

Managing stream frontages

Manage stream frontages and connected riparian areas by:

a) Managing grazing pressure and timing with:

- Fencing,
- Strategically placing off-stream water points and supplementary feed sites,
- Occasional wet season spelling ([video link](#)), and/or,

b) Controlling pests such as feral pigs as part of an integrated pest management plan.

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

Riparian areas naturally trap sediment and runoff. Frontage areas often have more nutritious grass and may be grazed preferentially. It is important to maintain ground cover and pasture species composition in frontage country to minimise erosion and water runoff.

Fencing the frontage country into separate paddocks can allow the frontage country and riparian areas to be managed separately. The management strategy used will depend upon the goal, such as maintaining land condition or rehabilitating degraded areas. The type of water course or wetland involved needs to be taken into account. Managers can stock according to the goal within the fencing arrangement. Cattle drinking from water bodies or camping nearby can also directly reduce water quality by fouling. Correct use of fencing and off-stream watering points minimises these issues(7G & 22G).

A new guideline *Grazing for Healthy Coastal Wetlands*:

Guidelines for managing coastal wetlands in grazing systems provides practical advice about managing grazing in coastal wetlands and riparian areas.

For rangelands:

Managing for water quality within grazing lands of the Burdekin catchment - guidelines for land managers is a good source of information.

Costs and benefits

Fencing & wet season spelling

Below are a collection of regional examples of the economic impacts of the practices to manage grazing pressure on major stream frontages and riparian areas.

a) Riparian fencing and strategically placing off-stream water points

Burdekin - riparian fencing in Northern Australian rangeland

The economic and environmental benefits of riparian fencing were assessed in a case study of monsoonal grasslands land types (mix of Mitchell grass plains, Shortgrass hills, and Spinifex plains) on a northern Australian rangeland property. Riparian fencing for the 300000ha property involved 90km of fences, including gates. This reduced the carrying capacity on 4500ha (1.5% of the area of the property) which reduced the total herd by approximately 2% with no changes to cattle weight gains. The large capital costs meant that the return on investment was not achieved economically due to a reduction in animal production and a 4.3% decline in net profit. The trade off was improved ecological health which includes improved runoff quality, minimised sediment loss, pasture improvement, and weed reduction (11G).

Burdekin – Riparian fencing and alternate watering points: 60 cattle properties around Charters Towers

In 2003, a six year project was completed which involved the fencing of creeks and rivers on 60 cattle properties around Charters Towers. Over 1200 kilometres of fencing (star pickets on a 10m spacing and three strands of barbed wire) was erected to manage the impact of cattle on inland river systems and trial alternative controls of woody weed infestations (rubber vine). Over 130 new off-stream watering points were established to provide cattle with alternative water sources the large capital investment was co-funded by the Australian Government's Natural Heritage Trust. Fire was trialled as an alternative to herbicide, to control a large-scale woody weed infestation along riparian areas. Excluding cattle from the riparian area through fencing allowed pastures which would normally be grazed to build up, providing a source of fuel. Burning successfully controlled woody weeds and prevented the application of large amounts of herbicides. In addition fencing enabled graziers to control grazing on frontage country to better manage the land and improve productivity. Less nutrient and soil runoff, improved water quality and ecological values were some of the observed environmental benefits of controlling stock access in riparian areas. The condition of riparian and frontage country is much improved today and the fenced frontage country is used for light dry season grazing (1G).

Further cases studies of economic impacts of fencing on grazing properties can also be found under management practice documents 'Recover any poor or declining land condition' and 'Distribute grazing pressure evenly across land types to avoid selective grazing'.

a) Wet season spelling

The following examples relate to wet season spelling in general and are not specific examples of spelling in riparian areas:

Long term grazing trial in the Burdekin

A 14 year trial on a rangeland property in the Burdekin compared a rotational wet season spelling strategy with a number of other stocking strategies. The strategy involved a three paddock spelling system with each paddock spelled during the wet season every third year. Stocking rates were at one and a half times the long term carrying capacity (LTCC) for the first five years but were then reduced to the LTCC for the paddock. Gross margins in the spelling strategy performed relatively well over the trial period, despite an ill-timed fire, drought and the subsequent sale of poor-condition cattle. Net present value was slightly lower than in the moderate stocking or variable stocking strategy but far greater than heavy stocking. The wet season spelling strategy also produced the best land and pasture condition of all strategies (13G & 15G).

Case study in the Burdekin

In another Burdekin case study, wet season spelling was economically assessed on a 28000ha beef enterprise. Wet season spelling can offer a positive economic return when compared to existing grazing management practices. This was replicated across a range of scenarios including a range of pasture recovery profiles, stocking capacity, animal productivity responses, beef prices and agistment options over a 20 year period.

The economic gain was significant for several wet season spelling scenarios. For two wet season spelling scenarios, the total gross margin increased by more than 65% and the net present value was three times higher compared to 'doing nothing' because productivity losses were avoided. (12G).

a) Off-stream water points

A typical Mackay-Whitsunday grazing business assessment

In the Mackay-Whitsunday area, an assessment was made of the costs and benefits associated with adoption of improved management practices to determine the effect on profitability and economic sustainability of grazing enterprises, and the economic viability of capital investment to achieve improved management. The improved practice changes included but were not limited to:

- annually adjusted stocking rates
- pasture monitoring
- fencing
- off-stream watering points
- pasture spelling

Changes to the management practices led to four main benefits:

- higher conception rates and higher weaning percentages
- better quality animals when turned off providing a higher price

- greater volume of pasture available per head reducing the frequency of emergency feeding and allowing lower input costs
- greater environmental outcomes in maintaining land condition and reducing sediment runoff

In the Mackay-Whitsunday region, the grazing based operations are predominantly small intensive systems that heavily utilise soil, nutrient and chemical management practices. For these enterprises, the economic costs of improved management practices are high and it is recommended landholders assess their specific farm circumstances before undertaking capital investment. This is to ensure it is an economically worthwhile and viable option to implement any of the above-mentioned improved practices. For larger grazing businesses of more than 1000ha, there are additional economic benefits of improving management practices. A positive return is predicted but the overall benefit is low because the capital costs are high (6G).

b) Managing feral pigs

Under development

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)

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

Phone 4936 0239 (DAFF Rockhampton).

BusinessEDGE

This two-day workshop, delivered by MLA EDGE network provides finance and business

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January 2014

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 EDGENetwork. 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)

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 (cost of a local call with Queensland) or 07 3404 6999

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 EDGENetwork. 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 25 23 (DAFF)

Grazing land management (land condition assessment)

This 3 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: 07 4938 3919

MLA livestock production assurance

This is a simple on-farm food safety program which focuses on 5 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 3 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.smarttrain-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 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.

Website: http://www.dnrm.qld.gov.au/_data/assets/pdf_file/0019/110476/managing-grazing-lands-qld.pdf

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.reefwise farming.qld.gov.au/pdf/guide-gbrpl.pdf>

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

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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