations
- forage budgeting
- land condition assessment
- sown pastures
- fire
- weeds

Website: www.mla.com.au

Phone: 3620 5200 (MLA) 13 23 25 (DAFF)

Grazing land management (land condition assessment)

This three day workshop, delivered by the Department of Agriculture, Fisheries and Forestry, for MLA teaches:

- how to assess paddock condition
- understanding grazing ecosystems
- how to meet target markets and sustainably

The workshops have been customised to 13 Queensland regions, providing location specific information.

Website: www.mla.com.au

Phone: 3620 5200 (MLA) 13 25 23 (DAFF)

Healthy grass, cattle and soils program

The program is a series of workshops offered by Grazing BestPrac. Grazing Bestprac also offer private consultancy for producers who wish to have one-on-one support on their property/farm. This includes:

- whole of property planning
- mapping and computerized mapping
- GPS training and vegetation mapping
- business facilitation
- business planning (Centrelink)
- grass budgeting and pasture programs

Website: <http://www.grazingbestprac.com.au/>

Phone: 1300 780 872

MLA livestock production assurance

This is a simple on-farm food safety program which focuses on five key elements:

- property risk assessment
- safe and responsible animal treatments
- stock foods, fodder crops, grain and pasture treatments
- preparation for dispatch of livestock
- livestock transactions and movements

This program is accredited by Ausmeat.

Website: www.mla.com.au

Phone: 3620 5200

Email: lpa@mla.com.au

NutritionEDGE

This three day workshop, delivered for MLA by the Department of Agriculture, Fisheries and Forestry, teaches:

- minerals and managing deficiencies
- pasture growth and quality
- grazing management

Website: www.mla.com.au

Phone: 3620 5200 (MLA) 13 25 23 (DAFF)

Email: beef@daff.qld.gov.au

Property computer mapping

These workshops, delivered by AgForce Projects provide landholders with the latest satellite imagery of their property and train them to use these images and mapping software, to build effective property maps. This gives landholders greater ability to plan infrastructure, monitor land condition and improve productivity.

Website: www.agforceprojects.org.au

Phone: 3238 6048

SMARTtrain

This national program is provided through a combination of correspondence education and workshops and aims to train users of agricultural and veterinary chemicals.

Website: www.smartrain-publications.com

Phone: 1800 138 351

Stocktake

This is a one-day workshop developed and delivered by the Department of Agriculture, Fisheries and Forestry. Focuses on land condition and monitoring and also demonstrates field assessment

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techniques using a database.

Website: www.daff.qld.gov.au

Phone: 13 23 25 (DAFF)

Email: beef@daff.qld.gov.au

Supplementary resources

FutureBeef

Is a collaborative program, aimed at north Australian graziers, with the Department of Agriculture, Fisheries and Forestry (Qld), Northern Territory Department of Resources – Primary Industry, Department of Agriculture and Food Western Australia and Meat and Livestock Australia. The website covers topics related to all aspects of beef production, with regional information where appropriate. It also links to external papers and resources.

Website: www.futurebeef.com.au

Phone: 13 25 23 (DAFF) 1800 023 100 (MLA)

Email: info@futurebeef.com.au

Managing grazing lands in Queensland

Developed by the Department of Environment and Resource Management, this guide looks at pasture management, soil conservation, biodiversity, pests, salinity, riparian vegetation and water resources.

Phone: 13 74 68 (Queensland Government).

Reef and rainforest research centre

This facility is undertaking development, trial and validation of land management practices that improve water quality outcomes in the sugar and grazing sectors. Reports regarding the scientific outcomes of these management practices are available on the website.

Website: <http://www.rrrc.org.au/>

Phone: 4781 5513

Wetlands management handbook

Farm Management Systems (FMS) guidelines for managing wetlands in intensive agriculture. Developed by the Australian and Queensland governments, as part of the Queensland Wetlands Program. The guide provides information to landholders and extension officers on:

- identifying wetlands
- wetland management
- artificial wetland creation

The guide was designed to complement other industry FMS programs, for holistic farm management.

Website <http://wetlandinfo.ehp.qld.gov.au/wetlands/resources/publications/reports.html>

Phone: 13 74 68 (Queensland Government)

Regional supplementary resources

ABCD management practices framework for dry rangelands

Developed for Terrain NRM by the Department of Agriculture, Fisheries and Forestry, this framework is used as part of the Reef Rescue Program to priorities practices for dry land been properties.

Website: www.terrain.org.au

Phone: 4043 8000

Email: info@terrain.org.au

Reef protection legislative requirements - ERMP guide to the Great Barrier Reef protection legislation

Developed by the Department of Environment and Resource Management to help landholders determine whether their property is affected by the legislation as well as explain the legislation and what is required of property owners. It also provides sources of information, support and advice.

Website: <http://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/>

Phone: 1300 130 372 and press option 8 (DERM)

Farm systems message

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More information

If you would like to contact DAFF about the information presented in this factsheet, contact us on: 13 25 23, for the cost of a local call within Queensland, or 07 3404 6999, or email us at;

ReefPlan@daff.qld.gov.au



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