

# Recovery of clumping perennial pastures after extended dry conditions

## Two quick tests

### Are my pastures dead or just dormant?

Most of our clumping perennial pasture species are deep-rooted and capable of survival, but root systems can die due to continued hard defoliation, temperature extremes and moisture stress. In extended dry conditions clumping perennial species can suffer considerable reductions in plant numbers. Kikuyu and other grasses which have their energy reserves and growing tips underground are more likely to survive dry conditions, and so these assessments may not be useful for these pastures.

Dry conditions cause slower pasture growth and therefore, plants are subjected to more frequent grazing, depleting their reserves and increasing death by starvation. Plant losses are greatest when grazing stress combines with dry conditions. Severe drought conditions can induce complete plant dormancy as a natural mechanism to conserve energy.

Perennial grasses rely on survival of existing plants, as re-establishment from seed is difficult, slow and often expensive. Legumes that die out in dry seasons tend to recover more easily from seed when rain falls.

#### Pinch test

Pinch clumps of dry grass, twist and pull to see if they pull out:

- If they do not pull out then they are alive. The roots have kept them anchored in the soil and they will respond to rain.
- If they come out easily then they are dead, and pasture recovery will need to rely on the soil seed bank.



You can categorise your paddocks:

**Category 1:** The majority of grasses do not pull out.

These pastures will be the quickest to respond as they are still alive but most likely dormant.

**Category 2:** The majority of the grass plants do pull out. Only a few plants are alive.

These pastures can still respond, but slower regrowth is likely, and low density of desirable plants can be an issue.

\*Hard grazing before the pasture has recovered will risk pasture loss in Category 1 & 2.

**Category 3:** Majority of the grass plants pull out (i.e. they are dead) or there is almost nothing left.

These paddocks are reliant on the soil seed bank. There is high weed potential. Consider using them as a sacrifice paddock if entirely hand-feeding, sparing other paddocks with pastures still alive. Re-growth from seed isn't likely to occur until moisture levels can support germination and continued growth. These paddocks may need to be replanted to ensure a good sward of productive species establishes.

### How will my pastures respond if we do get some rain?

#### Water test

During extended dry conditions, tropical pastures may not grow even when the soil temperature is suitable (i.e. need to be >14°C and preferably higher than 18°C for most tropical pasture species).

Rain at this time may give an expectation of pasture growth, but this may not necessarily happen, or may happen quite slowly. Plants which are dead will of course not respond to rain, and plants which have been grazed too low may not have the reserves or leaf area to recover quickly.

\*Weeds and broadleaf annuals may be the first to germinate, often from a large seed bank and if so will be need to managed.

Mark out one square meter on the ground with a spade or your boot.

Fill a bucket with 20L of water and tip it over the one square meter area twice in a week and observe what plants respond or germinate. 20L twice a week is the equivalent of 40mm rain.

You can use more or less water but try not to apply an excessive amount as this will give a false indication of what will return. Too little water and it will appear that pastures won't respond.



#### Information adapted from:

Looking after drought pastures. Tips and Tools. MLA. <https://www.mla.com.au/globalassets/mla-corporate/12943-looking-after-drought-pastures.pdf>

Pasture Recovery for North Coast Beef Producers. North Coast Local Land Services. [https://northcoast.lis.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0007/1155481/Pasture-Recovery.pdf](https://northcoast.lis.nsw.gov.au/__data/assets/pdf_file/0007/1155481/Pasture-Recovery.pdf)