

Tobacco weed

Elephantopus mollis



Tobacco weed is a vigorous and aggressive invasive plant and is regarded as a serious weed of agriculture in many wet tropical/subtropical countries.

It seeds prolifically and dense masses of broad-leaved seedlings can grow through and smother healthy, thick pastures. The plant is not a nutritious feed for cattle and reduces pasture productivity within a few years.

Preferring fertile soils and needing moderate to high rainfall, tobacco weed is a major threat to the beef and dairy industries of north Queensland.

Animals and machinery primarily spread seeds, so farm hygiene is very important in preventing spread. Running water is also a major dispersal agent of this invasive plant.



Queensland
Government

Legal requirements

Tobacco weed is a category 3 restricted invasive plant under the *Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. The Act requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with invasive plants 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 in its area. This plan may include actions to be taken on tobacco weed. Some of these actions may be required under local laws. Contact your local government for more information.

Description

Tobacco weed is a slender, fast-growing herb. Mature plants generally grow 30–150 cm high.

The stem is more or less erect and sparsely branched, becoming woody at the base when mature. Covered with fine white hairs, it may cause skin irritation when brushed against.

Leaves (oblong or oval in shape, 10–20 cm long and 2–5 cm wide) are scattered alternately along the stems and occur mostly at the base of the plant. Seedlings grow as a rosette of leaves.

The upper surfaces of the leaves are rough and thinly covered in fine hairs. The undersurfaces are densely haired and resinous, especially on veins.

The small, inconspicuous white flowers (rarely pink) form in multi-headed clusters at the tips of the stems and side shoots.

Three small leaf-like bracts cup each cluster. Individual flowers are tubular with five lobes at the apex and are about 4 mm long. The style is extended and surrounded by the stamens. After flowering, a large number of 3 mm long, brown to greyish-black seeds are released, each with five fine, straight, white, bristle-like hairs on the top.

Tobacco weed does not produce a taproot—fibrous roots extend from the crown of the plant. No tubers or rhizomes or below-ground buds are produced.

Similar species

A closely related species, *Elephantopus scaber*, is found in far north Queensland from the northern Tableland to Cape York and coastal areas. Its flowers are usually blue and the leaves on the stem are either absent or few and much reduced in size. Currently *Elephantopus scaber* is not considered as great a threat to production as tobacco weed.

Life cycle

Given sufficient moisture, seeds can germinate any time of the year. Flowering may also occur all year, but generally occurs in May. In other tropical regions, flowering is reduced or stopped by prolonged dry spells.



Seedling



Seedlings smothering native vegetation

Methods of spread

Wind can only blow the seeds a few hundred metres, so tobacco weed is predominantly spread by water, in the coats of animals and on machinery.

Habitat and distribution

A native of the tropical Americas, tobacco weed grows in fertile soil and in moderate to high rainfall areas of more than 1400 mm per year. Tobacco weed has spread to most tropical regions of the world.

Tropical areas are considered most at risk in Queensland. Currently, the weed is found in the Millaa Millaa area on the southern Atherton Tableland, at Cape Tribulation in far north Queensland, in the Koumala district south of Sarina, and around Teemburra Dam to the west of Mackay.

However it may be possible for tobacco weed to establish and spread in the south-eastern corner of Queensland, particularly in water run-on areas.

Control

Managing tobacco weed

The GBO requires a person to take reasonable and practical measures to minimise the biosecurity risks posed by tobacco weed. This fact sheet provides information and some options for controlling tobacco weed.

Tobacco weed is extremely competitive, with seeds capable of germinating under and growing through a thick healthy *Brachiaria* pasture. Young plants produce a thick cover over the ground, smothering grasses.

Tobacco weed is readily controlled by cultivation and so is unlikely to become a problem in cropping areas; however, it readily becomes a pest in permanent pastures.

Mechanical control

Slashing has been used to switch reproductive plants back to the vegetative mode, to allow treatment with herbicide.

Property hygiene will be a major factor in controlling the spread of tobacco weed. Care should be taken in moving machinery and stock between paddocks, and extreme care taken between properties.

Fire

As no underground buds are produced, fire could kill a significant number of plants and may be a useful tool during the dry season.

Herbicide control

Herbicide recommendations for tobacco weed are detailed in Table 1. It is critical for seedlings to be sprayed before they develop the flowering stem. Careful follow-up monitoring is needed as tobacco weed shows a pronounced ability to regrow after treatment.

Aerial spraying is an option when plants are inaccessible, but every care needs to be taken to prevent drift onto remnant and regenerating rainforest in the margins of the paddocks.

Tobacco weed becomes increasingly difficult to kill with herbicides once the plant has begun to flower (and possibly as early as at the beginning of stem growth). In the far north, the wet season may limit access to pastures and not provide opportunities for control until after seed production has occurred.

More information

For more information contact your local government or visit biosecurity.qld.gov.au.

Table 1. Herbicides for the control of tobacco weed

Situation	Herbicide	Rate	Comments
Agricultural non-crop areas, commercial and industrial areas, forests, pastures and rights-of-ways	Triclopyr 300 g/L + Picloram 100 g/L (e.g. Conqueror, Ken-Zon)	300 mL/100 L 45 mL/15 L knapsack	Spray actively growing plants to point of run-off
	Triclopyr 300 g/L + Picloram 100 g/L + aminopyralid 8 g/L (Grazon Extra)		Add wetting agent as per label recommendations

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

