



- Each plant grew from seed for 179 days and received the equivalent of 241mm of rain
- The first seedling was spelled for the entire time i.e. not grazed
- The second seedling was spelled for 59 days before simulated high grazing pressure was applied
- The third seedling was grazed as soon as leaves grew high enough—in this case 24 days



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Mitchell Grass seedling development

As a guide to wet season spelling

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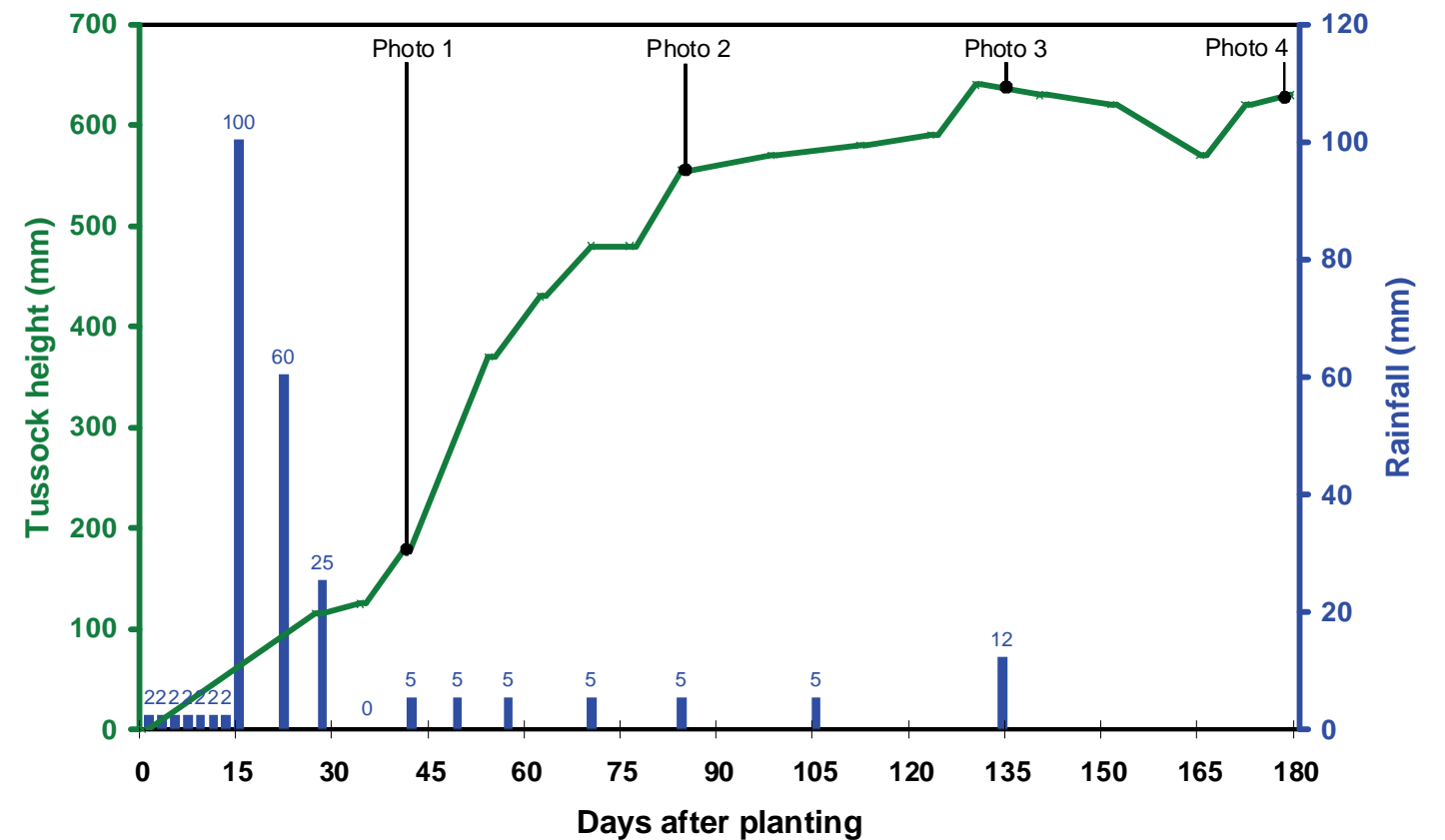
Spelling (or resting) paddocks over the wet season can aid Mitchell grass recovery from drought and improve poor land condition. In these situations the Mitchell grass often has to re-establish from seedlings. So how long do you need to spell country to allow seedlings to grow before restocking a paddock?

Mitchell grass seedlings were grown on the equivalent of 240 mm of rain over a 6-month period. One set of seedlings were spelled for that 6-months. Another set were subject to frequent simulated grazing and a third was spelled for 8-weeks before grazing commenced.

The next series of photographs show the pace the ungrazed seedling developed at. This seedling had grown, set seed and established within 180 days and was ready to be grazed.

The last photograph compares the size of the ungrazed and grazed seedlings after 180 days. The soil from these plants was washed away to reveal the roots. The ungrazed seedling had an extensive and robust root system and should survive a drought. The seedling which was grazed as soon as possible had a poorly developed and weak root system. It would be unlikely to survive the next dry season. The seedling which was spelled for 8-weeks also had a poorly developed root system, but may have grown enough to survive the next dry season.

The graph below shows the height of the ungrazed seedling, when each photograph was taken and the amount and frequency rainfall provided to each seedling.



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Curley Mitchell grass



Photo 1 43 days after planting



Photo 2 88 days after planting

Curley Mitchell grass



Photo 3 132 days after planting

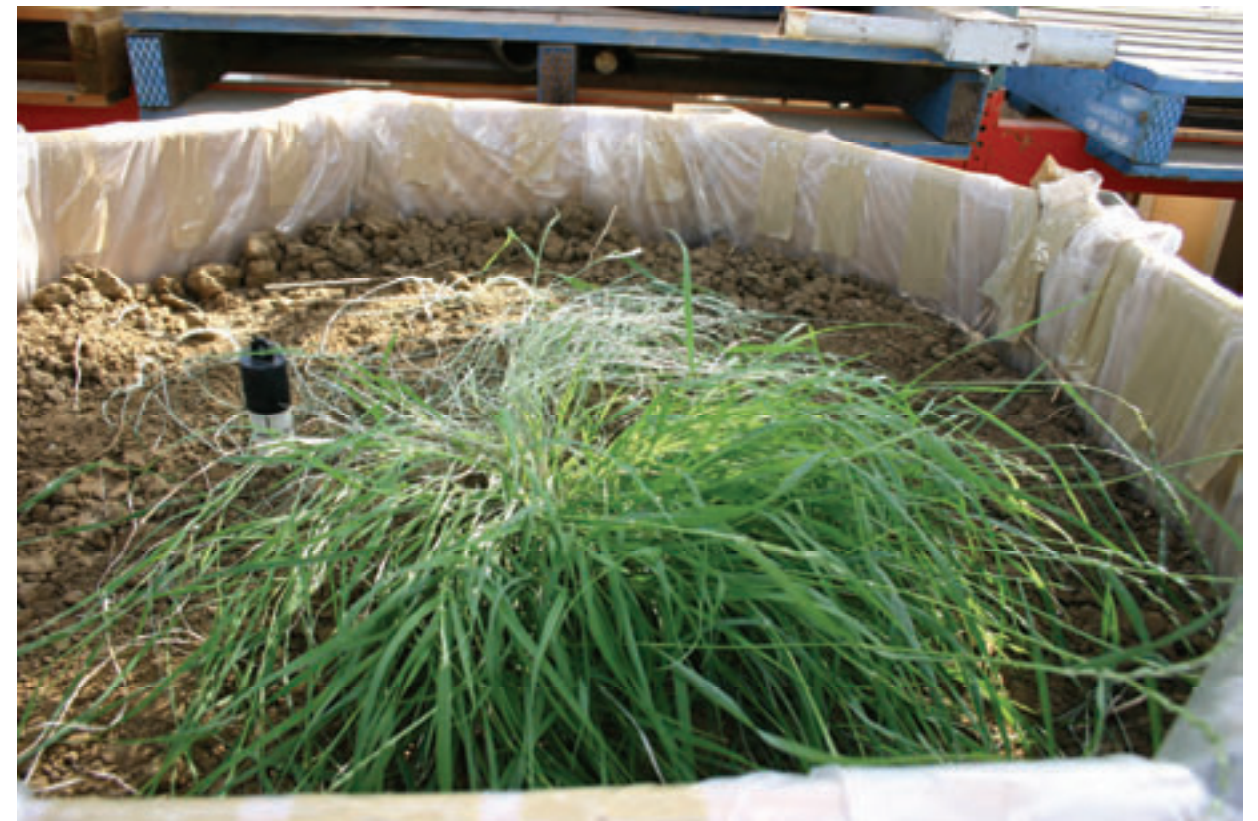


Photo 4 176 days after planting