

Wet season spelling in the Gulf

Good for your pastures and your pocket

Native pastures – a valuable resource

Beef businesses in the Gulf region rely heavily on native pastures – particularly 3P grasses (Perennial, Palatable and Productive). Set stocking and overgrazing have led to significant declines in both native perennial pastures and land productivity.

Grazing rotation programs including wet season spelling must be in place on all properties to assure strong, healthy, resilient perennial tussocks and therefore long term business viability.

When to spell

Dry season pasture spelling:

- retains stubble and ground cover and hence, greatly reduces runoff
- improves pasture growth response to first storms
- **DOES NOT** aid in the recovery of 3P grasses because they are ‘shut down’ or dormant for most of the dry season.

For maximum results, spell during periods of active pasture growth i.e. early wet season, for at least 6–8 weeks

Wet season pasture spelling will:

- replenish root reserves
- maximise seed production
- hasten seedling establishment
- produce grasses that are healthier, stronger and produce more bulk.

How long do I spell paddocks for?

For severely run down pasture, spelling for the whole wet season and successive wet seasons is needed. Removal of cattle at the second round muster (September) or in a later branding round may be a practical destocking option.

Rule of thumb – ‘Keep an eye on your country and once seed is set and starting to fall, cattle can go back on – this will vary with the season’.

Cattle can be returned during the first round following the wet season. This provides sufficient time to build up root reserves and maximise seed set. This rest also allows new seedlings to establish without being grazed off.

Spell some country every year to help buffer the affect of rainfall variability and capitalise on the better years.

Benefits of wet season spelling (WSS)

- Improved land condition
- Increased pasture production
- Increased animal production
- Increased profitability
- Buffers the effect of rainfall variability
- Allows build up of fuel load for fire



The black speargrass plant on the right was grazed every 2–3 weeks over one growing season. The plant on the left was grazed a few times over the same period. This demonstrates the impact of WSS on the plant's growth of roots and shoots.

Improved land condition

In the Ecobeef project, a section of the Einasleigh Town Common was spelled each wet season from 2008 to 2011. Measurements showed that in 2008, less than a quarter of the paddock was in good condition i.e. less than a quarter of the paddock was at 75% of its original carrying capacity.

After four successive wet season spells and moderate cattle numbers over the dry season, three quarters of the paddock is now in good condition (75% of original carrying capacity) with 3P species now a higher proportion of total yield.



The rewards of good pasture management

Increased profitability

Through the Climate Savvy Grazing project, property economics of spelling in terms of gross margin per adult equivalent (GM/AE) were calculated by GRASP and Enterprise models.

Results showed distinct increases when wet season spelling was conducted. Results for two major Gulf land types are shown below.

Land type	No spell (GM/AE)	Spell (GM/AE)
Sandy forest	\$44.20	\$59.95
Black soil (bluegrass/browntop)	\$77.51	\$100.64

Increased pasture production

A paddock on 'Namel' near Georgetown was also involved in the Ecobeef project. The paddock was spelled for successive wet seasons over the same period. Most years the paddock was heavily stocked over the dry season with stocking rates equivalent to a beast:4 ha.

End of wet season pasture yields

2007 – 1474 kg/ha

2011 – 1669 kg/ha

End of wet season yields were similar but a key productivity increase was the increase in proportion of 3P grasses and stylos in the total yield.

Yield of 3P grasses and stylo

2007 – 31.4% of pasture yield (492 kg/ha)

2011 – 58.2% of average yield (857 kg/ha)

Einasleigh Town Common



2008: Total pasture yield – 1046 kg/ha

2008: Yield of 3Ps and Indian couch – 606 kg/ha



2011: Total pasture yield – 1876 kg/ha

2011: Yield of 3Ps and Indian couch – 1500 kg/ha

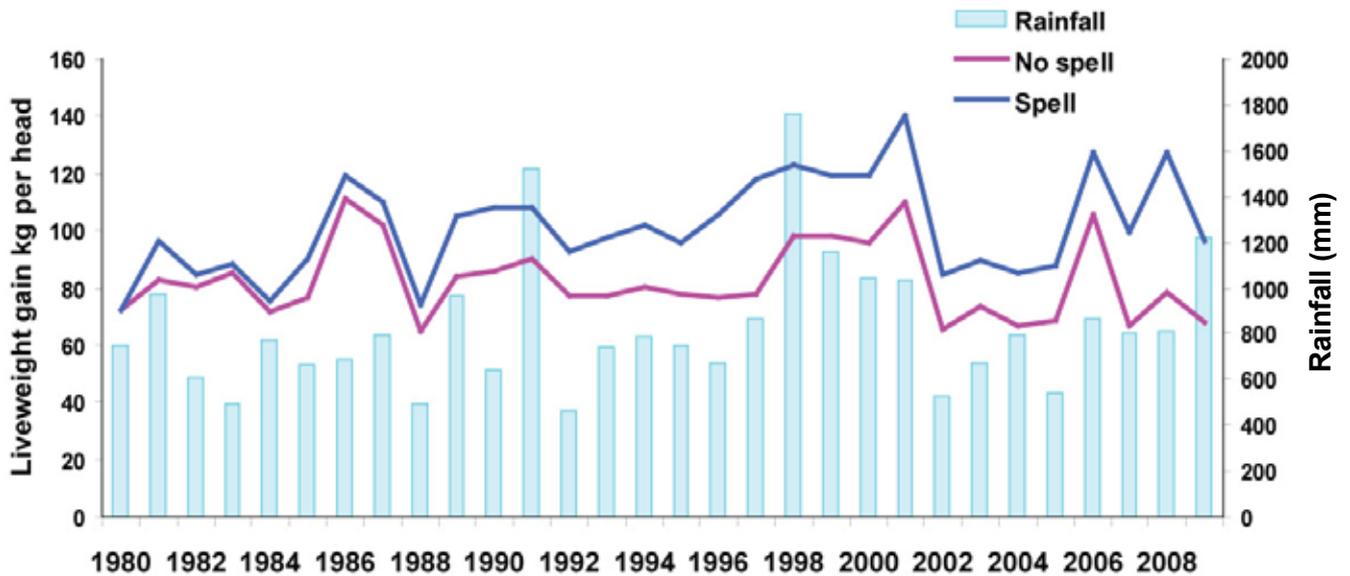


Wet season spelling can reflect positively on the breeder herd with increased reproductive efficiency and strong healthy cows and weaners.



Increased pasture productivity due to increased yield in 3P grasses and stylos on Namel Station.

Increased animal production



Impact of spelling on liveweight gain (kg) per head for black soil (bluegrass/browntop) country. Calculated through the Bio-Economic Modelling of the Climate Savvy Grazing project.

Considerations and constraints to wet season spelling

Balancing herd and land management

Lack of fencing and waters is a significant constraint when implementing a wet season spelling system.

Improving breeder performance often involves managing heifers separately or splitting breeders based on time of calving to reduce lick and mustering costs. Where there are limited paddock numbers, mobs are combined to allow spelling of large paddocks over the wet season. This might be good for restoring 3P pasture productivity but can compromise herd management options aimed at lifting breeder performance.

Get stocking rates right

Cattle from the spelled paddock need to go somewhere. If not being moved off the property, room has to be found in other paddocks. Increasing stock numbers in other paddocks, runs the risk of overgrazing these 'load-up' paddocks, which **defeats the purpose of spelling.**

Total cattle numbers must be adjusted to allow for a wet season spelling program. To minimise the risk of overgrazing 'load-up' paddocks, pay close attention to paddocks that genuinely have spare grazing capacity and/or contain resilient and productive land types.

For further information or enquiries contact

Queensland DAFF FutureBeef Team
www.futurebeef.com.au
Cloncurry 07 4742 1311 Mareeba 07 4048 4600



Wet season spelling of this heavily grazed area has allowed the 3P black spear grass to set seed. This is an essential step in recovering the Indian couch dominated pasture.