

Weed control in Tasmania's forests: information sheet 2

Bracken (*Pteridium esculentum*)



Identification

Bracken is a native plant of Tasmania. It is a perennial fern with fronds up to 2 metres high. New fronds emerge in spring, mature in late summer-autumn and may die off over the following winter, often dying with the first hard frost. In milder areas, fronds may persist for two years or more before dying.

The plant has an extensive system of thick, dark-coloured rhizomes and fine roots. These form a vast network in the upper layers of the soil, usually in the top 15 to 20cm, although in sandy soils they may penetrate to depths of half a metre or more.

Status under the Noxious Weeds Act 1964

Pteridium esculentum is not a declared weed under the Noxious Weeds Act 1964.



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Control

The rhizome system of the plant is extremely robust. New shoots from buds on the rhizomes can appear rapidly after the existing fronds are destroyed by fire, slashing, pulling, cultivation or herbicide application. Therefore unless the initial treatment is followed up, the infestation may regenerate rapidly.

Cutting:

Cutting is most effectively used to reduce dead material prior to herbicide application or to reduce regrowth after herbicide application.

The aim must be to cut the fronds just as they unfurl. At this stage, the fronds have used up food reserves from the rhizome without replacing them through photosynthesis. Repeated slashing will eventually lead to death of the rhizome from this continued loss of food reserves.

During the peak growth period, late spring to late summer, cutting needs to be carried out about every four weeks. From five to seven cuts may be required in the first year, followed by a lesser number in the following growing season. By the third year, most infestations will be weakened dramatically.

Chemical Control:

Two herbicide groups are recommended for the control of bracken including ; metsulfuron-methyl and glyphosate

BOOM OR SPOT SPRAYING

Stage of growth*	(Active ingredient)	Commercial product	Rate per hectare	Spot rate of product per Litre	Comments
Fully expanded young fronds	Glyphosate 680g/kg 360g/l	Roundup Dry	4.5 kg /ha	7gm/litre	Add Pulse at 20ml/10 litre
		Roundup Biactive	9 litres/ha	15mls per 1 litre	
Fully expanded young fronds	Metsulfuron - methyl	Brush-Off® (600 g/kg)	Up to 60 gm/ha 15g/hectare	10g per 100 litre	Add surfactant (see label) Avoid spraying stressed plants
Fully expanded young fronds	Glyphosate 835g/kg metsulfuron methyl 10g/kg	Trounce Brush Pack	2 x 865g measure packs per hectare	1 x 173g measure pack per 100 litres	Add Pulse (see label) Avoid spraying stressed plants

* Where herbicides are to be used, it is recommended that the area be slashed or burned six months prior to herbicide application, usually late winter to early spring, to remove old and dead fronds. This old material may protect the young growth from the spray.

* Glyphosate and metsulfuron methyl can be applied by boom and by handgun (including knapsacks).

* When using handguns, thorough coverage of the fronds, especially the lower surface, is required. Absorption of herbicides through the lower surface is greater than through the upper surface.

* Metsulfuron-methyl is the most cost-effective herbicide available for bracken control. However as other weeds are generally also present, a glyphosate—Brushoff combination is frequently used. The addition of glyphosate to Brushoff does increase the overall effectiveness

* The addition of an organosilicone penetrant (e.g. Pulse®, Freeway®) is essential when using glyphosate or Brushoff®

* Brushoff® can only be used before planting of pines or eucalypts. There is a withholding period before the trees can be planted. Brushoff® applications after tree planting will result in tree damage – see label.