Recovering from drought

Key management considerations for beef producers

Recovering from drought is a challenging period and decision-making during this time requires strategic management decisions to ensure you are in the best position to return to a positive cash flow and profitable operation as quickly as possible.

This document has been prepared to help you make informed decisions on how to effectively manage your business following prolonged drought conditions.

It is not a comprehensive analysis of all drought recovery management options, but it does provide a 'first look' at some of the key strategies and actions to consider when planning for recovery:

1. Assessing your feed availability
2. Rebuilding your herd
3. Monitoring herd and pasture performance
4. Planning for the next dry.

It is important to remember that management decisions made during drought will impact on the options that are available during drought recovery. The recovery strategies that will be most suitable for you and your business will depend on many factors and it is important that you spend time evaluating which are most applicable and their impacts when planning your drought recovery.

Phase 1: Assessing your feed availability

Pastures need time to recover following prolonged drought to remain productive. Grazing systems that include pasture spelling, deferred stocking, continued drought feeding, and prompt weed management will help pasture recover in the shortest possible time. Assessing your feed availability is an important first step in drought recovery. Below are some considerations for how to assess pasture quantity and quality and manage both short and long-term feed availability.

Drought feeding and supplements

- Maintain an adequate plane of nutrition through supplementary feeding while pastures recover. Short-term drought feeding in containment areas may be required.
- For cattle already on hand, consider confining them to holding paddocks and keep drought feeding so they won't lose weight chasing green pick.
- The most appropriate supplement for your cattle will depend on: the condition of the existing/sourced cattle, the state of available grazing, and your business objectives (survival or production). You will also need to weigh up factors such as cost, availability, labour for feeding out, supplement palatability, ease of controlling intake and availability of equipment.

Assessing pasture availability and quality

- Assessing post-drought pasture availability will help you determine when to restock and/or how long you'll need to continue drought feeding. It is important to estimate ground cover and standing feed to determine carrying capacity. The FORAGE and VegMachine programs can help you estimate ground cover across your property.

- There are two ways to measuring standing feed; (1) estimate the amount of pasture available using the appropriate Stocktake photo standard for your pasture type or (2) take pasture cuts. Stocktake workshops delivered by Department of Agriculture and Fisheries (DAF) staff are available to support you in developing your own pasture budgets.
- How well pasture recovers after a drought will depend on the amount and intensity of rain received, the time of year in which the season broke and the physical conditions at the time of rain. Follow up rain is the key to recovery as several rainfall events are required to promote pasture growth and allow seeding and recovery of root reserves. You need to consider the medium to long-term seasonal outlook and the subsequent impact on pasture growth when determining a safe carrying capacity.
- To help facilitate early pasture growth, consider implementing grazing management strategies such as delayed restocking, spelling paddocks and restricting stock to confinement paddocks. It is recommended that you allow at least 6–8 weeks before grazing.
- Stressed and sparse pastures are susceptible to competition from weeds and if left uncontrolled can impact pasture regeneration. Identify weed populations and put strategies in place to manage them early.
- What is the proportion of productive, palatable and perennial (3P) grasses in the paddock? Long-lived and desirable 3P grasses are an indicator of pasture health and productivity. Assessing pasture species composition and survival will help you determine if any damage has been done to your pastures due to drought and the expected recovery potential for each paddock.
- Where you have paddocks with low pasture recovery potential; resowing a permanent pasture and/or planting a forage crop could be considered where land type allows.

Phase 2: Rebuilding your herd

Rebuilding your herd and making decisions around future herd structure post-drought should focus on: (1) increasing the short to medium term cash flow to enable you to service debts and (2) returning the property to its long-term carrying capacity and optimum herd structure as efficiently as possible.

Herd structure and optimum age of turnoff

Getting the herd structure and age of steer turnoff right is fundamental to the performance of your business.

- Increasing the proportion of breeders in the herd will increase your drought risk due to their greater nutrition demands related to reproduction.
- Herds with a younger turnoff age will have a greater proportion of breeders (wet cows) and are therefore at a higher risk of business profitability being affected by drought.
- Optimum herd structure and age of turnoff is a balancing act between profitability and level of drought risk.

Herd rebuilding strategies

A recent study, 'Fitzroy beef production systems: preparing for, responding to, and recovering from drought' (Bowen and Chudleigh, 2018); modelled the implications of a range of alternative herd management strategies that could be considered during the drought recovery period for an example breeding and growing operation located in the Fitzroy region of central Queensland. A summary of the key findings for each strategy is outlined below.

Strategy 1: Rebuild the herd slowly from retained progeny

Where a substantial herd reduction has been carried out, allowing herd numbers to rebuild slowly from retained progeny, and taking no other action, is likely to seriously impact the ongoing viability of the business.

Strategy 2: Purchasing PTIC (pregnancy tested in calf) cows to rebuild the herd

Purchasing PTIC cows to rapidly restore the breeder herd at the end of the drought would increase and extend cash flow deficits in the short term and potentially provide a better outcome than just allowing the herd to return to normal numbers through foregoing sales.

Strategy 3: Taking stock on agistment

Taking stock on agistment during the recovery phase may improve cash flow while the herd is being rebuilt and can be considered to be less risky than purchasing replacement breeders or trading stock. Traditionally, the net income from taking stock on agistment was less than the profit available from trading stock. However, the recent increases in the amount producers are willing to pay for agistment suggests taking stock on agistment could be a viable way to rebuild cash flows in the short term. Taking stock on agistment appears to be the lowest risk option available in the first part of the recovery phase.

Strategy 4: Trading cattle

Purchasing groups of steers, heifers or cows and calves as a trading option to be sold once they reach target weight or conditions can be considered as part of a drought recovery strategy. Using the Breedcow and Dynama 'Bullocks' program to assess the purchase of dry stock and the 'CowTrade' program to assess cows and calves or PTIC cows is recommended. The resulting gross margins from these programs need to be incorporated into a cash flow budget for the property over the medium-term future to identify the impact of interest and other costs associated with funding stock purchases.

Short term trading of large numbers of stock when recovering from drought may be a risky venture that needs close consideration if you are to achieve benefits greater than those achieved through other strategies.

Strategy 5: Buying back the herd

This approach relies on returning the herd to its long-term structure as soon as possible by purchasing replacement steers, heifers, and PTIC cows. While this strategy results in a faster return to normal cash flow it may require you to increase your level of debt. The additional capital outlays required to rebuild the herd more rapidly than natural increase may increase cash flow deficits in the short term and/or require additional borrowings.

Which strategy is best for my business?

The applicability of each of these herd management strategies will be partly dependent on the individual management decisions made during the drought. Determining the most effective recovery option/s for your business will require an analysis of a number of strategies to better define the level of risk and impact on cash flow and profitability. Building each strategy into a cash flow budget for the recovery period allows comparison with the alternative strategies and may allow better communication with lenders.

The Breedcow and Dynama software programs (BCD) can help you to evaluate the impact of different herd management strategies on the speed of recovery and impact on cash flow and profit. You can download these programs from the DAF website. You can also download the associated spreadsheets from the FutureBeef website. DAF extension officers and economists can help you use these programs.

What are the biosecurity considerations when restocking?

Significant rainfall following a drought as well as cattle movement during restocking can increase the risk of diseases, parasites and problem grass and weed incursions in your business. Consider and manage the following factors early in the drought recovery phase:

Diseases

- Botulism can be an issue where drought conditions cause deficiencies of phosphorus and protein, leading to bone chewing and eating other unusual objects. The disease can result in rapid, significant losses.
- Leptospirosis infections represent a risk after rain and can kill young animals relatively soon after infection.
- Clostridial diseases, particularly pulpy kidney, usually occur when the amount of carbohydrate in the diet increases substantially. It's most commonly seen when animals enter a feedlot but can also occur when animals go from a high roughage diet to a highly digestible forage diet, such as during the first flush of new green feed.
- Prevention is the best cure for these diseases. Maintaining an up-to-date vaccination program is highly effective in preventing disease if the full course is given.

Parasites

- Tick populations may be reduced during extended dry periods. The tick life cycle depends on heat and moisture. Consequently, as soon as it rains there is the potential for a sudden increase in tick numbers. The increase in tick burden can cause production loss and also increases cattle exposure to tick fever. It is recommended that you increase monitoring for ticks and tick fever and

take action as necessary. Treating all cattle for ticks before reintroducing them to your property is recommended.

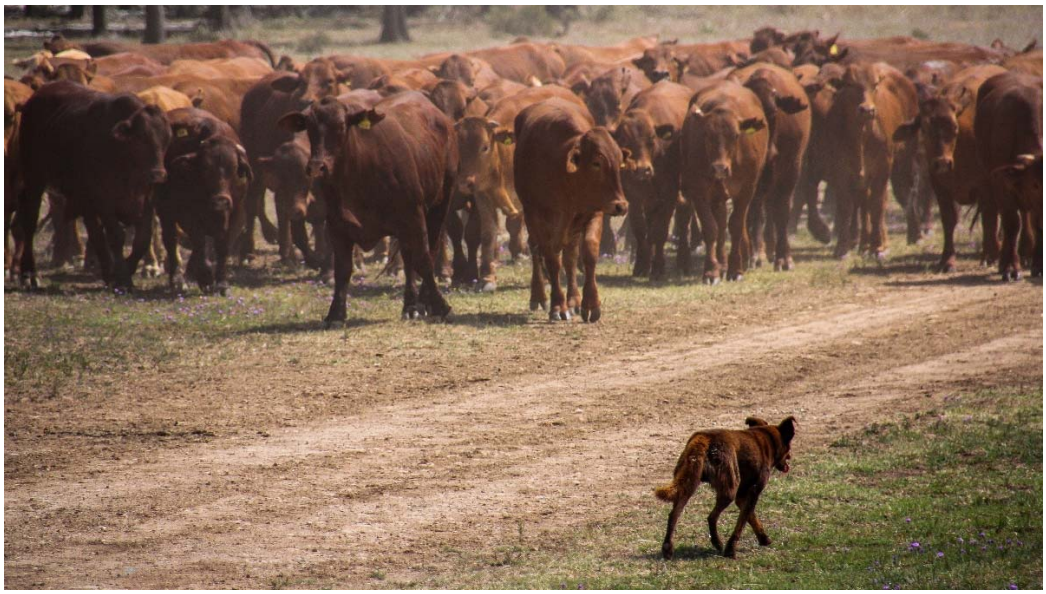
- Tick fever: while chemical treatments will keep your tick numbers under control, the tick fever organism is spread by larval tick so chemical treatments may not prevent tick fever. The best strategy for managing tick fever is vaccinating all weaners with trivalent tick fever vaccine and any unvaccinated animals brought onto the property. Unvaccinated cattle which haven't had the opportunity to develop immunity (due to lack of exposure to tick fever organisms in the dry) can be affected by tick fever.
- Populations of biting insects such as buffalo fly, midges, mosquitoes, stable fly and other biting flies can also increase after rain. Cattle are adversely affected by these insects in two ways: (1) persistent biting causing distress and associated loss of production due to distress and (2) transmission of diseases by insects (three-day sickness being the most common). There is a range of management options including pour-on preparations, insecticidal ear tags, oversprays or back rubbers.

Plant poisoning and weeds

Rain can cause growth or increased abundance of many toxic plants. These plants tends to grow more rapidly than pasture grasses. They can be harmful, or in some cases fatal to livestock, so it's important that you take care to minimise risks. If you notice a plant you are not familiar with, get it identified as soon as possible so you can take action if needed. Restrict access where possible or ensure a ready supply of alternative feed to prevent livestock eating toxic plants.

Once it has rained it is also important to check for emergence of new weed species. Weed seeds may have been transferred on-farm through contaminated fodder or machinery (e.g. harvesters, earthmoving equipment) from other regions. Early detection and management is critical. DAF extension and biosecurity officers can help with toxic plant and weed identification.

Phase 3: Monitor herd and pasture performance



Having a process to plan, monitor and evaluate business performance over time can be important to maximise long-term productivity and profitability post drought. Forward planning also ensures that you and your business are in the best position to respond to future droughts.

Pasture condition and animal performance monitoring and recording

- Pasture budgeting is an important tool for estimating the short- and long-term carrying capacity of your land. Undertaking regular pasture budgeting (every 6 months) will allow you to adjust stocking rates to meet current feed supply, animal requirements, pasture utilisation and ground cover targets with changing seasonal conditions.
- Ongoing recording of animal performance indicators (condition score, weight gains, pregnancy rates) will help ensure the maximum long-term performance of your herd.
- Conduct an analysis to evaluate your long-term business model and herd structure. Is my current drought recovery strategy working and what does my long-term herd structure look like?
- Develop a series of trigger points at which you plan to undertake your monitoring processes (pasture budgeting and cost-benefit assessments) throughout the year and make yourself accountable.

Phase 4: Planning for the next dry

- Review your breeder management program to ensure you are calving and weaning at the right time. These are fundamental for managing drought risk and facilitate better grazing management.
- Regularly review your herd structure including the age of steer turnoff, age of heifer culling and sale, plus the optimum final culling age for mature cows for your herd that best copes with climate variability and available land and other resources.
- Make time to document your experiences during the drought response and recovery phases. Memories are short and documenting what you learnt or would do different next time will help you to focus and refine your business management strategies in future droughts.
- If you don't have one already, develop a drought management plan. This plan should take into consideration; available feed and water, your financial position and the impact of your plan on future grazing.

Additional resources

Publications

Bowen MK, Chudleigh F (2018) 'Fitzroy beef production systems. Preparing for, responding to, and recovering from drought.' The State of Queensland, Department of Agriculture and Fisheries, Queensland: Brisbane, Qld, Australia.

Decision support tools

Breedcow and Dynama software (www.daf.qld.gov.au or www.futurebeef.com.au):

- Where are we now and where are we going? – **Dynamaplus**
- Is there a better way to organise and run the herd? – **Breedcowplus**
- Trading cattle and forced sales – **Bullocks and CowTrade**

Grazing land management decision support tools

- **FORAGE** (www.longpaddock.qld.gov.au) – ground cover monitoring using satellite imagery. Generates property scale reports on climate, pasture and ground cover.
- **VegMachine** (www.vegmachine.net) – ground cover monitoring using satellite imagery. Generates an 'easy to understand' ground cover report.
- **Stocktake** (www.futurebeef.com.au) – assists producers to assess pasture quality and quantity and develop pasture budgets.
- **BRICK** (www.futurebeef.com.au) – helps producers assess the current performance of herds and their business.

For further information, please contact your local Department of Agriculture and Fisheries extension or biosecurity officer, call us on 13 25 23 or follow us on Facebook at Queensland Agriculture.