



# Lippia

## Condamine couch/course

### *Phyla canescens*



## Description

Lippia is a summer-growing, broadleaf perennial herb, which 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 as 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.



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

## The problem

Lippia is a serious environmental and pastoral weed in the Murray–Darling river system in Queensland and New South Wales. 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 weed and has the ability to out-compete and dominate in pastures, where it can reduce stocking rates by up to 90 per cent, and reduce livestock productivity. Lippia also causes problems in cropping situations.

It is suggested that lippia has allelopathic properties, which suppress the growth of other plants and prevent the germination of their seeds. By preventing recruitment of other plants, lippia has the potential to catastrophically reduce the diversity of herbaceous plants.

Lippia has been sold as a low maintenance lawn species and garden ornamental; however, its impacts as an environmental and agricultural weed greatly outweigh any beneficial qualities it has as a lawn or ornamental species.

## Distribution

Lippia is a common, well-established weed 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.

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

## Spread

Lippia is able to grow vegetatively, 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.

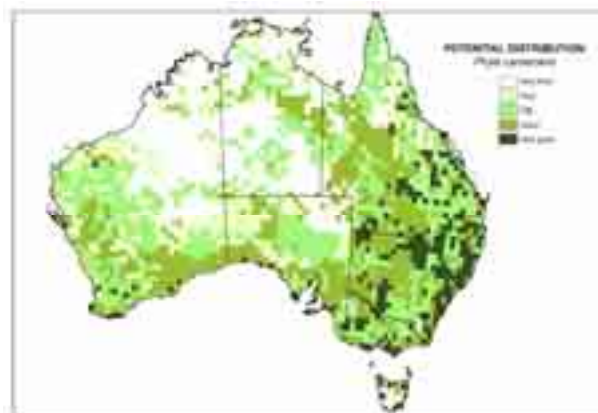
The spread of lippia appears to be clearly related to flood events, and a period of significant rainfall and flooding will likely result in an ‘explosion’ in a lippia population. Lippia is also capable of spreading on high ground and in other areas not affected by floodwaters.

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.

Lippia has the potential to invade large areas of Queensland, and continues to spread throughout the Murray–Darling river systems.

**FIGURE 1 – POTENTIAL DISTRIBUTION OF LIPPIA BASED ON CLIMATE AND SOIL SUITABILITY**



## Control

Lippia is difficult to control and 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 by mechanical methods 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, herbicide can be used in conjunction with mechanical control to give better results.

### Herbicide control

As lippia is a broadleaf weed 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 long-term. Due to its ability to rapidly recover and spread, multiple herbicide applications within a season have been shown to give better lippia suppression than single applications; however, chemical control can become very costly in areas that have large lippia infestations.

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

Before using any herbicide always read the label directions 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 reinvasion, while heavily grazed pastures will encourage the weed 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 reinvade 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: flogen 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.

## Declaration

Lippia is not a declared plant under the *Land Protection (Pest and Stock Route Management) Act 2002*; however, it may be declared under Local Government Law and be included in the Local Government Pest Management Plan.

Declaration requires landholders to control declared pests on the land and waters under their control. A local government may serve a notice upon a landholder requiring control of declared pests.

## Further information

Further information is available from the vegetation management/weed control/environmental staff at your local government.

The following publications are useful references on lippia. *Lippia (Phyla canescens) in Queensland. This can be accessed at: <[www.nrw.qld.gov.au/pests](http://www.nrw.qld.gov.au/pests)>*.

*The distribution and impacts of lippia (Phyla canescens) in the Murray–Darling System. This can be accessed at:*

*<<http://cotton.crc.org.au/Assets/PDFFiles/Reports/Lippia/LipiaMDS.pdf>>*.



TABLE 1 – HERBICIDES REGISTERED FOR THE CONTROL OF LIPPIA

Situation	Herbicide	Rate	Comments
Non crop, rights of way,	600 g/L Dichlorprop E.g. Lantana 600	1 L/200 L water  5L/ha boom (where feasible)	Do not use in areas where desirable broadleaf species are present.  Lippia must be actively growing under good soil moisture.  For effective control, spray at flowering (spray again 6-8 weeks later) and completely wet all leaves.  Other chemicals can be used to burn-off top growth but do not usually control the root system.
<p><b>The following herbicides described are permitted under Permit PER6427 – Qld only and is effective from 14 July 2003 to 31 July 2008.</b></p> <p><b>This permit is issued by the Australian Pesticides and Veterinary Medicine Authority and is in force at the time this publication was prepared. Any persons wishing to use a chemical in a manner approved under 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.</b></p>			
Fallow	Glyphosate (450 g/L) plus 2,4-D amine (225 g/L) and 1% crop oil	2.6 L to 5.4 L glyphosate plus 2.4 L of 2,4-D amine plus 1% crop oil	Apply when actively growing, preferably early flowering with good soils moisture.
	Glyphosate (450 g/L) plus metsulfuron (600 g/L) and 1% crop oil	2.6 L to 5.4 L glyphosate plus 15 to 30g metsulfuron plus 1% crop oil	Do not apply immediately after rain or if rain is forecast within 4 days of the proposed application.  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) plus 2,4-D amine (225 g/L) plus metsulfuron (600 g/L) and 1% crop oil	2.6 L to 5.4 L glyphosate plus 15 to 30 g metsulfuron plus 2.4 L of 2,4-D plus 1% crop oil	
Pasture	2,4-D amine (500 g/L)	2 to 4 L/ha plus 1% crop oil	Apply when lippia is in fresh condition, mid-flower and has good soil moisture. Do not apply in dry conditions.  Maximum of 2 applications of 2,4-D per growing season.

Fact sheets are available from NRW service centres and the NRW Information Centre phone (07 3237 1435). Check our web site <[www.nrw.qld.gov.au](http://www.nrw.qld.gov.au)> to ensure you have the latest version of this fact sheet. The control methods referred to in this Pest Fact 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 utilisation 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, the Department of Natural Resources and Water does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.