

Lippia

Phyla canescens



Lippia is a serious environmental and pastoral invasive plant in the Queensland and New South Wales Murray–Darling river system. It is well adapted to floodplains and adjacent areas and is extremely difficult to control.

It has a major environmental impact on riverbanks and waterways, and poses a serious threat to protected wetland areas. Lippia rapidly forms dense carpets, preventing the growth of other riparian vegetation. This results in soil erosion, which decreases bank stability and degrades the overall health and quality of the waterway.

Its thick, woody taproot enables it to rapidly establish and persist in poorly structured soils common to the riparian areas and floodplains of the Murray–Darling Basin. Lippia will also readily establish on bare ground.

It is an aggressive invasive plant and has the ability to outcompete and dominate in pastures, where it can reduce stocking rates by up to 90% and reduce livestock productivity. Lippia also causes problems in cropping situations.

Lippia has been sold as a low-maintenance lawn species and garden ornamental. However, its impacts as an environmental and agricultural invasive plant greatly outweigh any beneficial qualities.



Queensland
Government

Legal requirements

Lippia 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 measures to minimise the biosecurity risks associated with invasive plants under their control.

Local governments must have a biosecurity plan that covers invasive plants in their area. This plan may include actions to be taken on lippia. Some of these actions may be required under local laws. Contact your local government for more information.

Description

Lippia is a broadleaf perennial herb that grows in the summer. It forms a solid, mat-like ground cover with runners that take root at nodes. Leaves are 1–3 cm long and occur in pairs at stem nodes. They have a blunt, serrated edge towards the tip and taper to a short stem. Stems and leaves are greyish-green (canescent) in colour.

Small tubular flowers appear between spring and autumn when soil moisture is favourable, and can be white, cream, pinkish, or pale lilac. The flowers occur in clusters, forming a round flower head when mature. Rounded fruits are 1–1.5 mm in diameter and, when mature, split to release two flat, brown, oval seeds. Lippia is found in the more temperate regions of Australia, particularly in floodplain environments, and prefers heavy clay soils.

Lippia is similar in appearance to its close relative, carpet weed (*Phyla nodiflora*). However, carpet weed has sharp teeth on the leaf tips, a cylindrical mature flower head, and prefers more humid coastal conditions in lighter, sandy soils.

Habitat and distribution

Lippia is a common, well-established invasive plant in the Condamine and Border Rivers catchments in southern Queensland and is spreading across areas of south-east Queensland. It is also present in the Burnett region and throughout the Maranoa–Balonne and Warrego–Paroo catchments.

It is present in varying density within the Murray–Darling Basin system and occurs in all states of Australia, except Tasmania.

Lippia is able to grow from fragments that break off and take root in moist soil. It is primarily dispersed by floodwaters and can also spread via seed, vehicles, machinery, birds and livestock.

The spread of lippia appears to be clearly related to flood events, and a period of significant rainfall and flooding will likely result in an ‘explosion’ in a lippia population. Lippia is also capable of spreading on high ground and in other areas not affected by floodwaters.

Lippia can tolerate drought and frost and can survive long periods of inundation. It readily establishes on bare ground and has the ability to take over large areas of land along waterways and adjacent higher ground.

Control

Lippia is difficult to control. Some conventional control methods are not cost-effective or can be impractical under certain conditions.

The use of only one control method is usually ineffective. Therefore, long-term control is best achieved by using a combination of herbicides, mechanical control and pasture management.

Mechanical control

Short-term control of lippia can be achieved where infestations can be ploughed or harrowed. This method is not practical if lippia is growing in riparian zones (such as creek banks) due to the high risk of erosion and soil loss.

Lippia is not usually a problem in cropping areas as it can be readily ploughed into the soil. However, machinery easily spreads lippia, so it is recommended that machinery working in lippia-infested areas is washed down before leaving that area.

When lippia is actively growing and soil moisture levels are good, herbicides can be used in conjunction with mechanical control to give better results.

Herbicide control

As lippia is a broadleaf invasive plant that occurs in pasture situations, some herbicides can be used to reduce lippia without harming competitive grasses.

There are limited herbicides registered for use on lippia, but there is no herbicide currently available that will effectively suppress the growth of lippia in the long term. Due to its ability to rapidly recover and spread, multiple herbicide applications within a season have been shown to result in better lippia suppression than single applications. However, herbicide control can become very costly in areas that have large lippia infestations.

Herbicide control is not suitable in riparian areas due to the risk of polluting waterways. Also, herbicides should not be applied immediately after rain or if heavy rain is forecast.

Before using any herbicide, always read the directions on the label carefully and use strictly in accordance with the directions.

Pasture management

Productive pastures are essential for long-term lippia control. Healthy and competitive pastures can suppress lippia re-invasion, while heavily grazed pastures will encourage the plant to re-establish.

In degraded pastures, herbicide control may assist in suppressing the growth of lippia. However, this will only provide short-term benefits, as lippia will re-invade the pasture when conditions improve. To help prevent the re-establishment of lippia in degraded pastures, sowing with perennial pasture species is required. Recommended introduced grasses are floren bluegrass, bambatsi grass and purple pigeon grass. A recommended native species is Queensland bluegrass. Re-sown pastures should be maintained and monitored to ensure that any lippia regrowth is suppressed.

As lippia may release allelopathic toxins that can prevent the germination and establishment of other pasture species, it is recommended to allow a lippia-free fallow period of at least two months prior to sowing to allow time for the toxins to disperse.

More information

Contact your local government office for more information or visit biosecurity.qld.gov.au.



Table 1. Herbicides for the control of lippia

Situation	Herbicide	Rate	Comments
Non-crop, rights-of-way	Dichlorprop 600 g/L (e.g. Lantana 600)	5 L/ha	Boomspray using high water volumes—minimum 100 L/ha. For best results spray at flowering. Completely wet all leaves and stems of target plants.
		1 L/200 L water 5 mL/1 L water	Foliar spray (hand gun, knapsack) Completely wet all leaves and stems of target plants.
<p>The use of the following herbicides is permitted under Permit PER10540 (expires 31 July 2026).</p> <p>This permit was issued by the Australian Pesticides and Veterinary Medicine Authority and was in force at the time this publication was prepared. Any person wishing to use a herbicide in a manner approved under this permit must obtain a copy of the relevant permit from the APVMA, read all details, conditions and limitations relevant to that permit and comply with the details, conditions and limitations before use.</p>			
Fallow land	Glyphosate 450 g/L (e.g. Glyphosate 450 Herbicide) + 2,4-D amine 225 g/L (e.g. Amino CT 225) + 1% crop oil	2.6–5.4 L glyphosate + 2.4 L of 2,4-D amine + 1% crop oil	Foliar spray Tank mix Apply when actively growing, preferably during early flowering with good soil moisture. Do not apply immediately after rain or if rain is forecast within four days of the proposed application.
	Glyphosate 450 g/L (e.g. Glyphosate 450) + metsulfuron methyl 600 g/L (e.g. Associate) + 1% crop oil	2.6–5.4 L glyphosate + 15–30 g metsulfuron + 1% crop oil	Glyphosate 450 g/L formulation must not be used for the control of lippia within 20 m of a waterway. If control using glyphosate is needed within this area, Roundup® Biactive, Nufarm® Weedmaster 360 or similar formulations approved for aquatic uses must be used.
	Glyphosate 450 g/L + 2,4-D amine 225 g/L + metsulfuron methyl 600 g/L + 1% crop oil	2.6–5.4 L glyphosate + 15–30 g metsulfuron + 2.4 L of 2,4-D + 1% crop oil	
Pastoral land	2,4-D amine (500 g/L) + 1% crop oil	2–4 L/ha + 1% crop oil	Foliar spray Apply when lippia is in fresh condition, mid-flower and has good soil moisture. Do not apply in dry conditions. Maximum of two applications of 2,4-D per growing season

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

