

# NSW Weed Risk Management assessment: *Hyparrhenia hirta*

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		<i>Hyparrhenia</i>		
		<i>hirta</i>		
		Coolatai grass		
		Poaceae		
		North and Central Coast		
	Landuse:	Roadside (Transport and communication corridors)		
	Density:	High density in landuse		
		Standard weed management includes slashing, selective herbicide use, grazing and infrequent fires.		
<b>Invasiveness</b>			<b>Do not know</b>	
<b>Q1</b>	<b>score</b>	<b>2</b>	<b>0.0</b>	Plants become dominant in open habitats (CRC Weeds pg 4)
<b>Q2</b>	<b>score</b>	<b>3</b>	<b>0.0</b>	There is no routine management that affects this weed in the land use
<b>Q3</b>	<b>a</b>	<b>2</b>	<b>0.0</b>	Plants produce seeds in their first season of growth (CRC Weeds pg 4)
	<b>b</b>	<b>1</b>	<b>1.0</b>	References examined did not specify amount of seed produced.
	<b>c</b>	<b>0</b>	<b>0.0</b>	No vegetative reproduction mentioned in various references.
	<b>total</b>	<b>3</b>		
<b>Q3</b>	<b>score</b>	<b>2</b>		
<b>Q4</b>	<b>a</b>	<b>0</b>	<b>0.0</b>	Dispersal by flying animals not mentioned (e.g. CRC Weeds pg. 4).
	<b>b</b>	<b>1</b>	<b>0.0</b>	Dispersal by animals mentioned but type not specified (e.g. CRC Weeds pg. 4).
	<b>c</b>	<b>2</b>	<b>0.0</b>	Dispersal along drainage lines mentioned (CRC Weeds, pg. 4)
	<b>d</b>	<b>0</b>	<b>0.0</b>	Dispersal by wind not mentioned (e.g. CRC Weeds pg. 4).
	<b>total</b>	<b>3</b>		
<b>Q4</b>	<b>score</b>	<b>2</b>		
<b>Q5</b>	<b>a</b>	<b>0</b>	<b>0.0</b>	Once planted as a pasture grass but this no longer occurs (Cook and Dias 2006)
	<b>b</b>	<b>2</b>	<b>0.0</b>	Vehicles and on machinery are main means of spread (CRC weeds pg. 4), pers. obs.
	<b>c</b>	<b>1</b>	<b>0.0</b>	Not mentioned but possible if pasture hay moved.
	<b>d</b>	<b>2</b>	<b>0.0</b>	Another key means of spread (CRC weeds pg. 4)
	<b>total</b>	<b>5</b>		
<b>Q5</b>	<b>score</b>	<b>2</b>		
<b>Invasiveness score</b>		<b>11</b>		
<b>Impacts</b>				
<b>Q1</b>	<b>score</b>	<b>3</b>	<b>0.0</b>	Chejara <i>et al.</i> (2006).
<b>Q2</b>	<b>score</b>	<b>4</b>	<b>0.0</b>	Chejara <i>et al.</i> (2006).
<b>Q3</b>	<b>score</b>	<b>2</b>	<b>0.0</b>	Substantially reduces biodiversity so it is a lower priority for conservation (e.g. CRC Weeds pg. 7 and Coulls-Smith and Downey).
<b>Q4</b>	<b>score</b>	<b>0</b>	<b>0.0</b>	No affect on physical movement.
<b>Q5</b>	<b>score</b>	<b>0</b>	<b>0.0</b>	Not known to affect animal or human health.
<b>Q6</b>	<b>a</b>	<b>1</b>	<b>0.0</b>	Significantly reduces biodiversity (e.g. CRC Weeds pg. 7).
	<b>b</b>	<b>1</b>	<b>0.0</b>	Said to produce hotter fires (M. Power pers. comm.).
	<b>c</b>	<b>0</b>	<b>0.0</b>	Minor to no effect known.
	<b>d</b>	<b>0</b>	<b>0.0</b>	Minor to no effect known.
	<b>e</b>	<b>0</b>	<b>0.0</b>	Minor to no effect known.
	<b>f</b>	<b>0</b>	<b>0.0</b>	Minor to no effect known.
	<b>total</b>	<b>2</b>		
<b>Q6</b>	<b>score</b>	<b>2</b>		
<b>Impacts score</b>		<b>11</b>		
<b>Potential distribution</b>				
	<b>score</b>	<b>4</b>	<b>0.0</b>	Estimate - species grows over a wide range of conditions (e.g. CRC Weeds, pg. 4).
Comparative weed risk and Uncertainty scores				
<b>Corrected Invasiveness</b>		<b>7.3</b>		

*Hyparrhenia hirta* (cont.)

<b>Corrected Impacts</b>		<b>5.8</b>		
<b>Corrected Potential distribution</b>		<b>4.0</b>		
<b>Comparative Weed Risk</b>		<b>170</b>		
		<b>High</b>		
Uncertainty Invasiveness		7.1		
Uncertainty Impacts		0.0		
Uncertainty Potential Distribution		0.0		
<b>Control costs</b>				
Q1	a	2	0.0	Fairly non-descript (pers. obs.).
	b	1	0.0	An annual species. Plants lay off over winter (CRC weeds pg. 4).
	c	1	0.0	Grows to 1.2 m high (PlantNET 2008).
	d	1	0.0	Similar height to other grassy vegetation.
	total	5		
Q1	score	2		
Q2	score	0	0.0	Sites are all readily accessible (roadsides).
Q3	a	1	0.0	Flupropanate registered.
	b	2	2.0	Labour costs likely to be medium but not known for certain.
	c	1	0.0	Likely to be low equipment cost.
	total	4		
Q3	score	2		
Q4	score	2	0.0	Level of weed control needed in land use is infrequent and would require significant investment.
<b>Control costs score</b>		<b>6</b>		
<b>Persistence</b>				
Q1	score	1.5	1.5	WM program needed. Not known but likely to be significant recruitment after targeted control.
Q2	score	3	0.0	Plants produce seeds in their first season of growth (CRC Weeds pg.4).
Q3	score	1	1.0	Seed longevity studies not mentioned in references examined.
Q4	a	1	0.0	Natural dispersal probably occasional.
	b	2	0.0	Accidental human dispersal common.
	total	3		
Q4	score	2	0.0	
<b>Persistence score</b>		<b>7.5</b>		
<b>Current Distribution</b>				
Q1	score	0.5	0.0	Estimate.
Q2	score	1	0.0	Many small infestations.
<b>Current Distribution score</b>		<b>1.5</b>		
<b>Comparative Feasibility of Coordinated Control and Uncertainty scores</b>				
<b>Corrected Control costs</b>		<b>5.0</b>		
<b>Corrected Persistence</b>		<b>6.8</b>		
<b>Corrected Current distribution</b>		<b>1.3</b>		
<b>Comparative Feasibility of Coordinated Control</b>		<b>43</b>		
		<b>Medium</b>		
Uncertainty Control costs		16.7		

## *Hyparrhenia hirta* (cont.)

Uncertainty Persistence	41.7		
Uncertainty Current distribution	0.0		
Overall Uncertainty score	11		
Positive impacts	None currently known (no longer planted as pasture but people live with it as a pasture component)		
Other comments	None		

Determining priorities

Weed risk is HIGH

Feasibility of Coordinated control is MEDIUM

On the Management action matrix the weed falls into the 'Protect Priority Sites' roughly in the centre of the matrix

Suggested Management actions of Protect Priority Sites

**Aims to prevent the spread of the weed species to key sites/assets of high economic, environmental and/or social value**

Weed may be of limited current distribution but only threatens limited industries/habitats (lower weed risk), or the weed may be more widespread but is yet to invade/impact upon many key industries/habitats (higher weed risk).

Surveillance and mapping to locate all infested areas.

Identification of key sites/assets in the geographic area

Control of infestations in close proximity to key sites/assets, aiming for a significant reduction in weed density.

Limits on movement and sale of species within geographic area

Must not allow to spread from cultivated plants (if grown) in close proximity to key sites/assets.

Monitor change in current distribution within and in close proximity to key site/assets

### References

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