

<b>Weed (Scientific name)</b>	<b>Pinus radiata</b>		
<b>Region</b>	<b>South West Sydney</b>		
<b>Management Area</b>	<b>Wollondilly Shire LGA</b>		
<b>Landuse</b>	<b>1. CONSERVATION AND NATURAL ENVIRONMENTS</b>		
<b>Assumptions</b>			
<b><i>Invasiveness</i></b>	<b>Score</b>	<b>Total</b>	
<b>Q1. What is the ability of the weed to establish amongst existing plants?</b>		<b>1.0</b>	Seedlings establish after moderate disturbance Q1
<b>Q2. What is the weed's tolerance to average weed management practices in the land use?</b>		<b>1.0</b>	Between 5 and 50% of weeds survive Q2
<b>Q3. What is the reproductive ability of the weed in the land use?</b>		<b>1.0</b>	
(a) Time to seeding	0.0		>3 yrs/never Q3
(b) Annual seed production	1.0		Low
(c) Vegetative reproduction	1.0		Infrequent
<b>Q4. How likely is long-distance dispersal (&gt;100m) by natural means?</b>		<b>3.0</b>	
(a) Flying animals	2.0		Common Q4
(b) Other wild animals	1.0		Occasional
(c) Water	1.0		Occasional
(d) Wind	2.0		Common
<b>Q5. How likely is long-distance dispersal (&gt;100 m) by human means?</b>		<b>2.0</b>	
(a) Deliberate spread by people	2.0		Common Q5
(b) Accidentally by people and vehicles	1.0		Occasional
(c) Contaminated produce	0.0		Unlikely
(d) Domestic/farm animals	0.0		Unlikely
<b>Total</b>		<b>5.3</b>	

<b>Impacts</b>	<b>Score</b>	<b>Total</b>	
Q1. Does the weed reduce the establishment of desired plants?		<b>2.0</b>	10 - 50% reduction Q1
Q2. Does the weed reduce the yield or amount of desired vegetation?		<b>2.0</b>	10 - 25% reduction Q2
Q3. Does the weed reduce the quality of products, diversity or services available from the land use?		<b>2.0</b>	Medium Q3
Q4. What is the weed's potential to restrict the physical movement of people, animals, vehicles, machinery and/or water?		<b>1.0</b>	Low Q4
Q5. What is the weed's potential to negatively affect the health of animals and/or people?		<b>0.0</b>	None Q5
Q6. Does the weed have major positive or negative effects on environmental health?		<b>0.0</b>	Q6
(a) food/shelter	-1.0		Major positive effect
(b) fire regime	1.0		Major negative effect
(c) altered nutrient levels	1.0		Major negative effect
(d) soil salinity	0.0		Minor or no effect
(e) soil stability	-1.0		Major positive effect
(f) soil water table	0.0		Minor or no effect
<b>Total</b>		<b>3.7</b>	
<b>Potential Distribution</b>			
Q1. Within the geographic area being considered, what is the percentage area of land use that is suitable for the weed?		<b>4.0</b>	20-40% of land use Q1
<b>Comparative weed risk score</b>		<b>79</b>	
<b>Weed risk category</b>		<b>Medium</b>	

	Score	Total		
<b>Control Costs</b>				
<b>Q1. How detectable is the weed?</b>		<b>1</b>		Q1
(a) Distinguishing features	1		sometimes distinct	
(b) Period of year shoot growth visible	0		> 8 months	
(c) Height at maturity	0		> 2 m	
(d) Pre-reproductive height in relation to other vegetation	1		similar height	
<b>Q2. What is the general accessibility of known infestations at the optimum time of treatment?</b>		<b>0</b>	high	Q2
<b>Q3. How expensive is management of the weed in the first year of targeted control?</b>		<b>4</b>		Q3
(a) Chemical costs/ha	3		high (\$250-\$500/ha)	
(b) Labour costs/ha	3		high (\$250-\$500/ha)	
(c) Equipment costs	1		low	
<b>Q4. What is the likely level of participation from landholders/volunteers within the land use at risk?</b>		<b>2.0</b>	low	Q4
<b>Total</b>		<b>5.8</b>		
<b>Persistence</b>				
<b>Q1. How effective are targeted management treatments applied to infestations of the weed?</b>		<b>2</b>	medium	Q1
<b>Q2. What is the minimum time period for reproduction of sexual or vegetative propagules?</b>		<b>0</b>	>2 years	Q2
<b>Q3. What is the maximum longevity of sexual or vegetative propagules?</b>		<b>0</b>	< 2 years	Q3
<b>Q4. How likely are new propagules to continue to arrive at control sites, or to start new infestations?</b>		<b>2.0</b>		Q4
(a) Long-distance (>100m) dispersal by natural means	2		frequent	
(b) Long-distance (>100m) dispersal by human means	1		occasional	
<b>Total</b>		<b>3.6</b>		
<b>Current distribution</b>				
<b>Q1. What percentage area of the land use in the geographical area is currently infested by the weed?</b>		<b>0.5</b>	1-5% of land use	Q1
<b>Q2. What is the number of infestations, and weed distribution within the geographic area being considered?</b>		<b>1.0</b>	scattered	Q2
<b>Total</b>		<b>1.3</b>		
<b>Comparative feasibility of coordinated control score</b>		<b>27</b>		
<b>Feasibility of coordinated control category</b>		<b>High</b>		

<p style="text-align: center;"><b>Management priority category</b></p> <p style="text-align: center;"><b>Calculation of overall uncertainty score</b></p> <p style="text-align: center;"><b>Response</b></p>	<p><b>Protect priority sites</b></p> <p>0%</p> <p><b>Submit Assessment</b></p>
<p style="text-align: center;"><b>Positive Impacts</b></p>	<p>economic benefits of plantation timber. Used for weed control of some grass and annual species in marginal grazing country</p>
<p><b>References/Other comments</b></p>	

REF 1: <http://www.dpi.nsw.gov.au/forests/education/adventure/woodwork/info/forest-supermodels/radiata-pine/information> - DPI - Pinus radiata; REF2: <http://www.accessmylibrary.com/ar> under plantations of Pinus radiata and Quercus suber

**Source and comments**

in bushland nearest plantations or areas previously planted out. Can invade after fire. Fires trigger seed cones to open and seed to germinate.

can sucker and reshoot

seed can establish after fire. Once cut the

Often foraged by cockatoos (obs), the seed is winged and is designed to float away from parent.

Is still used as Australia's premier source of soft wood and hence used extensively in plantations.

has been studied to have soil altering qualities or allelopathy. See Ref 2

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Only when fully grown may hinder movement of vehicles but generally unlikely

Can be used as an alternate food source of cockatoos. The pine needles and the oils in the leaflets can increase fire intensity. As previously mentioned the leaves may cause allelopathy and may alter soil nutrient as a result.

The presence of this species is correlative to higher altitude vegetation on sandstone. Sandstone forms one of the major soil groups for the Hawkesbury.

Can be confused with *P. elliotii* - which is also a problem. To the unstrained eye this species in its early life stages could be confused with *casuarina* sp.

observation

Cut and paint of most specimens some may sucker and require follow up.

Not currently seen as a problem to most landholders, except where environmental restoration is occurring.

As previously mentioned can sucker.

Can produce fruit at a very early stage from about 2m

seed can be kept in seed cones until triggered by a stimulant such as heat or water.

Cockatoo poo, seed spread by local plantations.

and emerging pest

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file-1G1-54700004/influence-pinus-radiata-quercus.html - Study on the acidity of soil