

FutureBeef key messages



Breeding

1. Develop specific, measurable breeding objectives with milestone dates focussing on marketing requirements and improving herd performance.
2. Select for traits that are reasonably heritable, can be measured, and are economically important for the herd and where there is a reasonable variation in the herd so that rapid improvement can be made.
3. Put more effort into selecting bulls than breeders for more rapid improvement in herd performance.
4. Select the breeder herd that is best suited to the environment and target market.
5. Use targeted crossbreeding (heterosis) plus genetic selection to accelerate improvements in herd performance.
6. Use BREEDPLAN to genetically assess bulls for traits that are being selected for.
7. Use young bulls that have passed a BBSE (bull breeding soundness examination), including sperm morphology test.
8. Select females on reproductive efficiency, docility and environmental adaptation.
9. Cull breeders for reproductive failure and poor performance in other key traits (e.g. milk production, udder conformation and environmental adaptation).
10. Manage breeders to ensure their condition score in 3 (on a scale of 1–5) or higher so that breeders resume cycling soon after calving to maintain a 365-day calving cycle. Body condition at mating has the greatest effect on female fertility.
11. If the wet season fails, wean calves down to 100 kg or down to 60 kg if breeder survival is at risk and condition score is deteriorating rapidly.
12. Manage heifers from weaning to joining to maximise the proportion that reach a critical mating weight (CMW) at joining by:
 - minimising weight loss in weaner heifers during the post-weaning dry season;
 - allocating heifers to best paddocks; and
 - supplementing heifers as required to gain 100 g/day from weaning to mating.
13. Select docile heifers at weaning or early in life.
14. Mate more heifers than are needed for replacements in the breeding herd to allow culling for non-performance whilst maintaining breeder herd numbers.
15. Select heifers that conceive early in the mating period as they will be the more reliable breeders and most likely to produce a calf each year.
16. Manage heifers separately from breeders to achieve maximum re-conception through better use of paddocks, targeted supplementation such as spike feeding prior to calving, and weaning early if required.
17. Use conservative stocking rates in breeder paddocks to ensure adequate pasture at all times and identify and address any nutritional deficiencies prior to the onset of weight loss.

A joint initiative of:



Queensland
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mla
MEAT & LIVESTOCK AUSTRALIA

Grazing land management

1. Manage stocking rate around long term carrying capacity (LTCC).
2. Recognise stocking rate as the primary driver of land condition and animal performance.
 - Be flexible. Adjust stocking rate based on seasonal forage supply and changing conditions.
 - *Consistently* stocking beyond the capacity of your land drives down land condition and animal performance.
 - *Consistently* understocking compromises productivity per hectare.
3. Implement wet season spelling to encourage good land condition.
 - Spell country in the first six to eight weeks of the growing season to maintain land condition and maximise seed production.
 - Implement a full wet season spell to improve land in fair to poor condition.
 - Implement wet season spelling in two or more consecutive growing seasons to recover land in poor condition.
4. Change from *continuous* low stocking rate system to a *wet season spelling* system to improve land condition and achieve higher weight gains/ha by running slightly more stock.
 - Recognise that continuous low stocking rates at half (or less) the recommended safe long term utilisation rate, may gradually improve land condition but generally compromises weight gains/ha.
5. Use available pasture growth information specific for location, land type, land condition and tree density and considering infrastructure (particularly water placement and paddock layout) to:
 - Benchmark your property's carrying capacity
 - Strategically approach wet season spelling
 - Estimate land condition recovery time span.

Other considerations include:

- Best management principles are required to prepare for variable climate and potential climate change.
- LTCC is a benchmark not a ceiling. Stocking rate needs to be calculated to suit the season.
- To maintain land condition, destock quickly and restock gradually (be sensitive to early destocking and slow to re-stock).
- If land condition is going backwards implementing wet season spelling is the best management option.
- The more degraded the land condition, the more input is required and the higher the cost of recovery. For example, once land reaches D condition high cost mechanical or chemical intervention is necessary.
- It is likely that the longer country sits in a low condition the more difficult it is to recover (e.g. seedbank for 3Ps may deteriorate, organic matter/cover is reduced and hard-seeded weeds are favoured).

Nutrition

Pasture management

1. Manage stocking rates strategically to ensure that there is sufficient pasture at all times to meet pasture intake requirements.
2. Use grazing management strategies that preserve and promote good land condition, 3P pastures and legumes. Land in A condition is twice as productive as land in C condition.
3. Understand and monitor nutrient supply and animal performance potential of paddocks and pastures throughout the year.

Herd management

4. Understand and monitor nutrient requirements of different classes of stock throughout the year.
5. Identify the primary limiting nutrient(s) throughout the year for different classes of stock in each paddock and consider the cost–benefit of providing supplements.
6. Avoid long feeding programs because they are very expensive, and are stressful on people, stock, pastures, soils, infrastructure, finances and potential future productivity.
7. Manage breeders to ensure their condition score is 3 or higher at calving so that breeders resume cycling soon after calving to maintain a 365-day calving cycle.
8. Use seasonal mating, where possible, to match available highest quality diet with breeder peaks in nutritional requirements.
9. Wean calves early to preserve breeder body condition because dry season tropical pastures in northern Australia do not meet the nutrient requirements of lactating cows.
10. Weaning significantly reducing a breeder's nutrient requirements which is the equivalent of having to feed a wet cow 2 kg of grain or 3 kg of fortified molasses each day to meet its energy requirement
11. If the wet season fails wean **all** calves down to 100 kg, and 60 kg if breeder condition score is likely to be compromised.
12. Educate young animals at weaning for ease of handling throughout their lives.
13. Feed good quality hay to weaners at all times whilst in yards.
14. To achieve weight gain in calves under 150 kg, feed supplements that are high in protein and energy.
15. For heifer calves retained as breeders feed as required, to gain a **minimum** of 100 g/day from weaning to mating.
16. Destock weaner paddocks of all stock (including horses) from the beginning of the growing season until weaning commences.
17. Develop and implement a strategic plan to manage your production system in relation to production targets.

Phosphorus management

18. Determine the phosphorus status of cattle in all paddocks on the property.
19. Feed phosphorus in the wet season to all stock where soil phosphorus levels are deficient (<5 mg/kg).
20. Test breeders for phosphorus status where soil phosphorus levels are marginal (6–8 mg/kg).
21. Choose appropriate phosphorus diagnostic test for different classes of cattle.
22. Have results of blood and dung analyses interpreted by an NIRS specialist.
23. Use the ratio of faecal phosphorus to dry matter digestibility, which provides an indication of the balance between phosphorus and energy, as a guide to indicate the likely response to phosphorus supplementation in addition to measuring animal phosphorus status.
24. Supplement phosphorus-deficient animals with phosphorus when phosphorus is most limiting in the diet and dietary crude protein and energy levels are high enough for production.
25. Supplement cattle grazing stylo-based pastures with phosphorus in the early dry season.

Weaner management

1. Calves are taken from their mothers mainly for the benefit of the cow.
2. Stopping the need to produce milk reduces the cow's nutrient requirement and allows her to regain condition.
3. Stopping the need to produce milk is equivalent to feeding the cow with 2 kg of grain or 3 kg of fortified molasses each day.
4. Lighter stocking in breeder paddocks maximises the opportunity for the cows to maintain good body condition.
5. The cow needs to have a body condition score of 3 or higher at calving to maximise the chance of getting pregnant again while rearing her calf.
6. A cow must get pregnant within 75 days of calving to produce a calf every year.
7. With seasonal mating, calves are normally weaned at four to eight months of age in late autumn.
8. With year-round mating, calves are at a wide range of ages at the first muster in late autumn; weaning of all calves over 100 kg allows the cows to recover body condition and survive the dry season.
9. If the wet season fails, all calves can be weaned younger under both seasonal and continuous mating systems.
10. Hay is the main feed for weaners in the yard. Good quality hay must always be available from the first day of weaning.
11. Calves weaned under 150 kg should be fed to gain weight, and need supplements of highly digestible protein and energy.
12. Heifer calves retained as breeders should be fed to gain 100 g/day from weaning to mating.
13. Weaning is the time for educating young animals to set them up for ease of handling throughout their lives.
14. Weaner education includes being worked calmly through the yards and being tailed out from the yards to the weaner paddock and back.
15. Weaner paddocks should be rested over the year to accumulate a body of good herbage; they should not be used as a holding paddock for sale or sick stock, or for the working horses.

Benefits of early weaning

The likely benefits of good weaning and weaner management on the breeder herd include:

- better overall breeder condition
- higher conception rates
- fewer mortalities
- lower cost of supplements for breeders
- more females for sale
- more concentrated calving in
- continuously-mated herds
- more maiden heifers heavy enough to mate.

Extra costs

Extra costs of early weaning will include:

- more expensive supplementary feed
- more labour for tending small weaners
- increased infrastructure for yarding and feeding weaners.

Whole of business management

1. Analyse the business to understand where the issues are in terms of turnover, overheads and gross margin. Identify the primary driver that will most impact on profit and see what can be changed.
2. After analysing the business, develop strategies to overcome weaknesses specific to your business before it is too late.
3. Understand the implications of attempting to lift stocking rate above the carrying capacity.
4. Focus firstly on what can be done to sustainably lift carrying capacity.
5. In the extensive breeder regions, renewed focus on heifer management, breeder performance and bull selection based on objective measurement.
6. Continue to develop skills and capacity of business managers.
7. Ensure bull selection is appropriate and accounts for the pressure likely to be incurred within a given breeding system.