

Annotated timeline

100 years of fireweed (*Senecio madagascariensis*) in Australia.

20 March 2017

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Summary

This annotated timeline was compiled from records held by the Department of Agriculture and Fisheries, newspaper articles accessed through the National Library of Australia digitized newspaper archive TROVE (<http://trove.nla.gov.au/newspaper/>) and reports and scientific papers prepared by staff of various Queensland Government departments. As the majority of the impact of fireweed has occurred in New South Wales, New South Wales and Australian Government policy and legislative responses have also been included.

Entries in the timeline have been colour coded as follows.

Year	Issue	Comments
XXXX	Taxonomic issues	Years in which taxonomic issues were resolved.
XXXX	National policy	Years in which National Policy was formulated or changed.
XXXX	Queensland legislation	Years in which Queensland legislation was passed, commenced or significant amendments made.
XXXX	Queensland policy	Years in which Queensland Policy was formulated or changed.
XXXX	New South Wales Policy	Years in which New South Wales policy was formulated or changed.
XXXX	New South Wales legislation	Years in which New South Wales legislation was passed, commenced or significant amendments made.
XXXX	Impacts and spread	Years in which significant new or growing concerns were raised by community, local government or industry about the actual or potential impacts of fireweed and/or calls for government assistance.
XXXX	R&D - Biological control research	Years in which significant research activity; advances occurred or hurdles were encountered.
XXXX	R&D - Herbicide control research	Years in which significant research activity; advances occurred or hurdles were encountered.
XXXX	R&D - Management strategy research	Years in which significant research activity; advances occurred or hurdles were encountered.
XXXX	Major Publication	A major publication about fireweed.
XXXX	Education and Awareness	Years in which education and awareness publications were produced or revised.
XXXX	Community based action	Years in which significant local community based action occurred or funding received to control fireweed.

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Timeline - 1918 to present

Year	Issue	Comments
1817	Taxonomic Identity	Type specimen of <i>Senecio madagascariensis</i> described by Poiret in 1817 from specimens collected in Madagascar.
1918	Introduction to Australia	Earliest herbarium collection was at Raymond Terrace in the Lower Hunter Valley NSW. Initially confused with the native fireweed <i>Senecio lautus</i> . Two theories for its introduction into Australia either in the ballast of shipping into Newcastle or Sydney or in hay associated with importing horses from South Africa.
1918-1940	Spread in New South Wales	Fireweed spreads in Hunter Valley and near Sydney.
1940	Spread in New South Wales	Fireweed spreads to the north coast of NSW, allegedly in contaminated crop seed.
1946	Noxious Weed Declaration in NSW	Fireweed (as <i>Senecio lautus</i>) declared in Lismore under the <i>NSW Local Government Act 1919</i> . Proclamation published in NSW Government Gazette 15 February 1946
1950	Spread into Queensland	First report of fireweed near Numinbah (See Courier-Mail, Saturday 4 November 1950, page 7)
1950	Noxious Weed Declaration in NSW	Fireweed (as <i>Senecio lautus</i>) declared in Copmanhurst Shire, NSW under the <i>NSW Local Government Act 1919</i> proclamation NSW Government Gazette 24 November 1950
1951	Noxious Weed Declaration in NSW	Declaration of fireweed <i>Senecio lautus</i> in the Richmond River County District.
1981	Taxonomic Identity	True identity of fireweed established. Fireweed plants in Australia correctly identified as <i>Senecio madagascariensis</i> and recognised as being of a southern African origin.
1984	NSW education and awareness	NSW Department of Primary Industries publishes AgFact Fireweed P7.6.26.
1986	Queensland Legislation	Fireweed is not regulated in Queensland. <i>Rural Lands Protection Act 1985</i> commences 1 July 1986, lists pest plants in five categories with the following management requirements. P1 – The introduction of these plants into Queensland is prohibited. P2 – These plants are to be destroyed in the whole of Queensland unless otherwise stipulated. P3 – Distribution of these plants in the area of infestation is to be reduced, in the whole of Queensland unless otherwise stipulated P4 – These plants are to be prevented from spreading beyond the places in which they occur, namely the Local Authorities of major infestation. P5 – Particular action should be taken in relation to those plants on land in that area that is land under the control of a Government Department or a local Authority
1985-1988	Spread within Queensland	University of Sydney researchers made collections of fireweed in Queensland. These collections were at Pimpama, Albert Shire in 1985; Mount Tamborine 1985, Beechmont 1987, Beaudesert Shire; Burleigh Heads, City of Gold Coast in 1985; Collingwood Park, City of Ipswich in 1988; and Marsden, City of Logan in 1988.
1986	Community concern	First correspondence about fireweed to the Rural Lands Protection Board from Beaudesert Shire Council.
1987	Mapping	Preliminary fireweed survey 19 Feb 1987 of Beaudesert Shire by staff from the Alan Fletcher Research Station (Qld Department of Lands) and shire weed inspector. Mapped at Mt Tamborine, Beechmont, Jimboomba, Glenapp on Brisbane-Sydney railway and along Albert River and Canungra Creek.
1987	Spread within Queensland	Verified herbarium specimens collected at Beechmont and Canungra QLD

Year	Issue	Comments
1987	Local government concerns	In correspondence to the Rural Lands Protection Board, the Beaudesert Shire indicated that Council did not wish that fireweed be listed as a noxious weed.
1987	QLD Education and awareness	Rural Lands Protection Board outward correspondence Notification was sent to the Queensland Dairymen's Organisation & the United Graziers Association advising these organisations of the spread of fireweed into south-east Queensland.
1987	QLD Policy	At a Rural Lands Protection Board meeting (14/15 September 1987), a resolution was moved and carried "that Madagascan fireweed (<i>Senecio madagascariensis</i>) be placed on the Interim List of Declared Plants". This interim listing required that within two years, a recommendation including control measures and a proposed pest category be presented to the Rural Lands Protection Board for consideration.
1987	Biological Control Research	At that same Rural Lands Protection Board meeting (14/15 September 1987) another resolution was moved "that the Board approach New South Wales for funds to assist in research for biological control of Madagascan fireweed."
1987	QLD Education and awareness	The first Queensland Weed Bulletin "Fireweed and its control" was published by the Department of Lands in October 1987.
1987	Biological Control Research	A preliminary botanical survey to locate fireweed and related species in the Fort Dauphin region of south-east Madagascar was undertaken in January 1987 by a Queensland entomologist based in Madagascar searching for rubber vine biocontrol agents.
1987	Biological Control Research	Another survey was undertaken in June 1987 in Fort Dauphin region of south-east Madagascar to locate fireweed and the insects attacking it.
1988	Community concern	Rural Lands Protection Board received correspondence from the Boonah Shire Council concerned about the spread of fireweed in that shire.
1988	Spread within SEQ	Herbarium specimens were collected at Collingwood Park, Ipswich and at Browns Plains QLD.
1989	Spread within SEQ	Further herbarium specimen collections at Moogerah Dam, Boonah, QLD.
1989	QLD education and awareness	The Department of Primary Industries hosts a field day at Frank Warwick's property at Mt Alford on 31 Aug 1989.
1989	Community concern	A newspaper article "Fireweed alarm for livestock" published in the Queensland Times (Monday 26 August 1989 page 13)
1989	Biological Control Research	A four year "Biological control of Fireweed" project funded (\$161,081) by the Australia Meat and Livestock Research and Development Corporation.
1989	Biological Control Research	The Rural Lands Protection Board carried a motion "that the Board re-affirms its support for the appointment of an entomologist at the Alan Fletcher Research Station (Department of Lands) and requests that the Minister for Lands be advised accordingly."
1989	QLD Policy	After consideration of a report on fireweed management, the Declared Plants Consultative Committee recommended that fireweed (<i>Senecio madagascariensis</i>) be declared as a P3 and P4 pest in the Local Authority areas of Albert, Beaudesert, Boonah, Ipswich, Logan and Moreton and P2 elsewhere in the State.
1989	QLD Policy	The Rural Lands Protection Board Decision (20/21 September 1989) was moved L. Buchanan (nominee of the Queensland Dairymen's State Council) and seconded by R. Gundy (nominee of the Council of Agriculture) "that fireweed be declared as a P3 and P4 pest in the Local Authority areas of Albert, Beaudesert, Boonah, Ipswich, Logan and Moreton and P2 elsewhere in the State."
1990	QLD Policy	Minister for Lands and Minister for Primary Industries both support Rural Lands Protection Board resolution for declaration as a pest with the proposed categories.

Year	Issue	Comments
1990	Queensland legislation	Declaration of fireweed under the <i>Rural Lands Protection Act 1985</i> published in the Queensland Government Gazette 16.6.1990 No.54 pages 885-6. Fireweed in the following categories: P3 in local government area of Albert, Beaudesert, Boonah, Ipswich, Logan and Moreton (The distribution of these plants in the area of infestation is to be reduced). P4 in local government area of Albert, Beaudesert, Boonah, Ipswich, Logan and Moreton (These plants are to be prevented from spreading beyond the places in which they occur). P2 remainder of State (These plants are to be destroyed).
1990	Spread within SEQ	Flowering fireweed is found along the Gateway Arterial Road in Brisbane.
1990	QLD Policy	Correspondence to local government "each local authority is expected to control fireweed on roads and reserves as well as to enforce control on private land in accordance with the objectives for the categories".
1990	Herbicide Control research	Department of Primary Industries chastises Department of Lands for making recommendations about fireweed control not previously approved by the Agricultural Requirements Board under the <i>Chemical Usage (Agricultural and Veterinary) Control Act 1988</i> .
1990	Biological Control Research	Further exploration in Madagascar leads to the collection of 14 potential insect species. A stem-feeding Tortricid moth <i>Lobesia</i> new sp. and a flower-feeding pyralid <i>Phycitoides</i> new sp. were imported into high security quarantine in Australia where their host ranges were assessed. <i>Phycitoides</i> oviposited and developed on several native Senecio species, <i>Lobesia</i> sp. oviposited and developed on several plant species from the tribes Senecioneae and Calenduleae. As these results indicated an unacceptably wide host-range for both moths, no application was made to the Australia government for the release of the insects from quarantine. Both insect colonies in quarantine were destroyed.
1991	Biological Control Research	Fireweed declared target for biological control by the Standing Committee for Agriculture (meeting 147, Nelson NZ 12-13 Feb 1991). The applicant was the Plant Production Committee (PPC), a subcommittee of Standing Committee on Agriculture and Resource Management (SCRAM).
1991	Community concern	Native fireweed poisoning reported "Poison weed a threat to stock" TMB Tuesday June 18 1991 page 29 refers to native fireweed <i>Senecio lautus</i> .
1991	Community concern	Spread within Southeast Queensland, fireweed found on South Stradbroke Island.
1991	Biological Control Research	Field collections and investigation of native insect species attacking fireweed in southeast Queensland.
1991	Biological Control Research	First insect survey in South Africa by a Queensland Government entomologist to locate potential biocontrol agents.
1992	Biological Control Research	A Queensland Government entomologist is able to re-enter Madagascar to collect more insects after rioting and civil unrest in that country subsides.
1993	Herbicide Control Research	Only one herbicide was registered for fireweed control (bromoxynil). Landholders were reporting poor level of control in some circumstances. A screening trial tested various herbicides and adjuvant combinations for boom spray application. (See scientific paper by Anderson & Panetta 1995)
1993	Education and awareness	Herbicide demonstration trials set out in the Biddadaba district of the Beaudesert Shire.
1994	Biological Control Research	Genetic studies confirm that Madagascan fireweed and the native fireweed are not the same species.

Year	Issue	Comments
1994	QLD Policy	Department Policy endorsed 17 May 1994 by the Minister of Lands (i) In areas declared P3/P4 (established infestations) the Department of Lands will: (a) Require that the incidence and impact of fireweed is minimised by control of isolated infestations and use the appropriate management methods on all land areas. (b) increase awareness of the methods of control and management (ii) In areas declared P2 (generally without established infestations), the Department of Lands will: (a) Increase public awareness of the impact, potential for spread, means of spread and identification of fireweed. (b) Require eradication of all infestations except where eradication is not operationally or economically feasible, in which cases control shall be maintained at the highest possible level. (c) (iii) The Department of Lands will continue research to improve control methods.
1995	QLD Legislation	In this year local government amalgamations occurred - Shire of Albert with City of Gold Coast and Shire of Moreton with the Ipswich City. Declaration revised - P3 in local government area of Beaudesert, Boonah, Ipswich and Logan (The distribution of these plants in the area of infestation is to be reduced). P4 in local government area of Beaudesert, Boonah, Ipswich and Logan (These plants are to be prevented from spreading beyond the places in which they occur). P2 remainder of State (These plants are to be destroyed)
1995	Local government concerns	A meeting was hosted by the Beaudesert Shire to discuss local government's difficulties in preventing the spread of fireweed.
1996	Community concern	Rural Lands Protection Board members undertake a field trip to inspect fireweed issues.
1996	QLD Policy	Rural Lands Protection Board meeting November 1996 moved a "... immediate review of the declaration category of fireweed..."
1996/97	Biological Control Research	A botanical survey in South Africa undertaken for a taxonomic study (published in Radford <i>et al</i> 2000). During the survey a rust fungus discovered attacking fireweed.
1997	QLD Policy	Department of Natural Resources - Policy goal of containing fireweed south of Brisbane.
1997	Biological Control Research	Rural Lands Protection Board wrote letter of support for CSIRO funding application to the Dairy Research and Development Corporation for biological control exploration and testing in South Africa.
1997	Community Concern	Correspondence calling for all native <i>Senecio</i> species to be declared noxious to progress search for biological control agents.
1997	Community Concern	A petition to the <i>Queensland Parliament</i> was received on 7 October 1997 (322 petitioners) "requesting the house to urgently attend to releasing a biological form of control for <i>Senecio madagascariensis</i> (Fireweed), such as its natural enemy in Madagascar".
1998	QLD Policy	Joint Department Natural Resources and Department of Primary Industries workshop 1998 to develop management strategies and action plans for fireweed.
1998	Local government concern	Logan Council resolved 17 Nov 1998 to request an increase in the declaration category to P2 in its area. (Request was put on hold during consultation for the preparation of the Land Protection (Pest and Stock Route Management) Bill 2001.
1998	Biological Control Research	Further genetic studies indicate that the fireweed infestation in Australia originated from South Africa and not from Madagascar (Scott <i>et al</i> 1998).
1998	Education and awareness	Factsheet PP31 revision November 1998.
1999	Education and awareness	Ministerial Press Release "Government Steps up Efforts against Toxic Weed"
1999	Local government concern	Calls by local government for a regional approach to fireweed management.

Year	Issue	Comments
2000	Biological Control Research	Genetic study shows that fireweed in Australia is most similar to fireweed plants found in the KwaZulu-Natal region of South Africa. (Radford <i>et al</i> 2000).
2002	Biological Control Research	A special field trip to South Africa undertaken to collect the rust fungus found in 1996/97. This rust fungus (<i>Aecidium</i> sp.) was subsequently found to be same as the fungus (<i>Puccinia lagenophorae</i>) already present in Australia. <i>Puccinia lagenophorae</i> is damaging to fireweed and other native <i>Senecio</i> species. It was unlikely that this rust would lead to any improved control of fireweed and it was not released.
2003	QLD legislation	<i>Land Protection (Pest and Stock Route Management) Act 2002</i> commenced 1 July 2003. Fireweed declared as a Class 2 declared pest plant. A landowner must take reasonable steps to keep land free of Class 2 pests. A guideline for the management of fireweed was prepared under section 15 of the Act. The operational objectives for fireweed management were <ul style="list-style-type: none"> To prevent the spread of fireweed into uninvested areas. To eradicate small, isolated infestations Each local government must have a plan for the declared pests in its area.
2006	Education and awareness	Factsheet Revision PP31 February 2006.
2007	National Policy	Australian Government 2007 election commitments (Eden Monaro NSW). <ul style="list-style-type: none"> \$300,000 for a comprehensive fireweed research project. Undertake further testing of biological control agents. Work with industry and community groups to raise awareness about best practice. Undertake further assessment of fireweed for consideration as a “weed of national significance”.
2007	Community concern	ABC Capricornia misreport on 22 August 2007 of a major fireweed infestation near Rockhampton was in fact a native fireweed <i>Senecio bragalowensis</i> .
2007	Community concern	Spread to north Queensland - Fireweed detected at McHugh lookout Milla Milla by an observant tourist from Southeast Queensland.
2007	Response to north Queensland incursion	Interim FNQ Fireweed Management Group formed by government department and local government officers.
2008	Local government concern	Detected at two sites at Milla Milla and Wondecla in the Tablelands Regional Council area.
2008	Community concern	A National Fireweed Conference was hosted by the Bega Valley Fireweed Association (BVFA) at Bega, NSW on the 28/29 May 2008.
2008	NSW POLICY	NSW Noxious Weeds Advisory Committee’s review of fireweed management in NSW advised that the goals of a NSW fireweed strategy should be <ol style="list-style-type: none"> To prevent fireweed from establishing in areas where it is not currently established To minimise the negative impact of fireweed on primary production and land managers in areas where fireweed is established but not common To provide landholders with best practice technical information to enable them to minimise the negative impact of fireweed infestation on their land and enterprise in areas where fire weed is established and wide spread.
2009	Local government concern	Discussions and meetings held at officer level between Biosecurity Queensland and local governments in southeast Queensland for a fireweed containment line in southeast Queensland.
2010	Community concern (Eden Monaro NSW)	Nominated as a Weed of National Significance as an Australian Government 2007 election commitment. Nomination document prepared by staff of the University of New England, Armidale, NSW.

Year	Issue	Comments
2010	NSW POLICY	NSW Department of Industry & Investment NSW Draft Fireweed Strategy 2010-2015. This draft strategy was not finalised before the NSW state election in March 2011. The draft strategy objectives were: Objective 1 – Minimise the negative impact of fireweed on primary production and land managers in areas where fireweed is established but not common. Objective 2 – Minimise the negative impact of fireweed on primary production and land managers in areas where fireweed is widespread. Objective 3 – Provide landholders with best practice technical information to enable them to minimise the negative impact of fireweed.
2010	QLD Policy	Draft revision of the <i>Land Protection (Pest and Stock Rout Management) Act 2002</i> guideline. Revision not proceeded with during drafting of Biosecurity Bill 2011.
2011	Education and awareness	Factsheet Revision PP31 January 2011.
2012	National Policy	Fireweed listed as one of twelve additional Weeds of National Significance. Fireweed was nominated on behalf of the Australian Government. The assessment process was led by the Australian Bureau of Agricultural and Resources Economics (ABARES), part of the Australian Department of Agriculture and Water Resources with participation of all State and Territory jurisdictions. The 12 additional WONS were announced by Chair of the National Biosecurity Committee in 2012. Fireweed (<i>Senecio madagascariensis</i>) Strategic Plan 2012-2017 released. Strategic Vision: To prevent further establishment of fireweed and minimise the negative impact of fireweed on primary production, the environment and land managers. Three high level goals: 1. New infestations are prevented from establishing. 2. Established infestations are under strategic management. 3. Greater capability and commitment to manage fireweed
2012	Major publication	Fireweed – A Best Practice Management Guide for Australian landholders (Sindel & Coleman 2012)
2012	Biological Control Research	A clearer understanding of the taxonomic status and ecology of fireweed in South Africa. A list of at least 18 invertebrates and three fungi on fireweed in South Africa that are considered likely to be <i>Senecio</i> specialists. (Full report Sheppard AW and Olckers T (2012) Fireweed Control Research: Final Report on investigation of potential biological control agents in South Africa, including the KwaZulu-Natal province and surrounding areas . Unpublished Report for Department of Agriculture, Fisheries and Forestry.)
2013	Education and awareness	Factsheet Revision PP31 June 2013.
2016	Queensland legislation	<i>Biosecurity Act 2014</i> commenced 1 July 2016. Fireweed listed as Category 3 restricted matter, fireweed must not be distributed or released into the environment. A person dealing with fireweed, a carrier of fire weed or undertaking an activity must take all reasonable and practical measures to prevent or minimise the biosecurity risk posed by fireweed. A local government's function is to ensure the management of fireweed in its area in compliance with the Act.
2016	Education and awareness	Factsheet revision for the commencement of <i>Biosecurity Act 2014</i> .
2016	Response to north Queensland incursion	Local Government planning document for management of fireweed on the Atherton Tablelands Tablelands Regional Council Fireweed Management Plan V 1 January 2016

Year	Issue	Comments
2016	NSW legislation	NSW <i>Biosecurity Act 2016</i> establishes a general biosecurity duty similar to Queensland's general biosecurity obligation. The general biosecurity duty applies to a person dealing with fireweed. A Regulation applies to all Weeds of National Significance - A person must not move, import the weed into the State or sell.
2016/17	Community concern	Thirty-eight media reports mention fireweed in the twelve months to 31 March 2017.
2017	Education and awareness	Fireweed Workshop at the Marburg Showgrounds Hall February 26 2017
2017	NSW Policy	State Priority Weed Objective - Asset Protection (Whole of NSW)
2017	NSW Regional Planning	Draft NSW Regional Strategic Weed Management Plans were open for public consultation until 29 March 2017. For example, the North Coast Regional Strategic Weed Management Plan 2017-2022 listed the following for fireweed: Mandatory Measure (Biosecurity Regulation 2016) - A person must not move, import into the State or sell. Regional Strategic Response Outcomes – ASSET PROTECTION <ul style="list-style-type: none"> • Key sites/assets of high economic, environment and/or social value are protected Measures: <ul style="list-style-type: none"> • Control of infestations in close proximity to key sites/assets • The land should be managed in accordance with priorities detailed in published weed management plans and as a component of a regional campaign Response: <ul style="list-style-type: none"> • Develop region-wide coordinated campaigns for collaborative management • Identification of regional containment zones where required • Identification of key sites/assets in the geographic area
2016-17	AEC inquiry	AEC inquiry

Selected clippings from Queensland newspapers

FEAR OF FIREWEED

MURWILLUMBAN, Wed-
yesterday. — Fireweed is re-
ported to have appeared in
the Tweed district, and the
fear is expressed that it
might become a greater
menace than the Crofton
weed.

Fireweed is so named be-
cause its seeds, if gathered
with a harvested crop such
as lucerne, will start a fire
through spontaneous com-
bustion.

The Tweed district coun-
cil of the Australian Prim-
ary Producers' Union de-
cided to-day to ask the
Agriculture Department to
obtain all available data on
fireweed, and make it avail-
able to landholders; also to
display specimens of the
weed in public places.

Figure 1 First newspaper report. Courier-Mail (Brisbane, Qld.), Thursday 19 October 1950, page 12.

the state of Queensland



Fireweed menaces big areas of farm lands

From A STAFF REPORTER

COOLANGATTA, Friday.—“Fireweed, a pest now making its appearance on the Tweed, will make all other weeds look silly,” the District Primary Producers’ Union President (Mr. A. C. Pratt) said to-day.

The weed, which at first sight looks like a buttercup, has been found at Myocum, near Murwillumbah, Tumbulgum, on the Tweed River, and at Numinbah, in Queensland, near the border. It is already a problem on the Richmond.

“It is suspected of poisoning stock,” Mr. Pratt said, “and if it gets into harvested crops it causes internal combustion, and has been known to cause fires that have resulted in the destruction of barns. It acclimatises itself overnight, and will grow anywhere.”

The greatest problem on the Tweed at the moment, however, was Crofton weed, or hemp agrimony, Mr. Pratt added. Thousands of acres were infested with it, and it was quickly spreading all over south-eastern Queensland. The other great worry was groundsel, which first appeared on the Tweed about seven years ago. All the swamps and flats along the Tweed River were thick with it.

Figure 2 Follow-up article the Courier-Mail (Brisbane, Qld.), Saturday 4 November 1950, page 7

Fireweed alarm for livestock

FIREWEED is a fast growing concern in Boonah district pastures, district agricultural adviser George Malcolmson said yesterday.

The Primary Industries Department officer said the number of reports of this potentially poisonous, daisy-like weed on district properties had risen alarmingly this season, compared to the same period last year.

Mr Malcolmson said the widespread occurrence was not surprising, given the fact that fireweed had the ability to develop quickly, producing yellow flowers in six to 10 weeks after emergence.

The light, fluffy seeds attached to a white silky parachute are easily dispersed by wind, aiding the rapid spread of the plant.

As a result, the DPI will host a field day on Thursday, focussing on the control measures of fireweed, as well as animal health problems associated with it. The morning inspection starts at 10am at Frank Warwick's property, 1km west of Mt Alford township along the Moogerah Dam Rd.

Mr Malcolmson said fireweed would quickly invade and dominate bare or disturbed areas, particularly after drought and or/where grazing occurs.

While it grows in all types of pasture and on all aspects, the amount of fireweed is influenced by the quantity of ground cover and competition provided by pasture plants.

Mr Malcolmson said the greater the ground cover and competition provided by pasture, the less chance there is of the weed developing.

The plant has poisoning properties and there is an increasing risk of livestock losses, particularly cattle, if its spread continues.

Fireweed is responsible for many cases of ill-thrift and liver damage in livestock, and is toxic in all growth stages, whether green or dry.

Figure 3 Spread and toxicity concerns in Boonah district The Queensland Times Monday August 26 1989, page 13

Toxic weed infestation found

AN infestation of a new weed species toxic to livestock has been found growing on and around the McHugh Lookout in the Miles Miles area in Eacham Shire.

An introduced weed known as fireweed (*Senecio morganianensis*), a composite strongly with pasture species and is responsible for illness, slow growth and poor conditioning of cattle, which can result in death.

Eacham Shire Council pest management officer Troy Orchard stressed the importance of controlling this outbreak as the impact of further spread onto properties would be serious.

"As with most weeds in the Eacham Shire, the best control for fireweed incorporates integrated management strategies with herbicides and mechan-

ical methods in addition to vigorous permanent pastures that can compete strongly with fireweed seedlings."

"This new infestation at McHugh Lookout is the first record for North Queensland, with the previous northern most record just above Gympie," said Mr Orchard.

Fireweed is an annual or a short-lived perennial. It is a daisy-like herb that can vary greatly in size and shape depending on environmental conditions. In ideal conditions fireweed will grow to 50cm tall with multiple branches, long wide leaves (6 cm x 2 cm) and about 100 flowers. Flowers and seeds are produced continuously over the growing season. An average plant can produce more than 10,000 seeds during this time.

"If you identify an infestation of fireweed, act immediately to prevent the situation from becoming worse and to increase the likelihood of eradication," Mr Orchard said.

Council officers can provide advice and assistance on pest management issues including weed identification and information on chemical selection and application. Symptoms of more severe poisoning are loss of appetite, sickness, wandering, loss of coordination, sensitivity to sunlight, jaundice and abdominal straining with rectal oedema. Severe poisoning will result in death and an autopsy will reveal chronic liver sclerosis.

Anyone who sees fireweed within Eacham Shire should phone Mr Orchard on 4693 7693.



Eacham Shire Council pest control officer Troy Orchard examines fireweed.

Advertisement

Can you pick the environmentally

Figure 4 Media report of the spread of fireweed to the Atherton Tablelands, North Queensland in 2006.

Queensland Government scientific reports relating to fireweed

Anderson, T.M.D. and Panetta, F.D. (1995). **Fireweed response to boomspray applications of different herbicides and adjuvants.** *Plant Protection Quarterly* 10(4): 152-153.

Marohasy, J.J. (1989) **A survey of fireweed (*Senecio madagascariensis* Poir.) and its natural enemies on Madagascar with a view to biological control in Australia.** *Plant Protection Quarterly* 4: 139-140.

Marohasy, J.J. (1991) **A survey of the insect fauna of the *Senecio madagascariensis* complex (Compositae) in South Africa.** Unpublished report. Qld Government Brisbane.

Marohasy, J.J. (1991). **A survey of the insect fauna of the *Senecio madagascariensis* complex (Compositae) in South Africa.** Unpublished report, Queensland Lands Department, Brisbane.

Marohasy, J.J. (1993). **Are we justified in considering fireweed (*Senecio madagascariensis*) an exotic?** In: Proceedings 10th Australian Weeds Conference and 14th Asian Pacific Weed Science Society Conference, Brisbane, September 1993, Volume II, pp. 122-127. (Weed Society of Queensland, Brisbane, Australia).

McFadyen, R.E. (1995). **MRC project QDL003 “Biological control of fireweed” final report.** Unpublished report December 1995. Qld Government, Brisbane.

McFadyen, R.E. and Sparks, D. (1996). **Biological control of fireweed.** In: Proceedings of the 11th Australian Weeds Conference, 30 September - 3 October 1996, Melbourne, Victoria. (Ed R.C.H. Shepherd) pp.305-308. The Weed Society of Victoria, Melbourne.

White, E.M., Sims, N.M., and Clarke, A.R. (2008) **Test of the enemy release hypothesis: The native magpie moth prefers a native fireweed (*Senecio pinnatifolius*) to its introduced congener (*S. madagascariensis*).** *Austral Ecology*, 33 (1), pp. 110-116. DOI: 10.1111/j.1442-9993.2007.01795.x

White, E.M., Wilson, J.C., and Clarke, A.R. (2008) **Diversity and abundance of arthropod floral visitor and herbivore assemblages on exotic and native *Senecio* species.** *Plant Protection Quarterly*, 23 (2), pp. 90-98.

White, E.M., Wilson, J.C., and Clarke, A.R. (2008) **Plant-pollinator interactions in sympatric exotic and native *Senecio* species: Is facilitation or competition for pollinators occurring?** *Plant Protection Quarterly*, 23 (3), pp. 120-126.