

# Pasture recovery of desert bluegrass through dry years in central Queensland

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## The issue

- Reduced condition of pasture and soil is evident in most communities across northern Australia (Figure 1).
- “C” condition land has lost around 50% of its productivity.
- The presence of 3P (palatable, perennial, productive) grasses means recovery is possible.
- Desert bluegrass (*Bothriochloa ewartiana*) is a key 3P grass.



Fig 1. “C” land condition



Fig 2. Perennial grass studies

## The studies

- Two trials examine perennial grass dynamics under varying spelling regimes on “C” condition land (Figure 2).
- Spelling regimes include annual and biennial spelling with either an early or full wet season spell.
- The trials are conducted under either a moderate or high stocking rate.
- Basal cover is a key measure of pasture health and vigour.

## Aims

- Better understand pasture recovery under different spelling regimes.
- Develop better recommendations around pasture recovery.

## Results

- Stocking rate has had an overriding effect on perennial grass basal cover (Figure 3).
- Extended dry conditions have stressed the perennial grasses.
- However, under moderate stocking rate there is a trend for recovery with spelling as seasonal conditions improve (Figure 4).
- Desert bluegrass is showing a strong trend for recovery under full wet season annual spelling.
- The original plants, as well as the seedlings, are getting bigger despite a 40% death rate due to dry conditions (Figure 5).

## Key points

- Desert bluegrass is long-lived and recruitment rates are low.
- Wet season spelling is only of benefit under moderate stocking rate.
- Recovery will occur with improving seasonal conditions but only if pastures are not overgrazed during drought (Figure 6).

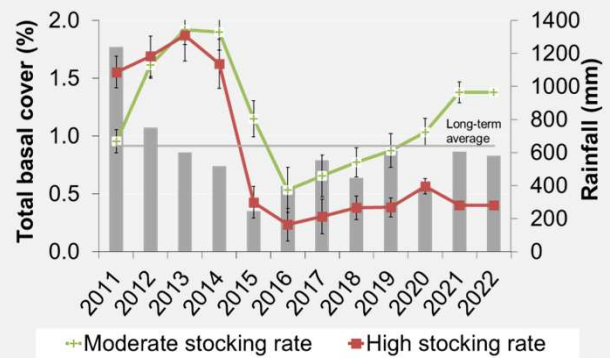


Fig 3. The effect of stocking rate on perennial grass basal cover

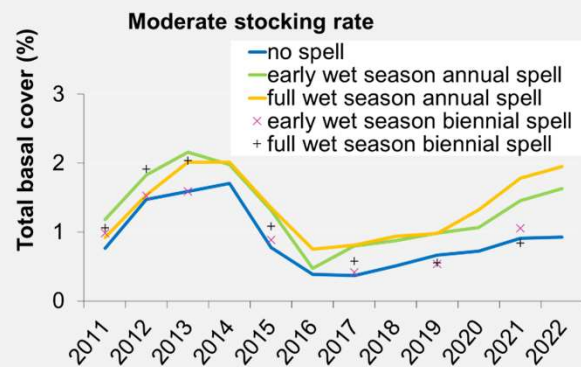


Fig 4. The effect of spelling regime on perennial grass basal cover

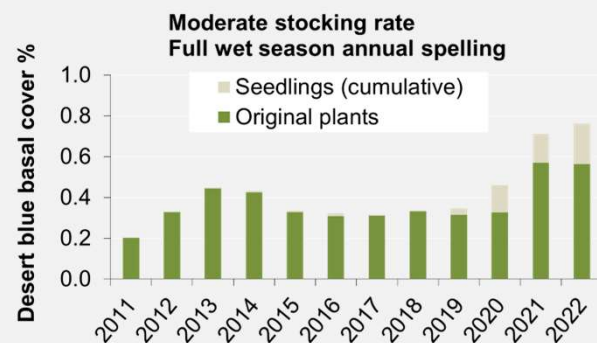


Fig 5. The basal cover of desert bluegrass seedlings and original plants resulting from full wet season annual spelling