

# Weeds of the Burdekin Rangelands: Managing castor oil plant and bellyache bush

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**Table 1 Preventing new weeds from establishing**

*Summary of key processes: what do we know?*

What are the key bio-physical processes and at what scale do they operate?	What factors regulate them, in order of importance? Are they 'manageable'?	Do we have enough data to set benchmarks? Do these vary with landtypes and/or seasons?
<b>Seed production</b>	Seasonal conditions—bellyache bush can flower at any time of year but castor oil flowers over the wet season and fruits subsequently; cannot be managed. Slashing—this will reduce the seed output of these species.	
<b>Dispersal</b>	Explosion of fruit—fruits of both species explode when ripe and throw seeds up to several metres; this process cannot be managed. Water—seeds could conceivably be washed downstream; not a manageable process.	Nothing is known about the importance of this means of dispersal; as a general rule, upstream infestations should be treated first.
<b>Germination</b>	Seasonal conditions—germination generally occurs at the beginning of the wet season; this process cannot be managed.	Little is known of the seed/seedling biology of these species in Australia.
<b>Plant survival</b>	Fire—may be effective against these species.  Manual weeding—this is effective against small or scattered infestations. Biocontrol agents—a biocontrol program has been initiated against bellyache bush.  Competition—healthy populations of perennial grasses may slow invasion by these species.	There is insufficient information to recommend appropriate fire regimes or indicate how effective prescribed fire may be. Plants removed should be burned.  The importance of grass competition has not been assessed.



**Table 2 Key processes for management**

<i>Management Options</i>		
Based on current scientific understanding, what management options are available to achieve the objective? How can we monitor their effectiveness?	What confidence do we currently have in these options?	Do the options conflict or interact with other management objectives? Will trade-offs be needed?
Manually remove and burn scattered individuals and small infestations.	Effective but requires follow-up.	No conflicts involved. Decision must be made about whether manual or herbicide treatments are most appropriate in any given situation.
Slashing followed by shallow cultivation.	Effective but requires follow-up.	As above
Herbicide treatment.	Effective but requires follow-up.	As above

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