

Fact Sheet

Fireweed

Fireweed is an introduced weed that can be poisonous to livestock and competes with pasture species, reducing the viability of agricultural production. Fireweed was first detected in Collingwood Park in the late 1980s and can now be found throughout the entire Ipswich Local Government Area.

Heavy infestations of Fireweed often result from neglect of steadily increasing Fireweed infestations in previous years, and lack of good ground cover caused by overgrazing, drought, fire or slashing.

Introduction

Fireweed is an annual or short-lived perennial that prefers mild, warm conditions between 15-27°C. Most seedlings appear between March and June then grow quickly to produce their first flowers in 6-10 weeks. With an increase in temperature in the summer months, the top growth usually dies leaving a base and roots that can re-grow the following autumn.

Single plants have been recorded to produce between 25,000 and 30,000 seeds per annum, with up to 150 seeds per flower head (Parsons and Cuthbertson 1992). Total seed production of 9,163 seeds per square metre (per annum) was recorded in New South Wales (Radford and Cousens 2000).

The latter authors also reported that an average of 42% of seedlings survived to maturity, that the species was reproductive in all months except December and January and that 50% of plants flowered before they were 3 months old.

Seeds can be spread by wind, stock, in pasture seed, hay, turf, mulch and with stock transport.

Legal obligations

Fireweed is a restricted invasive plant under the *Biosecurity Act 2014* (The Act). It must not be given away, sold, or released into the environment without a permit. The Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. This is called a general biosecurity obligation (GBO). This fact sheet gives examples of how you can meet your GBO.

Property pest management plan

Although landowners are not required to develop a property pest management plan, effective planning is an extremely useful management tool.

Developing a pest management plan will help you:

- effectively control invasive plants on your property
- comply with The Act to show you are meeting your general biosecurity obligations
- coordinate weed control activities with your neighbours
- integrate pest animal control activities with weed control activities and other components of your property plan
- improve efficiency by prioritising control activities using resources at optimal times
- monitor how well control activities are working and communicate achievements.

Council can provide assistance with the development of your plan and its on-going review.

Control methods

Prevention and early eradication

The best approach to Fireweed control is to prevent it establishing by ensuring that there is a dense cover of pasture in autumn and winter. Waiting until autumn to begin pasture improvement will worsen the Fireweed problem because Fireweed (which germinates in autumn) will be promoted ahead of the pasture by fertilising and direct drilling of winter pasture species.

When small infestations of Fireweed are identified, act immediately to prevent the situation from becoming worse and to increase the likelihood of eradication.

Mechanical control

Chip out, bag and burn any isolated plants or dispose of them at council-approved landfill tips (a permit can be obtained to dispose of Fireweed without incurring a dumping fee). You should not burn any toxic plants in household wood-burning stoves or heaters. Remove chipped-out plants from paddocks because they may still set seed and poison stock.

Slashing is usually not effective as it may lead to increased stock poisoning. Slashing tends to give a good visual effect because it removes the flowers, but at best it delays flowering and seeding and at worst damages the pasture, making conditions more favourable for Fireweed.

Fireweed remains toxic after being cut and becomes more attractive to stock and thus more likely to cause poisoning.

Herbicide control

Herbicides are most effective if sprayed before plants reach maturity. However, application during flowering will be effective if higher recommended rates of herbicide are applied.

Research for herbicide controls against Fireweed, including residual control methods is ongoing. Trials have shown herbicide application in autumn provides good control. Before undertaking such programs landholders are advised to determine the infestation levels.

An effective application method in an open pasture situation is a boom spray. Follow this up by spot spraying, or pulling and bagging any regrowth or missed plants.

Boom spraying is also suitable for follow-up treatments, as it allows destruction of immature plants, which may otherwise grow to re-seed the area before they can be noticed.

Bromoxynil (trade names Bromicide 200, Brominil 200 and Bucril 200) is suitable for use in pastures containing clovers, medics and lucerne, and it will not affect grass.

Bromoxynil is effective if used on seedlings, which usually appear in autumn and early winter but may appear later following rain. Twice as much bromoxynil is needed if it is applied to plants that are just beginning to flower. Bromoxynil is less effective on mature plants, as it is a contact herbicide only. Mature plants will only be killed off where the bromoxynil comes into contact with the plant, allowing recovery of the plant from lower, untouched portions.

Unfortunately, Fireweed control is often not considered until the highly visible flowers appear and it is too late for effective control with herbicide.

Prior to using the herbicides listed under PER11463 you must read and understand the conditions of the permit. To obtain a copy of this permit visit Aapvma.gov.au.

Table 1 lists herbicides registered for Fireweed control. Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label.

Table 1. Herbicides for the control of Fireweed

SITUATION	HERBICIDE	RATE	COMMENTS
Agricultural non-crop land, bushland, forests, wetlands, coastal and adjacent areas	2,4-D 625g/L (e.g. Ken-Amine 625)	300ml/ha	Permit 11463 (expires 30/04/27) Spot spray only
Agricultural non-crop land, commercial and industrial land, forests, pastures and right-of-ways	Fluroxypyi 140g/L + Aminopyralid 100g/L (e.g. Hotshot)	500ml/100L water	Apply as a high-volume or spot spray to flowering plants up to 30cm tall.
	Fluroxypyr 140g/L + Aminopyralid 10g/L (e.g. Hotshot)	1.5L/ha	Boom application
Agricultural non-crop land, commercial and industrial land, forests, pastures and right-of-ways	Triclopyr 300g/L + Picloram 100g/L + Aminopyralid 8g/L (e.g. Grazon Extra)	350ml/100L water	Apply as a high-volume or spot spray when the plant is flowering
Agricultural non-crop land and pastures	2,4-D 300g/L (e.g. Affray 300)	700ml/100L water	Apply as a high-volume spray when the plant is actively growing
Pastures and improved pastures (containing clover and/or lucerne)	Bromoxynil 200g/L + (e.g. Bromicide 00)	1.4L/ha seedling control, 2.8L/ha for early flowering plants	Boom application Apply during the autumn-winter period when plants are young and active growing Not effective on mature plants
Improved pastures (containing clover and/or lucerne)	Bromoxynil 250g/L + Diflufenican 25g/L (e.g. Jaguar)	500ml/ha	Seedling control up to the four leaf stage
Improved pastures (containing clover)	MCPA 250g/L + Diflufenican 25g/L (e.g. Tigrex)	1L/ha	Seedling control up to the four leaf stage

Read the label carefully before use and always use the herbicide in accordance with the directions on the label.

Biological control

A number of organisms can be found attacking Fireweed, but any effect they have is temporary and isolated. An orange rust (*Puccinia lagenophorae*) is common and often affects Fireweed, particularly in lower country. The blue stem borer moth (*Patagoniodes farinari*) is also common, but the larvae usually develop too slowly to have an impact. Two moths imported from Madagascar were host tested. In controlled tests they were found to feed on important non-target plants so no releases were made and all these insects were destroyed.

Distinguishing between Fireweed and closely related native *Senecio* species

Fireweed (*Senecio madagascariensis*)

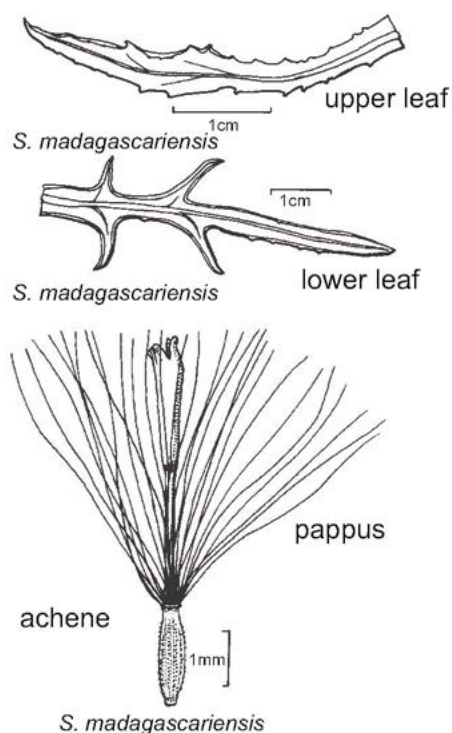
Fireweed is a daisy-like plant that grows from 100 to 600mm high. It is usually a low, heavily branched, annual or short-lived perennial plant.

Leaves: Generally bright green, fleshy and narrow, 20-70mm long, alternately arranged on the stem, with serrated, entire or lobed margins. Broader leaves usually clasp around the stem.



Flowers: Small, yellow and daisy-like, flowers are 10-20mm in diameter and arranged in clusters at the end of each branch. Each flower has 12-15 petals and 21 bracts forming the 'cup' under the flower.

Seeds and dispersal: Seeds are small (1-3mm long), light and slender. Most seed will fall within five metres of the parent plant but some seed can be spread to greater distances in updrafts and whirlwinds.



Native Fireweed Groundsel (*Senecio linearifolius*)

Perennial herb or shrub 500-1,500mm high, stems few-branched, glabrous to cobwebby.



Native fireweed flowers



Native fireweed leaves

Leaves: Variable, either linear or elliptic. Mostly linear to lanceolate or narrow-elliptic (oval and flat, broadest at middle and tapered at ends). 60-150mm long and 5-15mm wide with margins \pm recurved and entire to sparsely toothed, lower surface mostly cobwebby, base tapered and petiole-like.

Flowers: Throughout the year. The structures supporting the flowers arise at different points on the stem but, the flowers are at the same level resulting in a flat top arrangement. There are numerous cylindrical, 2-3mm diameter flower heads that are glabrous except at the apex. The seed is compressed, 2-2.5mm long, brown, glabrous with a 5-8mm long pappus.

Native Common Coast Groundsel (*Senecio pinnatifolius* A.Rich.)

Erect, sprawling or prostrate annual or perennial herb, to 1.5m high. Flowering, with a yellow flower, in July or September to December. White, grey, yellow, brown or red sand, black peaty sandy clay, skeletal soils, gravel, limestone, granite. Coastal dunes, along low cliffs, rock summits.



Fireweed disposal at council-approved landfill

A permit to dispose of Fireweed at Ipswich City Council's waste facility is available to landholders upon application. The permits remain current for one month and are renewable by contacting council's Biosecurity Team and requesting a renewal.

Permit requirements:

- The matter must be transported directly to the facility within securely tied, sturdy, plastic garbage bag/s
- The matter must not be mixed with any other waste (including other green waste) or fees will apply to the disposal
- The permit must be able to be presented to the operators of the waste facility on every occasion the matter is disposed.

Further information

Further information is available by contacting Ipswich City Council on (07) 3810 6666 or visiting ipswich.qld.gov.au/fireweed