

Glaucous star thistle (*Carthamus leucocaulos*)



Declaration

(Code: C= City; S=Shire; T=Town)

Category : P1; P3

Location : For the municipal districts of Gnowangerup (S), Tambellup (S).

Category : P1; P4

Location : For the municipal districts of Broomehill (S), Dumbleyung (S), Katanning (S), Kojonup (S), Wagin (S), West Arthur (S), Woodanilling (S).

Standard Control Codes (these may vary for individual plants)

P1 REQUIREMENTS Prohibits movement	The movement of plants or their seeds is prohibited within the State. This prohibits the movement of contaminated machinery and produce including livestock and fodder.
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<p style="text-align: center;">P3 REQUIREMENTS</p> <p>Aims to control infestation by reducing area and/or density of infestation</p>	<p>The infested area must be managed in such a way that prevents the spread of seed or plant parts within and from the property on or in livestock, fodder, grain, vehicles and/or machinery.</p> <p>Treat to destroy and prevent seed set all plants:</p> <ul style="list-style-type: none"> • within 100 metres inside of the boundaries of the infestation • within 50 metres of roads and high-water mark on waterways • within 50 metres of sheds, stock yards and houses <p>Treatment must be done prior to seed set each year.</p> <p>Of the remaining infested area:-</p> <p>Where plant density is 1-10 per hectare treat 100% of infestation.</p> <p>Where plant density is 11-100 per hectare treat 50% of infestation. Where plant density is 101-1000 per hectare treat 10% of infestation.</p> <p>Properties with less than 2 hectares of infestation must treat the entire infestation.</p> <p>Additional areas may be ordered to be treated.</p>
<p style="text-align: center;">P4 REQUIREMENTS</p> <p>Aims to prevent infestation spreading beyond existing boundaries of infestation</p>	<p>The infested area must be managed in such a way that prevents the spread of seed or plant parts within and from the property on or in livestock, fodder, grain, vehicles and/or machinery.</p> <p>Treat to destroy and prevent seed set all plants:</p> <ul style="list-style-type: none"> • within 100 metres inside of the boundaries of the infested property • within 50 metres of roads and high-water mark on waterways • within 50 metres of sheds, stock yards and houses <p>Treatment must be done prior to seed set each year. Properties with less than 2 hectares of infestation must treat the entire infestation.</p> <p>Additional areas may be ordered to be treated.</p>
<p>Special considerations</p>	<p>In the case of P4 infestations where they continue across property boundaries there is no requirement to treat the relevant part of the property boundaries as long as the boundaries of the infestation as a whole are treated. There must be agreement between neighbours in relation to the treatment of these areas.</p>



Control Method

Recommended herbicides	:	<ul style="list-style-type: none"> • Pre-emergent/Cereals Chlorsulfuron • Seedling - rosette - flowering 2,4-D ester 2,4-D amine Glyphosate + 2,4-D ester Clopyralid Spray.Seed 250® Clopyralid+ MCPA Metsulfuron • Non-legume pastures Clopyralid+MPCA • Up to 4 leaf stage of weed Jaguar® • Up to 6 leaf stage Bromoxynil
Herbicide	:	2,4-D ester (various trade names - AVPMA site)
Active ingredient	:	600 and 680 g/litre 2,4-D ester (Group I)
Rates of dilution for spot spraying	:	1:1000 - 1:660
Amount of product per 10 litres water	:	10 - 20 mL
Rate of product per hectare	:	<ul style="list-style-type: none"> • 0.9 - 2.8 litre in non legume; use lower rates on seedlings. • 0.9 L in crops • 3.7 L/ha at flowering; spot treatment for pastures. Adjust rates if using 680 g/L concentrations of 2,4-D ester.
Time of application	:	<ul style="list-style-type: none"> • Seedling-small rosette. • For cereal crops: Winter-spring, while weed at rosette stage. Crops must be in early tillering stage
Remarks	:	Use in pasture but subterranean clovers will be damaged at these rates.
More information and other control methods	:	<ul style="list-style-type: none"> • Check restricted spraying areas around Geraldton before use. • Not recommended in Southwest because of vineyards. • Grub individual plants. Cultivation is effective, but must be repeated to kill any late emerging seedlings. Multiple cropping reduces seed bank in soil.



Herbicide	:	2,4-D amine (various trade names - AVPMA site)
Active ingredient	:	500 g/litre 2,4-D amine (Group I)
Rate of product per hectare	:	<ul style="list-style-type: none"> 1.4 litre 1.4 L – 2.0 L pastures; use lower rates on seedlings. 4 L/ha at flowering; spot treatment for pastures Adjust rates if using 625 g/L concentrations of 2,4-D amine.
Time of application	:	For cereal crops: Winter-spring, while weed at rosette stage. Crops must be in early tillering stage
Remarks	:	Clover pastures will be damaged at these rates. Alternative is to use "spray grazing", i.e. sublethal dose (0.75 L/ha) and follow 10 days later with very heavy grazing using sheep.
More information and other control methods	:	Spot spraying 40 mL/ 10 L at late bolting to early flowering.

Herbicide	:	Glyphosate + 2,4-D ester (various trade names - AVPMA site)
Active ingredient	:	360 g/litre or 450 g/litre glyphosate (Group M) + 2,4-D ester (600 or 680 g/L) (Group I)
Rate of product per hectare	:	350 mL (360 g/litre) or 300 mL (450 g/litre) + 500 mL 2,4-D ester (600 g/L) Adjust rates if using other concentrations of glyphosate or 2,4-D ester.
Time of application	:	Seedling and early flowering stage.
Remarks	:	<ul style="list-style-type: none"> Treatment at flowering prevents the weed forming viable seed. Medics and clovers will be damaged if applied at seedling stage Roundup Biactive® would be the preferred glyphosate treatment in wet areas near drains, creeks and ponds.
More information and other control methods	:	Applications at flowering have two main advantages: Little damage is done to annual pastures and there is little chance of further weed germination. Formulations of 2,4-D and glyphosate (Tillmaster®) at 1.5-2.0 litres/ha have given good reductions in seed formation when applied at flowering. Other formulations of glyphosate can be substituted providing rates are adjusted

Herbicide	:	Clopyralid (various trade names - AVPMA site)
Active ingredient	:	a) 300 g/litre clopyralid (Group I) b) 750 g/kg clopyralid
Rate of product per hectare	:	a) 300 mL b) 120 g
Time of application	:	Seedling
Remarks	:	Recommended for use in cereal crops at 4-5 leaf stage. 2,4-D and MCPA can be added.



Herbicide	:	Spray.Seed 250®
Active ingredient	:	135 g/litre paraquat and 115 g/litre diquat (Group L)
Rates of dilution for spot spraying	:	1:1000
Amount of product per 10 litres water	:	10 mL
Rate of product per hectare	:	1.0 L
Wetting agent dilution	:	1:400
Time of application	:	Early flowering stage.
Remarks	:	Treatment only to prevent seed formation. May not be successful if sprayed too late or plant not thoroughly wetted.
More information and other control methods	:	Applications at flowering have two main advantages: Little damage is done to annual pastures and there is little chance of further weed germination. Formulations of 2,4-D and glyphosate (Tillmaster®) at 1.5-2.0 litres/ha have also given good reductions in seed formation when applied at flowering.

Herbicide	:	Clopyralid + MCPA (various trade names - AVPMA site)
Active ingredient & Group	:	300 g/litre or 750 g/kg clopyralid (Group I) + 500 g/litre MCPA (Group I)
Rate of product per hectare	:	a) 50 mL clopyralid product + 400 mL MCPA b) 10 g clopyralid product + 400 mL MCPA
Time of application	:	Seedlings
Remarks	:	Recommended for treatment in pasture. There should be little damage to subterranean clover at this application rate, however medics may still be damaged.
More information and other control methods	:	Graze the area prior to spraying and allow 7-10 days for recovery. This exposes the thistles by reducing grass and clover cover.

Herbicide	:	Clopyralid + MCPA (various trade names - AVPMA site)
Active ingredient	:	300 g/litre clopyralid (Group I) + 500 g/litre MCPA (Group I)
Rate of product per hectare	:	a) 50 mL clopyralid product + 1.0 to 1.5 litre MCPA B) 10 g clopyralid product + 1.0 to 1.5 litre MCPA
Time of application	:	Rosette stage prior to stem elongation
Remarks	:	Avoid spraying when thistles are not actively growing.
More information and other control methods	:	These rates will damage legume pastures.



Herbicide	:	Metsulfuron (various trade names - AVPMA site)
Active ingredient	:	600 g/kg Metsulfuron methyl (Group B)
Rate of product per hectare	:	5 g
Wetting agent dilution	:	1:1000
Time of application	:	Young rosettes before they become spiny.
Remarks	:	Apply to wheat, barley, cereal rye and triticale at 5 leaf stage (Z15).
More information and other control methods	:	The addition of 1.1-1.6 L of MCPA low volatile ester is necessary for good results.

Herbicide	:	Chlorsulfuron (various trade names - AVPMA site)
Active ingredient	:	750 g/kg Chlorsulfuron (Group B)
Rate of product per hectare	:	20 g
Time of application	:	Pre-emergent to wheat and barley.
Remarks	:	Registered in all states except Western Australia. At this rate claim is for suppression only.

Herbicide	:	Jaguar®
Active ingredient	:	250 g litre bromoxynil (Group C)+ 25 g/litre diflufenican (Group F)
Amount of product per 10 litres water	:	10 mL
Rate of product per hectare	:	1 litre
Time of application	:	Up to 4 leaf stage of thistle.
Remarks	:	Useful in cereal crops under sown with clovers and also for pasture

Herbicide	:	Bromoxynil (various trade names - AVPMA site)
Active ingredient	:	200 g/litre bromoxynil (Group C)
Amount of product per 10 litres water	:	20 mL
Rate of product per hectare	:	2.0 L
Wetting agent dilution	:	1:400
Time of application	:	Up to 6 leaf stage when plants are no more than 50 mm diameter.
Remarks	:	Useful in cereal crops under sown with clovers and also for pasture



Weed Description

Family : Asteraceae
Form : Herbaceous – Annual
Status : Present in WA

An erect slightly hairy or cobwebby annual herb, 50-100 cm high, reproducing by seed. Native of Turkey and Greece (Aegean region).

Stems : White to purple, rigid and ribbed but not winged. Single stem usually branching in the upper half.

Leaves : Greenish white; rosette leaves deeply divided, lobes ending in a spine, sparsely glandular; stem leaves stiff and shiny, deeply divided into 2-3 pairs of segments 1.3-1.7 cm long, each ending in a spine.

Flowers : Florets pale purple, grouped in terminal solitary heads 10-13 cm diameter; outer bracts surrounding the flower are shiny and bent back. These are 2.5-3 times longer than the inner bracts.

Seed : Grey brown, 4 angled, sometimes with a pappus of stiff scales 5-7 mm long.

Other relevant information related to this topic:

- [Quarantine WA](#)
- [Permitted and quarantine species list](#)
- [Permit for minor off-label-use of a registered agvet chemical product](#)
(Permit number – per9655)
- [Off-label permit \(olp\) for use of a registered agvet chemical product](#)
(Permit number - per4590)
- [Off-label permit \(olp\) for use of a registered agvet chemical product](#)
(Permit number – per4594)