

# Bellyache bush

*Jatropha gossypifolia*



Bellyache bush is often confused with castor oil plant (*Ricinus communis*). Both plants are frequently found in the same area.

Bellyache bush has been recognised in Australia as a Weed of National Significance.

It is generally acknowledged that the shallow root system and canopy cover of bellyache bush precludes growth of other plants, often outcompeting native vegetation and reducing pasture growth. Dense infestations may occur on river flats and other areas of

good loamy soil. Bellyache bush has taken over extensive sections of river frontage in several locations, reducing biodiversity and increasing mustering costs.

The fruits of bellyache bush are poisonous to humans and animals. The toxic substance is a toxalbumin which, when eaten, leads to symptoms of gastroenteritis and the eventual death of some animals. There have been many stock deaths reported due to bellyache bush poisoning, mainly in times of severe drought.



## Legal requirements

Bellyache bush is a Category 3 restricted invasive plant under the *Biosecurity Act 2014*. 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.

At a local level, each local government must have a biosecurity plan that covers invasive plants and animals in its 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

Bellyache bush is a squat, thick-stemmed shrub 2.5–4 m tall developing from a short, single-stemmed plant with three or four young leaves sprouting from the top. Young leaves are deeply divided into three rounded lobes, and are purple coloured and sticky. Older leaves are bright green, about 10 cm in diameter, and may have up to five lobes, the edges covered in coarse, dark brown hairs.

The flowers are small, red with yellow centres, and found in small clusters throughout the upper part of the plant. Seed pods are smooth and oval, about the size of a cherry and 12 mm across; they contain three to four seeds about 8 mm long.

Castor oil plant is similar but usually taller than bellyache bush. The leaves are larger and clearly different, with more lobes (seven to nine) which are much more pointed. Flowers and fruit are on an obvious spike near the top of the plant. Fruit are covered with soft spines and are 2.5 cm across, much larger than those on bellyache bush.

## Life cycle

Bellyache bush flowers throughout the year when moisture is adequate. The seeds germinate during October to December.

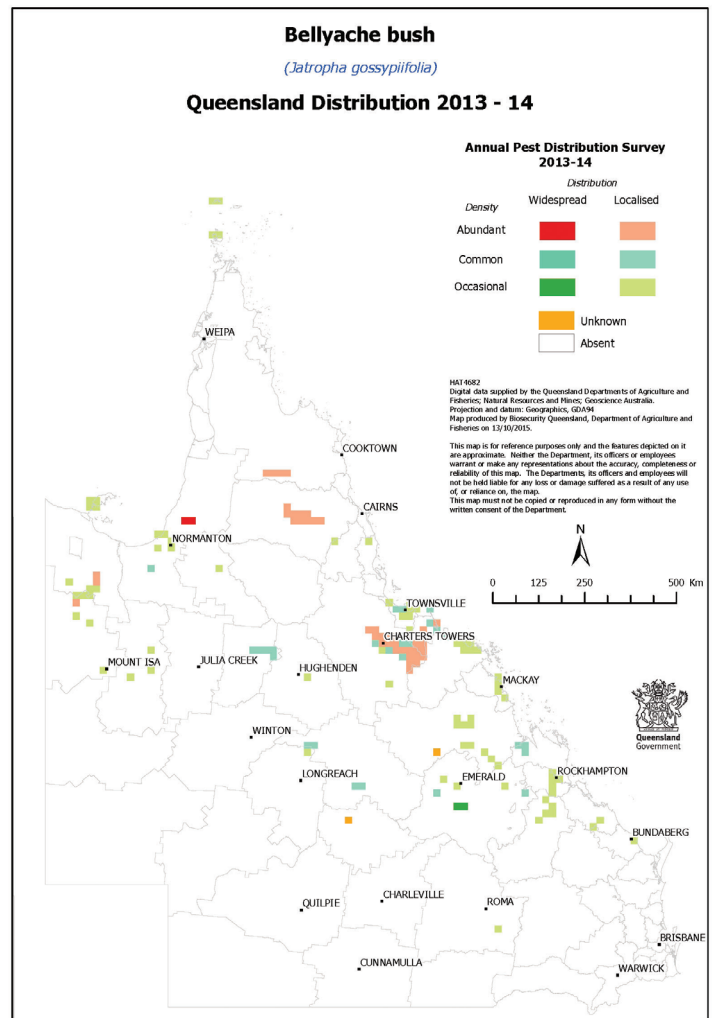
## Methods of spread

Spread by fruit eating birds, water, livestock and by people on machinery and for use as an ornamental plant.

## Habitat and distribution

A native of tropical America, bellyache bush was sometimes grown as a garden plant. It has escaped and become naturalised in various areas of north Queensland. A number of infestations occur throughout the remainder of Queensland. It is usually common along riverbanks and roadsides.

## Map 1. Distribution of bellyache bush in Queensland



## Control

### Managing bellyache bush

The GBO requires a person to take reasonable and practical steps to minimise the risks posed by bellyache bush. This fact sheet provides information and some options for controlling bellyache bush.

### Mechanical control

As bellyache bush is shallow rooted, grubbing the plant by hand is effective. Repeated slashing of infested areas will help reduce density.

### Grazing management

A healthy pasture consisting of large numbers of perennial grasses can effectively inhibit or increase time for an infestation to develop. Pasture management to maintain ground cover post treatment significantly reduces seedlings survival through competition.

### Fire

High mortality rates using fire have been observed in the field, but only when there is a sufficient fuel load to carry a fire through a bellyache bush infestation.

## Herbicide control

The herbicides currently registered for bellyache bush are listed in Table 1. Testing has shown several others to be effective against bellyache bush; they have been submitted for registration.

## 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](http://www.biosecurity.qld.gov.au).

**Table 1. Herbicides for the control of bellyache bush**

Situation	Herbicide active ingredient	Rate	Comments
Agricultural non-crop areas, and rights-of-way, commercial and industrial areas, forests and pastures <sup>1</sup>	<sup>1</sup> Fluroxypyr as mhe 200 g/L (e.g. FMC Fluroxypyr 200 Herbicide)	0.5 L/100 L	Thoroughly wet plants and apply when actively growing.
	<sup>1</sup> Fluroxypyr as mhe 400 g/L (e.g. Comet 400)	0.25 L/100 L	
Agricultural non-crop areas, commercial and industrial areas, forests (including softwood plantations), pastures and rights-of-way	<sup>1</sup> Fluroxypyr as mhe 333 g/L (eg. Starane Advanced)	0.33 L/100 L	Thoroughly wet plants and apply when actively growing.
Forestry (softwood plantations), roadsides, industrial areas and rights-of-way <sup>1</sup>		0.6–1.8 L/ha	Boom application Pre-plant spray operations in forestry or general broadleaf weed growth.
Forestry (softwood plantations)		0.6–1.8 L/ha	Boom application Post-plant spray operations. Ground based directional spraying to the inter-row zone only in forestry.
Native pastures, rights-of-way, commercial and Industrial areas	Metsulfuron-methyl 600 g/kg (e.g. Associate)	10 g/100 L + penetrant	Thoroughly wet plants and apply when actively growing.
	Triclopyr as Butotyl 75 g/L + Metsulfuron-methyl 28 g/L (e.g. Zelum Brush Weed)	0.25 L/100 L	Spray just before flowering when plant is in full leaf and actively growing.
Native pastures, rights-of-way, commercial and industrial areas	Metsulfuron-methyl 600 g/kg (e.g. Associate)	1 g/1 L + Pulse 2 mL/L PERMIT 13707 (expires 30/09/2022)	Apply 4 mL/m height as foliar application using a gas or splatter gun. Treat actively growing plants with fully expanded leaves after storms. This will allow the mass germination to occur and be treated in the same pass. Seedlings underneath plants will be treated indirectly. Apply mixture to foliage in arc across plant such that all leading branches have had at least some of their leaves contact with herbicide.

### Notes

<sup>1</sup> Products containing fluroxypyr have a 7-day withholding period in agricultural situations before grazing or cutting for stockfeed.

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



This fact sheet is developed with funding support from the Land Protection Fund.

Fact sheets are available from Department of Agriculture and Fisheries (DAF) service centres and our Customer Service Centre (telephone 13 25 23). Check our website at [www.biosecurity.qld.gov.au](http://www.biosecurity.qld.gov.au) to ensure you have the latest version of this fact sheet. The control methods referred to in this fact sheet should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, DAF does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

