Saffron thistle is found in cultivated paddocks, poor pastures or neglected areas and when present in thick patches can restrict stock movement and cause injury to grazing animals, particularly in the eyes and mouth. Saffron thistle's spines contaminate wool and make wool handling painful. It is also a weed of cultivation and displaces useful pasture species.

Saffron thistle is more likely to occur on pastures which have been overgrazed, or in soils of low nutrient levels. As the seed of saffron thistle is heavy it tends to fall at the base of the plant. This causes infestations to be more localised and spread is not rapid.

Legal requirements

Saffron thistle is not a prohibited or restricted invasive plant under the Biosecurity Act 2014. However, by law, everyone has a general biosecurity obligation (GBO) to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.

Local governments must have a biosecurity plan that covers invasive plants and animals in their area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws. Contact your local government for more information.
Description
Saffron thistle is an herb standing erect, annual growing to 1 m or higher. Leaves are grey green, up to 20 cm long and deeply divided with stout spines. Stems are yellow-white or very pale green, flowers being solitary, yellow and surrounded by spiny bracts. Seeds are grey-brown, egg-shaped, four sided and 15–8 mm long.

Distribution
Saffron thistle is a native of the Mediterranean region and western Asia, and has spread to many parts of the world. Saffron thistle was first recorded in South Australia in 1874, and its introduction may have been unintentional due to confusion with its close relative, safflower (Carthamus tinctorius L.), which was imported as a source of dye.

Saffron thistle occurs in all states of Australia and in the Northern Territory. It occurs extensively in the wheat growing areas of New South Wales and Victoria. In Queensland saffron thistle occurs on the Darling Downs and in coastal areas north to the tropics.

Methods of spread
Saffron thistle spreads by seed but is not rapid.

Control
Physical control
Manual chip out individual plants.

Mechanical control
Deep ploughing, to a depth of 10–15 cm will bury many seeds and reduce emergence. Seedlings emerging can be destroyed by shallow cultivation or spraying. Improved perennial or native pastures will prevent establishment, as saffron thistle is a poor competitor.

If annual treatments are performed and seeding is reduced, germination will be reduced.

In pasture areas avoid heavy grazing as it will encourage saffron thistle growth, and apply superphosphate to promote pasture growth.

Slashing shortly before flowering can also effectively prevent seed production. However, if slashing is carried out too early, plants often regrow and produce new flower heads.

Herbicide control
Spraying or shallow cultivation will destroy emerging seeds. Herbicides can be effective. See Table 1 for treatment options.

Further information
Further information is available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit www.biosecurity.qld.gov.au.

Table 1. Herbicides for the control of saffron thistle

<table>
<thead>
<tr>
<th>Situation</th>
<th>Herbicide</th>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter cereals</td>
<td>2,4-D Amine 500</td>
<td>0.28-1.7L/ha</td>
<td>Boom spray when young</td>
</tr>
<tr>
<td>Sorghum</td>
<td>Amicide 500</td>
<td>0.7-1.4L/ha</td>
<td></td>
</tr>
<tr>
<td>Fields/fallow</td>
<td>Glyphosate 450</td>
<td>0.8-1.2L/ha</td>
<td></td>
</tr>
<tr>
<td>Pastures-grass</td>
<td>MCPA 500 (Amine)</td>
<td>0.7-4L/ha</td>
<td></td>
</tr>
</tbody>
</table>

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