



Broom

(Montpellier broom – *Genista monspessulana*
English broom – *Cytisus scoparius*)

What is broom?

- Broom is a significant pasture and environmental weed.
- There are two types of broom in Tasmania. Montpellier broom and English broom are both **declared weeds** under the *Tasmanian Weed Management Act 1999*. The importation, sale and distribution of Montpellier broom and English broom are prohibited in Tasmania.



How to identify broom

- Montpellier broom and English broom are erect, semi-woody shrubs growing 2 to 3 metres high.
- The leaves of Montpellier broom and English broom are trifoliate (have three leaflets) with the central leaflet being longer than the outer two leaflets.
- Broom flowers are bright yellow. English broom normally flowers in late spring while Montpellier broom flowers from late winter to late spring.
- Both brooms produce seed in pods. When the seeds are mature and still attached to the parent plant, the pods open explosively to eject the seed up to 3 metres.
- If you are still in doubt about the weed you are dealing with, contact your Regional Weed Management Officer on 1300 368 550 for help.



English broom – *Cytisus scoparius*



Montpellier broom – *Genista monspessulana*

Broom in Tasmania

- English broom occurs throughout the settled areas of the state, being locally abundant on roadsides, waste areas, poor quality pastures and in disturbed bushland. Montpellier broom is widely distributed in Tasmania's north, north-east and in the south.
- Broom can form dense thickets in degraded pasture and reduce productivity and access. Broom along roadsides can reduce visibility and increase road maintenance costs. Dense thickets of broom can also provide cover for pest animals such as rabbits.
- Broom also invades a wide range of native vegetation including native grassland, woodland/open forest and subalpine grassland, where it competes with native plants and alters fauna habitat.

What is the legal status of broom in your area?

- The legal responsibilities of landholders and other stakeholders in dealing with broom are laid out in the broom Statutory Weed Management Plan at www.dpipwe.tas.gov.au/weedsindex
- Use Table 1 (Zone A municipalities) and Table 2 (Zone B municipalities) in the Statutory Weed Management Plan to find out whether your area falls in an eradication or containment zone.

Control of Broom

Do's and Don'ts of Broom Control

Do's

- Plan your control program, this will save time and money in the long-run;
- Consider the impact of your control methods on off-target species, especially if herbicides are used;
- Ensure machinery and equipment is washed down between sites or prior to contractors leaving site;
- Get in early - for new infestations, eradicate before the plants reach the flowering stage: once plants begin seeding, control becomes more difficult and expensive;
- Carefully time your use of herbicide for best results (see Herbicides for Broom Control for more information);
- Coordinate your control program with neighbouring landholders where your weed problem crosses property boundaries;
- Revisit and regularly inspect the site and ensure follow-up is undertaken;
- Use a combination of different control methods; and
- Establish vigorous pasture (or native species) after removal to reduce re-infestation.

Don'ts

- Don't introduce broom to broom-free areas (e.g. by failing to wash down machinery and equipment between sites – see www.dpipwe.tas.gov.au/weedhygiene for more information);
- Don't start your control program without first planning your approach;
- Don't allow broom to flower and set seed before treatment;

- Don't rely on one attempt at removal – follow-up is essential;
- Don't rely on just one control method;
- Never burn broom without follow up treatment of regrowth; and
- Do not burn broom in native vegetation.

Spread of broom

- Broom spreads solely by seed. The bursting pods can eject seed for 1 to 3 metres from the parent plant. Ants may also disperse seeds. Dry pods containing seeds can also be blown short distances by wind.
- Broom seeds are not buoyant in water but can be carried in the bed load of rivers and streams, resulting in long distance dispersal downstream. Long distance seed movement can also occur in mud and soil carried on road graders and earth moving equipment, farm machinery, vehicles and footwear and in sand and gravel from quarries.
- Seed can also be carried within the digestive tracts of horses and other animals. Contaminated agricultural produce may also result in some spread.
- Seed germination usually occurs after some soil or vegetation disturbance including cultivation, fire, slashing, herbicide treatment, road-making and pig-digging. However, broom can also invade native vegetation without major disturbance.

Avoiding the introduction of broom

- If cultivation must be carried out in infested areas, ensure all equipment is cleaned and checked for broom seed before moving to un-infested areas. If possible, always work un-infested areas first.
- Gravel and sand should not be removed from infested quarries and streams.
- Broom growing along access tracks must be controlled to limit spread of seed. Vehicles, bush walkers and horse riders using infested areas should keep to designated routes to minimise the spread of seed.

Growth Calendar

- The colours on the calendar below represent the times of year for germination, flowering and seeding of Brooms and also the optimum time for their treatment.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Flowering												
Seeding												
Germination												
Herbicide Treatment												
Mechanical/ manual removal												

Physical removal

- Small plants can be hand pulled or grubbed in spring when the ground is soft.
 - Cutting seedlings when they are 5 to 10 cm high can provide effective control of regenerating plants.
 - Larger shrubs should be cut close to ground level and the stumps painted with herbicide. See Herbicides for Broom Control for more information.
 - Dense thickets can be slashed with a brushcutter and regrowth sprayed with herbicide. See Herbicides for Broom Control for more information.
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Cultivation

- Pasture improvement is the best method of control for broom infested pastures on arable land where large plants can be mechanically removed, followed by repeated cultivation, pasture establishment and grazing.
 - Some dense infestations have been destroyed by bulldozing and repeated cultivation over two years. However, soil disturbance will move seed from the surface and distribute it through the soil profile and may in some instances make long term eradication more difficult.
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Burning

- Fire can be used to remove mature bushes and to reduce the broom seed bank in the soil.
 - Heating of the soil by fire can stimulate the germination of up to 90% of seed in the soil. Regeneration after fire can then be treated with herbicide or by hand weeding.
 - When pasture species cannot be established on burned areas (e.g. stony ground, creek banks), or regeneration of native species is required (conservation areas and bushlands), do not use fire to remove broom.
 - Burning can be useful several months after spraying of an infestation as it reduces the dead stems to ashes.
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Grazing

- Sheep and goats will graze broom seedlings and flowers and assist in preventing infestations.
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Biological control

- Biological control is the use of a living species, usually an insect, mite or disease, to control a weed;
 - Biological control will not eradicate broom, but may be used in conjunction with other control methods;
 - Biological control agents for English broom that have been released in Tasmania include the twig mining moth and the broom bud psyllid.
 - For more information on biological control programs in Tasmania contact the Tasmanian Institute of Agricultural Research .
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Native vegetation

- In native vegetation, preventing ground disturbance will help reduce the rate of invasion by brooms.
 - Do not burn broom in native vegetation. Bushes should be removed with minimal soil disturbance.
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Chemical control

- A number of herbicides are registered for use on Broom in Tasmania. See Herbicides for Broom Control for more information.
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For more information

- Visit the Department of Primary Industries, Parks, Water and Environment website at www.dpipwe.tas.gov.au.
- Contact your Regional Weed Management Officer on 1300 368 550.

Herbicide for Broom Control

Disclaimer

These herbicide recommendations are made subject to the product being registered for that purpose under relevant legislation. It is the user's responsibility to check that registration or an off-label permit covers the proposed use. Always read the herbicide label.

If in doubt, check with the Australian Pesticides and Veterinary Medicines Authority (APVMA) website at www.apvma.gov.au.

Only herbicides registered for use in pasture and non-cropping situations – or included under off-label provisions - are listed in the following table. For recommendations in specific crops consult an agronomist.

Care must be taken in using herbicides as non-target plants contacted may be harmed.

Wetting agents

Most herbicides require a wetting agent for best results. Carefully consult the product label for specific directions regarding any adjuvants.

Waterways and wetlands

Be careful! Many herbicides can cause damage to waterways and wetlands. Check the herbicide label directions carefully before use near waterways and wetlands. For more information see Rivercare: guideline for safe and effective herbicide use near water at www.dpipwe.tas.gov.au)

Herbicide Brands and Concentrations

Herbicides are referred to by the active chemical ingredient in the following table. The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by DPIPWE over any other equivalent product from another manufacturer. Information on available brands containing the herbicide you require should be obtained from a reputable herbicide supplier or the APVMA website at www.apvma.gov.au.

There may be a number of products with the same active ingredient some with alternate formulations (concentration) registered for control of a weed eg: Glyphosate 360g/L, Glyphosate 450g/L may be registered for use on the same weed. Alternate formulations such as these will have a different application rate. ALWAYS check the label.

Herbicide for Broom Control

Foliar application

Stage of Growth	Herbicide (active ingredient)	Example of commercial product (concentration of active ingredient)	Application rate of commercial product	Comments
Spring to mid summer (prior to pod formation)	Triclopyr+ Picloram	Grass-up™ (300 g/L + 100 g/L)	2.5ml/L	<p>Where thorough coverage of the plants can be achieved, one application will usually give complete control with no regrowth.</p> <p>Treated bushes should be checked twelve months after the herbicide application and any regrowth treated.</p> <p>Will not affect grasses, will severely damage clovers and other broadleaved plants, including surrounding trees, if contacted by the spray.</p> <p>Soil-residual, hindering the re-establishment of clovers and other broadleaved plants for 6-12 months.</p> <p>Picloram remains active in the soil for extended periods and may leach into groundwater.</p>
	Triclopyr	Garlon® 600 (600 g/L)	1.7ml/L	<p>Thoroughly spray foliage.</p> <p>Less volatile and preferred to triclopyr+picloram in urban or horticultural areas.</p> <p>Will not affect grasses, will severely damage clovers and other broadleaved plants, including surrounding trees, if contacted by the spray.</p>

Herbicide for Broom Control

Foliar application continued

Triclopyr + Picloram+ Aminopyralid	Grazon™ Extra (300g/L + 100g/L + 8g/L)	Spring to Mid Summer 2.5ml/L Autumn to Winter 3.5ml/L	Where thorough coverage of the plants can be achieved, one application will usually give complete control with no regrowth. Picloram remains active in the soil for extended periods and may leach into groundwater Treated bushes should be checked twelve months after the herbicide application and any regrowth treated.
*Metsulfuron methyl	Brushoff® (600 g/Kg)	0.1 – 0.15g/L	APVMA Off-Label permit – PER13160. Will not affect grasses, will severely damage clovers and other broadleaved plants, including surrounding trees, if contacted by the spray. Soil-residual, hindering the re-establishment of clovers and other broadleaved plants for 6-12 months.

Herbicide for Broom Control

Basal bark and cut stump application

Stage of Growth	Herbicide (active ingredient)	Example of commercial product (concentration of active ingredient)	Application rate of commercial product	Comments
Use when plants are actively growing	Triclopyr	Garlon® 600 (600 g/L)	20ml per litre of diesel distillate	<p>Basal Bark: Use for plants with a basal diameter up to 50mm without removing top growth. Spray or paint bark from ground level to a minimum height of 30 cm, wetting thoroughly to runoff.</p> <p>Cut Stump: Apply immediately (within 15 seconds) after top growth removal.</p>
	Picloram	Vigilant®-Herbicide Gel (43g/kg)	3-5mm thick	<p>Cut Stump: Cut stems 20mm above ground level, immediately apply gel over cut surface. For multi-stemmed plants treat at least 80 percent of stems including all main stems.</p> <p>Picloram remains active in the soil for extended periods and may leach into groundwater.</p>
	*Triclopyr+ Picloram	Access™ (240g/L + 120 g/L)	1 part to 60 parts of diesel distillate	<p>APVMA Off-Label permit – PER13160.</p> <p>Basal Bark: Use for plants with a basal diameter up to 50mm without removing top growth. Spray or paint bark from ground level to a minimum height of 30 cm, wetting thoroughly to runoff.</p> <p>Cut Stump: Apply immediately (within 15 seconds) after top growth removal.</p> <p>Picloram remains active in the soil for extended periods and may leach into groundwater.</p>

Herbicide for Broom Control

Basal bark and cut stump application continued

Use when plants are actively growing	*Glyphosate	(360 g/L)	Undiluted	In accordance with APVMA Off-Label permit – PER13160. Cut Stump: Apply immediately (within 15 seconds) after top growth removal.
	Roundup® Biactive™	(360 g/L)		In accordance with APVMA Off-Label permit – PER13160. Suitable for use near waterways. Cut Stump: Apply immediately (within 15 seconds) after top growth removal.

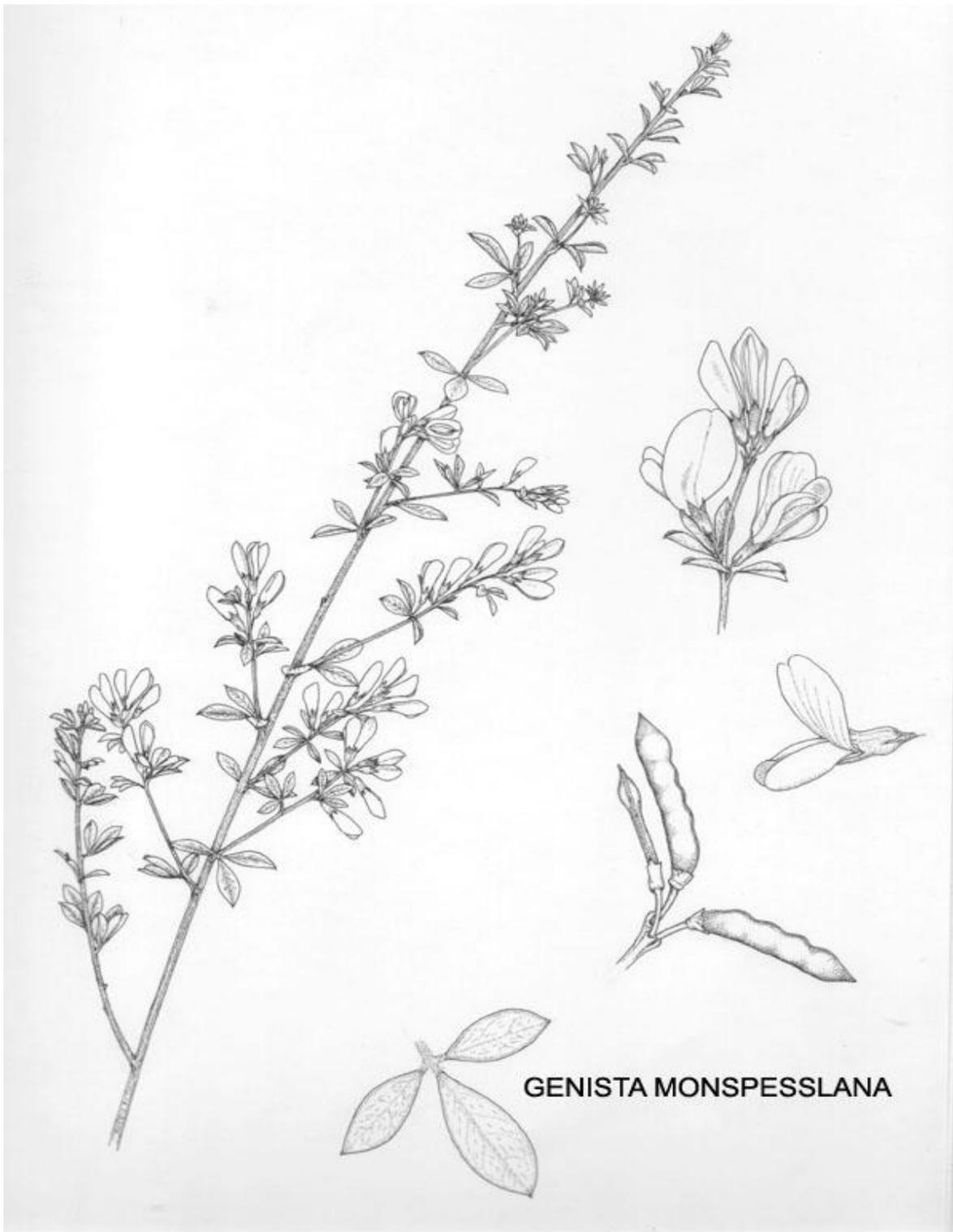
* These products are not registered for this use in Tasmania and will not be mentioned on product labels, however Permit Number – PER13160 issued by the Australian Pesticides & Veterinary Medicines Authority allows this specific use. If using this method and herbicide you will require a copy of this off-label permit.

For further information on permit details visit the APVMA website at www.apvma.gov.au.

English Broom - *Cytisus scoparius*



Montpellier broom – *Genista monspesslana*



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