

Weeds of the Burdekin Rangelands: Managing hymenachne

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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?
Seed production	<p>Sowing as ponded pasture species—can be managed.</p> <p>Water—plants are spread when pieces break off and are carried downstream; this process cannot be managed.</p> <p>Birds—waterbirds may spread seeds; this process cannot be managed.</p> <p>Motor vehicles—pieces of plants can break off and be transported in machinery; this can be managed.</p>	<p>The species does best in seasonally flooded situations.</p> <p>As a general rule, upstream infestation should be treated first.</p> <p>Any machinery that operates in areas invaded by hymenachne could transport plant parts to other areas.</p>
Dispersal	<p>Climate—the plant does well in seasonally flooded tropical and subtropical areas; this factor cannot be managed.</p> <p>Grazing—this species is very tolerant of grazing; grazing can reduce the biomass.</p> <p>Application of herbicides—no herbicides are currently available; research is under way.</p>	





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?
Avoid planting hymenachne.	Given that control of this species is extremely difficult once it is established, the most effective strategy is to avoid introducing it.	The plant is used by the pastoral industry and yet poses a major threat as a weed to the sugar industry and to conservation values; the species has been declared a Weed Of National Significance and yet is NOT currently a declared plant in Queensland.
Avoid transporting plant parts on farm machinery or other motor vehicles	This is only one of several ways in which hymenachne may spread.	
Monitor to detect new infestations as early as possible.	Early intervention with the few tools that are available will be critical in limiting spread of this weed.	Monitoring can be carried out in conjunction with other activities but will require an awareness of the threat and an ability to identify the species.

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