Declared Plant Policy
under the Natural Resources Management Act 2004

flax-leaf broom (Genista linifolia)

Flax-leaf broom is a shrub that forms dense thickets, excluding native vegetation and providing cover for rabbits. It was introduced to Australia as an ornamental and hedge plant and is a weed of native vegetation in the Mt Lofty Ranges region and some coastal localities. It resembles Cape broom (Genista monspessulana), which is the subject of a separate policy.

Management Plan for Flax-leaf broom

Outcomes

- Maintain the integrity of native vegetation.

Objectives

- High priority infestations of flax-leaf broom in the control areas controlled.
- No further spread of flax-leaf broom to currently uninfested areas.

Implementation

- Biosecurity SA to publicise the new status of flax-leaf broom as a declared plant.
- NRM authorities and Chief Officer to enforce the prohibition on sale of flax-leaf broom.
- NRM authorities in the active control areas to ensure all high priority infestations on private or public land are controlled.
- NRM authorities to control priority infestations on road reserves.
- Any infestations too large for immediate destruction in these areas to be the subject of plans for containment and progressive reduction by direct treatment or by encouraging regeneration of native vegetation as appropriate.

Regional Implementation

Refer to regional management plans for further details.

<table>
<thead>
<tr>
<th>NRM Region</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide and Mount Lofty Ranges</td>
<td>Manage weed</td>
</tr>
<tr>
<td>Alinytjara Wilurara</td>
<td>Prohibit sale and movement</td>
</tr>
<tr>
<td>Eyre Peninsula</td>
<td>Manage weed</td>
</tr>
<tr>
<td>Kangaroo Island</td>
<td>Manage weed</td>
</tr>
<tr>
<td>Northern and Yorke</td>
<td>Manage weed</td>
</tr>
<tr>
<td>South Australian Arid Lands</td>
<td>Prohibit sale and movement</td>
</tr>
<tr>
<td>South Australian Murray Darling Basin</td>
<td>Manage weed</td>
</tr>
<tr>
<td>South East</td>
<td>Manage weed</td>
</tr>
</tbody>
</table>
**Declaration**

To implement this policy, flax-leaf broom is declared under the *Natural Resources Management Act, 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road, by itself or as a contaminant, or the sale by itself or as a contaminant is prohibited. NRM authorities in the Adelaide and Mount Lofty Ranges, Eyre Peninsula, Kangaroo Island, Northern and Yorke, SA Murray Darling Basin and South East NRM regions may require land owners to control flax-leaf broom plants growing on their land. NRM authorities in these regions are required to control plants on road reserves, and may recover costs from the adjoining land owners.

Flax-leaf broom is declared in category 2 under the Act for the purpose of setting maximum penalties under section 177. Any permit to allow its movement or sale can only be issued by the Chief Officer pursuant to section 188.

The following sections of the Act apply to flax-leaf broom throughout each of the NRM regions noted below:

<table>
<thead>
<tr>
<th>Sections of Act</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>175(1) Prohibiting entry to area</td>
<td></td>
</tr>
<tr>
<td>175(2) Prohibiting movement on public roads</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>177(1) Prohibiting sale of the plant</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>177(2) Prohibiting sale of contaminated goods</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>180 Requiring notification of infestations</td>
<td></td>
</tr>
<tr>
<td>182(1) Landowners to destroy the plant on their properties</td>
<td>X X X X</td>
</tr>
<tr>
<td>182(2) Landowners to control the plant on their properties</td>
<td>X X X</td>
</tr>
<tr>
<td>185 Recovery of control costs on adjoining road reserves</td>
<td>X X X</td>
</tr>
</tbody>
</table>

**Review**

This policy is to be reviewed by 2020, or in the event of a change in one or more regional management plans for flax-leaf broom.

**Weed Risk**

**Invasiveness**

Flax-leaf broom is a leguminous shrub that grows rapidly after the first year and produces large quantities of hard seed. Plants develop slowly during the first year and do not flower until at least two years old.

Seed is scattered locally when the pods burst. It has been estimated that most seeds would be ejected around 20 m. Longer distance dispersal may occur by road graders and earthmoving equipment, or occasional contamination of fodder and farm machinery. Infestations are only found in regions where flax-leaf broom has been used as an ornamental.

Germination occurs in autumn and spring after the seed coat has been damaged by fire or abrasion. Disturbance, such as fire or partial clearing, is usually needed before flax-leaf broom can establish in native vegetation, and most infestations begin on disturbed areas such as timber plantations, quarries and road construction sites.
Impacts

Flax-leaf broom is primary an environmental weed as it invades dry coastal vegetation, heath land and heathy woodland, grassy woodland, dry sclerophyll forest and woodland, damp sclerophyll forest and riparian vegetation. It can dominate the shrub canopy and grow to 3 metres high and wide, excluding native shrubs and ground flora, at least in the short term. It fixes atmospheric nitrogen and consequently increases nitrogen levels in the soil, providing a favourable habitat for other weeds to invade. Dense infestations provide harbour for rabbits and foxes, and increase fire fuel-loads in native vegetation and neglected pasture areas. In turn, fire stimulates seed germination by breaking the dormancy of soil-stored seed resulting in dense infestations of seedlings.

In neglected pasture, flax-leaf broom can spread rapidly and displace pasture species. It is considered toxic to stock if grazed excessively, but in Australia no cases of poisoning have been reported. Although stock will eat seedlings and thereby prevent encroachment into managed pasture, old broom infestations on neglected land can exclude stock and necessitate more expensive control measures to restore the land to production. The dense thickets can become a significant barrier to humans, machinery and animals.

Cape broom is a fire hazard in wooded areas where it can form an inflammmable understorey at the edge of forests where fires are most likely to start. The infestation of abandoned grazing paddocks on the peri urban fringe by Cape broom thickets is also a fire hazard that increases the risk of bushfires moving into residential suburbs.

Potential distribution

Flax-leaf broom is adapted to Mediterranean climates and slightly acid soils in areas of moderate rainfall. In SA, infestations occur in areas receiving 400 mm to 900 mm annual rainfall. It could be expected to grow in near-coastal and hill vegetation from southern Eyre Peninsula, Kangaroo Island, Fleurieu Peninsula and Mount Lofty Ranges to the lower South East.

Feasibility of Containment

Control costs

A small percentage of seeds are not dormant and are capable of germinating immediately on exposure to suitable temperature and soil moisture conditions. This variation in seed dormancy and germination increases the difficulty of control.

Herbicide control is possible with picloram herbicides being registered for use. Other options for control includes browsing plant with goats, hand pulling small plants when soil is moist, burning adult plants, stem injection or cut stump treatment and cultivation.

Persistence

While mature plants are often killed by fire, the plant regenerates prolifically from soil-stored seed after fire. tolerant of drought and water logging.

Current distribution

Flax-leaf broom is scattered in the Mount Lofty Ranges and Fleurieu Peninsula. A large infestation occurs near Clare, and at least one small one in the Port Lincoln area. It is also established in Western Australia, Victoria, NSW and Tasmania.
State Level Risk Assessment

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

<table>
<thead>
<tr>
<th>Land use</th>
<th>Weed Risk</th>
<th>Feasibility of control</th>
<th>Response at State Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native vegetation</td>
<td>medium</td>
<td>high</td>
<td>Protect sites</td>
</tr>
<tr>
<td></td>
<td>77</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

Considerations

Flax-leaf broom is native to the western Mediterranean; it was introduced to SA as a garden shrub in 1858 and was first recorded as naturalised in 1903.

Risk assessment indicates the action of site protection in native vegetation. While sale and movement are prohibited uniformly across the State, regional actions vary according to the presence of the weed and the amount of vulnerable native vegetation in each region. The three NRM regions where it is known to occur, Adelaide and Mount Lofty Ranges, Northern and Yorke and Eyre Peninsula, aim to manage the weed as do the Kangaroo Island, South Australian Murray Darling Basin and South East regions, which have habitats vulnerable to invasion by flax leaf broom.

Flax leaf broom has been recognised as a Weed of National Significance and will be the subject of a national control strategy.

Synonymy


Nomenclatural synonyms:

*Cytisus linifolius* (L.) Lam., Fl. Francoise 2 (1778).


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Hon Ian Hunter MP
Minister for Sustainability, Environment and Conservation

Date: 28 July 2014