

## Natural Resource Management - Goals and Risks

*Natural resource management is essential for a sustainable and profitable grazing businesses. It enhances soil health, promotes biodiversity, reduces off-site impacts, and contributes to producer satisfaction and capacity. By prioritising these practices, graziers can achieve long-term success while safeguarding and improving the environment for future.*

### Natural Resources goals

- Maintain or improve our grazing land so the majority is in A and B condition.
- Maintain or improve our grazing land to mitigate and repair erosion to improve soil health, water infiltration and land condition.
- Matching stocking rate to long-term carrying capacity or land condition.
- Maintain or improve water efficiency and security to ensure continuous supply throughout all conditions.
- Manage pest animals to reduce impact to livestock and land condition.
- Manage priority weeds to reduce impact to livestock and land condition.
- Manage native vegetation (shrubs and trees) to support livestock shelter/shade requirements.
- Manage fodder vegetation (shrubs and trees) to support drought resilience for sustainable/regenerative livestock feed.
- Manage native vegetation (shrubs and trees) to support improvement in land condition (retaining toe-slope, shelter belt and riparian vegetation).
- Manage or improve riparian vegetation condition and connectivity (bank stability and water quality).
- Take appropriate actions to improve soil health (organic cover, microbiology, dung beetles etc.).
- Maintain or improve biodiversity (species richness) to support ecosystem services essential to sustainable and resilient production.

Use fire management where appropriate to maintain or improve land condition and mitigate wild fire risk.

### How our natural resource goals will be achieved

- Develop a property map to identify locations of infrastructure (fencing, waters, buildings), land types, land condition, significant environmental values and locations of pest infestations to enable better NRM planning.
- Develop a grazing management strategy (including decision points for adapting stocking levels).
- Wet spelling country and allow reseeding before grazing is reintroduced.
- Use available resources and tools for monitoring: land condition, carrying capacity/forage budgeting, seasonal conditions and outlook, and market environment.
- Optimise fence, track and crossing design and placement (consider land types, riparian corridors, erosion potential, fire management, etc.).
- Develop a plan to address erosion and loss of function in the landscapes (e.g. installing spreader banks and timber windrows, rehabilitate disused bore drains, and other structures to slow damaging runoff flows).
- Audit water infrastructure and replace inefficient components, cap and pipe bores, desilt or modify dam, installing additional water storage and watering points, etc.
- Develop a Pest Management Plan, including identification of key foraging and refuge sites, management strategies and monitoring (e.g. baiting, trapping, ground and aerial shooting, engaging contractors, participating in coordinated control events with adjoining properties, exclusion and electric fencing).

*The Farm Business Resilience Program is jointly funded through the Australian Government's Future Drought Fund and the Queensland Government's Drought and Climate Adaptation Program.*

# Farm Business Resilience Program

- Maintain a Biosecurity Management Plan with specific measures incorporated to address key pest, weeds, and disease transmission risks (e.g. Foot and Mouth Disease, Lumpy Skin Disease, Leptospirosis, Bird Flu, Botulism, African Swine Fever).
- Undertake weed surveys and strategic management of priority species (e.g. spraying, manual control, introduction of suitable bio-controls).
- Incorporate crop rotation into pasture and fodder management for better soil health.
- Protect/increase native pasture diversity in grazing paddocks to improve pasture resilience, biodiversity, and soil health.
- Manage and protect native vegetation/riparian corridors and patches (through regeneration, revegetation, retention of toe-slope vegetation, fodder management, grazing management, fire, pest and weed management etc.).
- Investigate soil conditioning products and strategies and apply as appropriate.
- Identify existing (and pre-settlement) biodiversity assets and align other management plans to protect and enhance species richness and resilience.
- Develop a Fire Management Plan incorporating best practice mosaic/cool burn techniques to maintain or improve land condition and mitigate wildfire risk.
- Attend NRM training, workshops, and field days.

## How we measure success – what does success look like to you?

- ✓ Confidence and capacity to manage land through drought, flood, fire, and climate and market variability.
- ✓ Balanced production and resources use with the protection of the natural environment.
- ✓ Capacity to make proactive decisions and adapt stocking rates based on chosen indicators.
- ✓ Majority of grazing country has improved soil health supporting improved perennial, palatable and productive groundcover resilient to seasons and climate.
- ✓ Pest animals have negligible impact on land condition and production.
- ✓ Weeds have negligible impact on land condition and production.
- ✓ Diseases have negligible impact on production and ecosystem health.
- ✓ The risk and impact of wildfires is much reduced.
- ✓ Water infrastructure is fit for purpose and minimises wastage.
- ✓ Less time in drought (early actions are taken to slow entry into drought, and land is rain ready and quick to recover).
- ✓ Most of the erosion is mitigated, and no new erosion features have formed.
- ✓ Increased flora and fauna species richness indicating improved landscape health.
- ✓ Reduced impacts and need for infrastructure repair from damaging flood flows.

## Managing our Risks

### 4.1 - Production Risks

| Natural Resource Risk | Strategies for Mitigating Risk   |
|-----------------------|--|
| Drought               | <ul style="list-style-type: none"> <li>• Periodically assess drought information tools (e.g. LongPaddock website, stocking rate and forage calculators).</li> <li>• Monitoring indicators to inform stocking rates and rotations.</li> <li>• Destocking early to maintain land condition and groundcover.</li> <li>• Improve overall land condition to enhance soil moisture retention.</li> <li>• Build pasture/fodder diversity and resilience to reduce time in drought.</li> <li>• Water infrastructure has low evaporation and no wastage.</li> <li>• Grazing pest numbers are kept low.</li> </ul> |

# Farm Business Resilience Program

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|----------------------------|--|
| <b>Flood</b>               | <ul style="list-style-type: none"> <li>• Upgrade/realign fencing in flood-prone areas to be more resilient.</li> <li>• Mitigate damaging runoff by slowing and spreading waters, reducing impacts.</li> <li>• Maintain stable riparian banks using vegetation and groundcover to reduce erosion and improve infiltration.</li> <li>• Track and fence design minimises flood and erosion impacts.</li> </ul>  |
| <b>Fires</b>               | <ul style="list-style-type: none"> <li>• Fire management plan is well considered (infrastructure, water resources, fire lines, strategic action areas, response plan).</li> <li>• Implement mosaic/cool burn strategies and weed management to improve vegetation structure and reduce bushfire hazard.</li> <li>• Well planned and constructed fire lines to assist in managing fires.</li> <li>• Fuel reduction burns to protect infrastructure and biodiversity assets from wildfire.</li> </ul>  |
| <b>Temperatures</b>        | <ul style="list-style-type: none"> <li>• Maintain paddock trees, vegetation patched, and shadelines to provide livestock and wildlife shade and shelter.</li> <li>• Watering points are installed to minimise evaporation and maximise access by livestock.</li> <li>• Keep the landscape cooler by maintaining groundcover.</li> </ul>  |
| <b>Climate Variability</b> | <ul style="list-style-type: none"> <li>• Stay informed through available climate projection resources and tools (e.g. CliMate Monitor) to guide strategic management decisions.</li> <li>• Undertake training to build understanding of climate and weather drivers and conditions.</li> <li>• Periodically assess other climate information tools (e.g. LongPaddock website – AussieGrass, Forage).</li> <li>• Improve landscape condition to build resilience of all ecosystem services supporting production and biodiversity assets.</li> </ul>                  |
| <b>Biosecurity Risks</b>   | <b>Strategies for Mitigating Risk</b>  |
| <b>Exotic Diseases</b>     | <ul style="list-style-type: none"> <li>• Biosecurity Plan to identify and mitigate disease risk and manage outbreaks.</li> <li>• Implement Pest Management Plan.</li> <li>• Build knowledge to detect signs and symptoms and mitigate disease impacts.</li> </ul>  |
| <b>Weeds</b>               | <ul style="list-style-type: none"> <li>• Biosecurity Plan to identify priority and potential species and control actions.</li> <li>• Undertake integrated weed control approach (chemical, mechanical, biological, fire, containment) in accordance with the Biosecurity Plan.</li> <li>• Maintain vehicle and machinery hygiene practices.</li> <li>• Maintain vigilance in identifying new and emerging infestations.</li> <li>• Coordinated weed control with neighbouring properties.</li> <li>• Stock and wildlife exclusion to prevent weed spread.</li> </ul> |
| <b>Pests</b>               | <ul style="list-style-type: none"> <li>• Biosecurity Plan to identify priority pest species and control actions.</li> <li>• Undertake integrated pest control (baiting, shooting, trapping, containment) in accordance with the Biosecurity Plan.</li> <li>• Coordinated pest control with neighbouring properties.</li> <li>• Maintain vigilance in identifying new and emerging threats.</li> <li>• Exclusion and/or electric fencing to manage pest incursions.</li> </ul>  |

## Additional Resources

How to fence your riparian zone



Water spreading to improve degraded native pastures



Coolatai grass factsheet



Whoa-Boys for reducing runoff



Managing gully erosion



Runoff control measures for erosion control in cropping land



How to use low profile contour banks to promote ground cover and pasture



Dung Beetles for controlling parasites of cattle



Erosion control in grazing lands



Southern Queensland Landscapes



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