



## Agriculture and Environment Committee

### Inquiry into the impacts of invasive plants (weeds) and their control in Queensland

#### Summary of issues raised by submitters - Fireweed Case Study (*Senecio Madagascariensis*)

This paper gives a summary of the points raised by submitters about the impacts of fireweed and its control in Queensland. The committee's secretariat prepared the paper to assist discussions during the roundtable meeting and public hearings in Gatton on 4 May 2017.

#### Infestations

Submitters noted the presence of fireweed infestations in the following locations:

- Grandchester and neighbouring districts (Sub 23)
- on the roadside near the RAAF base at Amberley (Sub 35)
- Southern Downs Regional Council areas (Sub 11)
- Toowoomba region, though most outbreaks were the native variety (Sub 28)
- Scenic Rim Council areas (Sub 4, Sub 14, Sub 17)
- Gympie area (Sub 22, Sub 46)
- southern parts of the Burnett Regional Council area (Sub 46)
- generally in South East Queensland (Sub 7)
- Mary Valley and Maleny (Sub 50)
- The Tablelands and other areas of North Queensland (Sub 14, Sub 39)
- Tamborine Mountain (Sub 24)
- in small isolated pockets of the Noosa Council area at Noosaville, Cooroy and Federal (Sub 30)
- New South Wales (Sub 55), and
- the national parks of Tasmania (Sub 14).

Submitters noted that weather conditions in 2016 were ideal for fireweed – late winter, early spring rains at regular intervals which, combined with often well-grazed paddocks, led to a greater amount of fireweed than in previous years, resulting in a seed bank in the soil for later years (Sub 45, Sub 11). Agforce notes that both fireweed species are particularly abundant after dry summers followed by winter rains, as occurred in 2016 (Sub 33).

One submitter is battling simultaneous infestations of fireweed and Giant Rat's Tail grass on his property (sub 17).

#### Impacts

Impacts noted by submitters include:

- the potential to wipe out the cattle industry if fireweed isn't brought under control as it reduces cattle numbers (Sub 14)
- although areas covered by fireweed may be small, it has noticeable impacts on the agriculture industry due to beast losses as a result of the weed (Sub 39)

The Gomaren and Doctor's Creek Land Care Group stated that producers are equally concerned about native fireweed (*Senecio Brigalowensis*) which is also toxic to livestock, invasive and impacts on costs

and productivity (Sub 25). They also note the difficulties of identifying livestock deaths due to autopsy requirements for the diagnosis, and suggest deaths are likely to increase in number (Sub 25).

Agforce noted that the toxin (pyrrolizidine alkaloids) in fireweed is present in both green and dry material, is cumulative and that the symptoms of poisoning may take weeks or months to appear (Sub 33).

Submitters also questioned whether fireweed also presents a health risk to humans who consume foodstuffs (eg honey, milk, grains) that may be contaminated with fireweed toxin (Sub 35). One submitter suggested it causes irreversible liver damage, and questioned whether landholders should be encouraged to wear gloves when handling fireweed material (Sub 23).

### **Factors contributing to the spread of fireweed**

Submitters note that:

- the introduced fireweed is one of 32 weeds of national significance (Sub 23)
- it can be hidden within fields of native fireweed (Sub 28)
- its correct identification from the native species requires close examination of leaf and stem structure and the number of petals on flowers (Sub 23)
- contrary to available information, fireweed can flower all year round if conditions are right (Sub 30)
- it can continue to thrive despite spraying and other measures to control it (Sub 4)
- the seed has a very effective parachute and is readily spread by wind and other means (Sub 7)
- the rapid lifecycle and subsequent control window means enforcing provisions of the *Biosecurity Act 2014* is challenging at best. Plants are only readily visible once flowering has occurred and seed set occurs shortly after flowering (Sub 11)
- the efficacy of herbicides diminish once plants have matured to the stage of flowering (Sub 11), and
- despite chemical spraying, fireweed is spread by water, native animals and wind (Sub 17).

Submitters believe that the Queensland Government allowed fireweed to spread from New South Wales (Sub 14), and that infestations on public lands, such as roadside verges, are a source of infestations on private lands (Sub 45).

Other contributors the spread of fireweed noted by submitters are:

- the failure by the Queensland community to be alert and vigilant (Sub 23)
- contaminated hay and fodder (Sub 23)
- the application of contaminated mulch (in the Atherton area) (Sub 29), and
- contaminated turf (Noosa and Moreton Bay council area) (Sub 30, Sub 34).

### **Strategy**

Agforce noted that the *2012-2017 Fireweed Strategic Plan* has been superseded by a general national framework for managing established pests and diseases of national significance (sub 33).

The CSIRO note that there is insufficient quantitative information on triple bottom line impacts to effectively guide investments, and that this information is vital to guide decisions on the value of different management approaches (sub 48).

Other comments on strategy include:

- the lack of a consistent or harmonious approach in the community, and that some landholders are unable to control weeds because of ill health or restricted mobility (Sub 23)

- the apparent lack of a control process in place to investigate or find a solution to fireweed, other than continued spraying by individual landholders (Sub 7)
- the need to commit to stopping the spread of fireweed – without a firm commitment efforts to control fireweed are useless (Sub 24)
- coordination is key - land care groups could play a crucial role in the eradication of fireweed if given the opportunity to participate in a coordinated approach with councils (Sub 25)
- fireweed has been identified by council stakeholders as in the top 10 priority species for management in the Noosa region (Sub 30)
- State and local governments need to coordinate weed programs with the Federal Government for defence lands and other Commonwealth controlled lands (sub 35), and
- the need to protect areas and not to allow contamination (by fireweed) to occur (Sub 34).

The Gomaren and Doctor's Creek Land Care Group recommended that all fireweed, whether native or introduced, be declared a weed of national significance (Sub 25).

### **Eradication and control programs**

Submitters noted that some councils and government departments have been reluctant to act to control fireweed on their lands (Sub 7, Sub 34, Sub 24). One submitter suggested that councils and state government agencies lack the resources to effectively control fireweed on their lands (Sub 45).

The Moreton Bay Regional Council noted that there is no proactive program for controlling fireweed on State managed lands and road reserves (Sub 34).

One submitter questioned whether it is realistic to list fireweed as restricted matter under the *Biosecurity Act 2014*, given the inability to control fireweed on public lands (Sub 45).

Agforce suggested that fireweed is one of several examples where Section 48 of the *Biosecurity Act 2014* impedes local governments coordinating the management of regional priority weeds that are not listed as restricted matter, and that embedding the prescribed lists in the Act prevents autonomy and local decision making by councils about priority weeds in Queensland (Sub 33).

One submitter noted: changes in how councils deal with weeds issues, with regular inspections to check for weeds on private lands ceasing around 1995; individual councils now have different approaches to weeds; and some councils are proactive and provide and maintain extensive information through road signage and through information on their websites such as their pest management plans, whilst other councils appear to treat weeds as a lower priority issue and provide less information (Sub 23).

Other comments by submitters include:

- criticism of the level of action by the Scenic Rim Regional Council (sub 24)
- the need for protocols for the safe disposal of bagged fireweed at rubbish tips (Sub 45)
- support for the Ipswich City Council for waiving dump fees for bagged fireweed (sub 23)
- the six week enforcement delay by councils for fireweed contributes to its spread (Sub 24)
- recruitment of a dedicated weeds officer by the Ipswich City Council (Sub 57), and
- the need by government to consider a 'work for the dole' type program to provide equipped and supervised teams to assist landholders to control fireweed (Sub 35).

## Techniques

Submitters raised a number of issues about control techniques for fireweed:

- spraying alone is ineffective (Sub 5)
- establishing areas to wash down mowers may slow the spread (Sub 5)
- fireweed can only be controlled effectively by aerial spraying (helicopter) and biological control, as mechanical spraying can only reach fifty per cent of country, leaving fireweed in the other half to grow from seed beds (Sub 14)
- concerns about the high costs and residual risks of herbicides for landholders (Sub 23)
- concerns about the high costs of helicopter spraying, and the need for a subsidy to reduce the costs to landholders to encourage spraying (Sub 14)
- herbicide treatments are ineffective unless applied during the early growth stages (Sub 34)
- the narrow (six week) window for herbicide control before flowering (Sub 33)
- the importance of follow-up inspections and retreatments, and of using herbicide combined with a wetting agent on new, small seedlings (Sub 23)
- the need to reduce stocking levels to allow other pasture grasses to compete with fireweed (Sub 23)
- physical removal of fireweed plants is effective though time-consuming, and prevents cattle grazing on potentially toxic plant material (Sub 23), and
- the efficacy of treatments of fireweed by landholders is undermined by reinfestation from roadside verges and neighbouring properties (Sub 25).

## Biocontrols and other research

Agforce noted that there is no effective biocontrol for fireweed, nor any current biocontrol research (Sub 33).

A number of submitters, including the NSW Department of Primary Industries, supported further research (Sub 11, Sub 17, Sub 55, Sub 45, Sub 25). The Invasive Species Council noted the difficulty of targeting biocontrols at fireweed (and the other case study weeds for the inquiry) because they are closely related to native species (Sub 37).

One submitter suggested that the biological control that ultimately conquers fireweed may actually be a small army of people (Sub 24).

## Encouraging landowners to take action

One submitter argued that subsidies are warranted to assist landholders meet the high costs of herbicides for treating fireweed (Sub 45). The Gomaren and Doctor's Creek Land Care Group recommended that grants be provided to landholders for conducting fireweed control programs in the spring of 2017 (Sub 25).

Agforce noted that Biosecurity Queensland officers and council officers have no authority to request landholders to control the native variety of fireweed (Sub 33).

## Education

A number of submitters commented on public education about fireweed:

- obsolete government weed distribution maps (Sub 33)
- criticisms of the currency, comprehensiveness and availability of information on fireweed produced by the Department of Agriculture and Fisheries (DAF) (Sub 23, Sub 33)
- the failure to use rates notices to convey information about fireweed (Sub 23)
- the need for councils to send advisory letters to landholders at the start of fireweed season (Sub 34)

- the need to increase staffing levels at the Queensland Herbarium to assist with the timely identification of fireweed specimens during the short flowering seasons (sub 33)
- the need for DAF to update its Fireweed PestFact factsheet to include information on registered herbicides and how they may be used (sub 33), and
- recommendations for public notices (newspaper ads or roadside billboards) declaring the presence of fireweed and the need for controls, including on small acreages and vacant lots (Sub 25).

#### **Submissions that referred to fireweed**

Sub 4	Sheila Venz
Sub 5	Biddadaba Creek Action Group
Sub 7	Jean K Hawkins
Sub 11	Southern Downs Regional Council
Sub 14	John Pocock
Sub 17	Errol Steinhardt
Sub 22	Gympie Regional Council
Sub 23	Michael O'Donoghue
Sub 24	Dianne Schluter
Sub 25	Gomaren and Doctor's Creek Land Care Group
Sub 28	Toowoomba Regional Council
Sub 29	Queensland Farmer's Federation
Sub 30	Noosa Shire Council
Sub 33	AgForce Queensland
Sub 34	Moreton Bay Regional Council
Sub 35	J and M Barrow
Sub 37	Invasive Species Council
Sub 39	Tablelands Regional Council
Sub 45	Trevor and Marion Weatherhead
Sub 48	CSIRO
Sub 50	Mary River Catchment Coordinating Committee
Sub 55	Department of Primary Industries, NSW Government
Sub 57	Department of Agriculture and Water Resources, Cwth Government

#### **May 2017**