African lovegrass

Eragrostis curvula

A native of southern Africa, African lovegrass was probably first introduced to Australia by accident as a contaminant of pasture seed. Different cultivars of African lovegrass have also been used as a soil stabiliser in erosion-control situations.

African lovegrass has been planted in different locations throughout south-east Queensland and has naturalised in all Australian states in acidic, red and especially sandy soils.

African lovegrass produces vast quantities of seeds, which quickly develop into a large viable seed bank, making the plant very difficult to eradicate. African lovegrass is extremely competitive with other pasture species and is an aggressive invader, quickly overtaking sparse, overgrazed or poor-quality pastures, particularly in sandy soils.

African lovegrass can form dense monocultures up to 1.2 m high. This can create large fuel loads in the dry months, posing a fire hazard and creating competition with native species regeneration.

Queensland Government

Legal requirements

African lovegrass 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 African lovegrass. Some of these actions may be required under local laws. Contact your local government for more information.

Description

African lovegrass is a densely tufted, perennial species that can grow up to 1.2 m in height. The plant is generally erect, but stems may bend at the lower nodes—the whole plant often adopts a weeping habit.

The narrow leaf blades are of varying lengths and are coloured bright green to blue-green. Leaves are generally hairless, tough to break and have distinct parallel veins.

The young flower head may be compact but then spreads, and seed heads can be up to 30 cm long. Spikelets/seeds have the typical overlapping herringbone feature of all *Eragrostis* species.

The robust, tufted leaf blades are supported by a fibrous root system contained mostly in the top 50 cm of soil.

A distinguishing feature of African lovegrass is that the basal sheaths (surrounding its crown at ground level) have very fine silky hairs.

Habitat and distribution

African lovegrass is mainly found along roadsides, railway lines and other neglected areas where it favours acidic and light, sandy soils. However, it has encroached onto adjacent degraded pastures causing a reduction in preferable pasture species.

While African lovegrass is not generally considered a problem in western areas of Queensland due to its lack of drought tolerance and lower seed-bank viability, it does occur in areas such as Charleville, Quilpie and Winton.

African lovegrass reproduces by seed, producing thousands at a time.

Visit the Weeds Australia website at https://profiles.ala.org.au/opus/weeds-australia for the most up-to-date distribution in Queensland.

Methods of spread

Slashing of roadsides is a common method of dispersal for this plant, as the seed is easily transported by machinery and motor vehicles. Other dispersal methods are attachment on the fur and hooves of animals, and as a soil and grain contaminant.

Recent studies have shown that cattle feeding on African lovegrass can excrete viable seed up to 10 days after consumption.

African lovegrass generally grows in summer. However, it has the ability to go to seed at any time of the year provided there is enough moisture and temperatures are high enough.

There is concern that African lovegrass is spreading into more fertile areas of southern Queensland and invading pasture, lucerne and summer-cropping areas.

Control

Management strategies

Control of African lovegrass is not easy and requires an integrated approach in overall pasture management.

Before using any control method, correct identification of African lovegrass is important to distinguish it from the many native *Eragrostis* species. Once identification is confirmed, effective control of African lovegrass depends on preventing seed spread and whether the land affected is arable or non-arable—both situations require an integrated land management program.

Prevention of spread to clean areas and control of new infestations is the best option for African lovegrass. Any plants should be destroyed before they set seed.

Preventative measures include the following:

- Ensure that any fodder, stock, soil or produce purchased, and any vehicles entering your property, are free of weed seeds.
- Request a weed hygiene declaration.
- Do not allow stock in pastures of seeding African lovegrass.
- Avoid ploughing, grading or disturbing soil to allow better growth of competitors and new pasture.
- Continue monitoring the property for new infestations and regrowth.

Mechanical control

Any physical disturbance of African lovegrass, such as slashing and ploughing, can promote spread and re-infestation. Therefore, if mechanical practices are necessary they must be carried out carefully and with clean equipment, which must be cleaned after use.

Scattered African lovegrass plants can be chipped out before they flower. Better results will be achieved if chipping out is followed by over-sowing and fertilising the area. When chipping out the plant ensure that the tussock crowns are removed, as this will prevent regrowth. If in seed, the stems must be cut and bagged first.

Herbicide control

Before using any herbicide always read the label carefully. All herbicides must be applied strictly in accordance with the directions on the label. Also note that some herbicides require a withholding period. If the addition of a wetting agent is recommended, always use a commercial wetting agent or surfactant. Details of herbicides for the control of African lovegrass are listed in Table 1.

A foliar application should be sprayed when the plant is green and actively growing. Residual herbicides are best applied from July to December, as this will help stop seed set in the following summer. Flupropanate symptoms on African lovegrass may take over three months to show effect and up to twenty-four months to kill the plant. Always observe and adhere to the grazing withholding periods.

Fire and herbicide management

Appreciable levels of African lovegrass control have been observed in southern states of Australia when integrating a burning regime followed by an herbicide treatment onto the fresh regrowth. Burns should be undertaken in late Autumn, early Spring to maximise the highest burn intensity whilst maintaining a safe working environment. Herbicides are then applied to the fresh regrowth two to three months later.

Biological control

As part of a project led by AgriFutures Australia, the New South Wales Environmental Trust is providing a cash contribution to target a biological program on African lovegrass. This is a component of the national project 'underpinning agricultural productivity and biosecurity by biological control' supported by the Australian Government program Rural Research and Development for Profit (RRnD4P) (Round 4) being administered by the Department of Agriculture, Water and the Environment. The activities included surveys in southern Africa for natural enemies associated with African lovegrass and the testing of promising natural agents against African lovegrass.

Pasture management

African lovegrass is palatable to stock when it is young. However, it does go to seed very quickly, forming a fibrous and tough tussock making it difficult to digest once it's dry.

Heavy grazing of African lovegrass while it is young and succulent is recommended, as this is when it is the most palatable and nutritious to stock.

The older growth has low palatability and is usually avoided by animals. It will only be eaten once all other pasture has been consumed.

It is thought that as long as African lovegrass is kept short, protein content can be as high as 20%. Maintaining a healthy pasture will help reduce the chances of a infestation. Keep bare patches of ground to a minimum, as it will quickly establish in these areas.

As cattle can spread viable seed, it is advisable to either prevent cattle from grazing on African lovegrass while it is in seed, or to quarantine stock before moving to clean paddocks.

Re-sowing of desirable pasture species may be an option in small areas that are heavily infested.

More information

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

Table 1. Herbicides for the control of African lovegrass

Situation	Herbicide	Rate	Comments
Pasture, non-crop and right-of-way areas	Glyphosate (360 g/L) e.g. Weedmaster® Duo	100 mL/10 L water	Spot spray only Apply to actively growing plants
		6 L/ha and re-plant	Use in areas where pasture is being re-sown
	Glyphosate (540g/L) e.g. Roundup PowerMax	67 mL/10 L spot spray	Consult label for details
	Glyphosate (other formulations)	Refer to label for rate, or calculate rate by the formula: 100 x 360/xxx mL/10L, where xxx is the strength of the formulation you are using in g/L	
Commercial and industrial areas, around agricultural buildings, rights-of-way including roadsides, around guide posts, railways, power lines and telephone lines	Sulfometuron-methyl 750g/kg (e.g. Mojo, Mako)	400 or 800 g/ha 40 or 80 g/100 L 6 or 12 g/15 L Plus glyphosate as a tank mix at label rates	Boom spray Handgun knapsack Consult labels for details
Grass seed crops	Atrazine 500 g/L (e.g. Atrazine 500 SC)	4.5–6.0 L/ha/year	Pre-emergent. Consult label for details. Annual limits apply to atrazine application.
	Atrazine 600 g/L (e.g. Gesaprim 600 SC)	3.7–5.0 L/ha/year	
	Atrazine 900 g/kg (e.g. Atradex WG)	2.5–3.3 kg/ha/year	

Table 1. Herbicides for the control of African lovegrass (continued)

Situation	Herbicide	Rate	Comments
Sorghum, broom millet, saccaline, and forage sorghum, dryland and irrigated	Atrazine 500 g/L (e.g. Atrazine 500 SC)	Rate depends on control technique and situation	Pre-plant, pre-emergence or post emergence. Rate depends on control technique and situation. Consult label for details. Annual limits apply to atrazine application.
	Atrazine 600 g/L (e.g. Gesaprim 600 SC)		
	Atrazine 900 g/kg (e.g. Atradex WG)		
Established turf	Prodiamine 480 g/L (e.g. Barricade)	2–3 L/ha	Apply prior to emergence in early spring. Consult label for details.
Turf	S-Metalochlor 960 g/L (e.g. Pennmag Turf Herbicide)	2 L/ha or 20 mL/ 100 m^2	Apply prior to weed emergence as per label instructions.
Garden beds (under mulch) and potted plants in nurseries, public open spaces and residential or commercial gardens	Prodiamine 480 g/L (e.g. Barricade)	4–6 L/ha	Apply prior to weed emergence for residual control. Consult label for details.
Container and in-ground ornamental plants	Oxyfluorfen 20g/kg + oryzalin 10 g/kg (e.g. Rout Ornamental Herbicide)	100 kg/ha or 1 kg/ 100 m^2 or 10 g/m^2	Apply granules evenly as per label instructions
Pastures and non-crop situations	Flupropanate 745 g/L (e.g. Taskforce or Apparent Rocky 745 Herbicide)	300 mL/100L 3 L/ha	Spot spraying Boom spray
	Flupropanate 745 g/L (e.g. Taskforce or Apparent Rocky 745 Herbicide)	22.5 kg/ha 2.25 g/m^2	Apply February to December, ideally during the vegetative stage of growth to allow sufficient time for herbicide to take effect prior to flowering. Ground or aerial application Spot application
Various See APVMA Minor Use Permit 9792 for details	Regisitered products Containing: 745 g/L Flupropanate present as the sodium sal tas their only active constituent	Various See APVMA Minor Use Permit 9792 (expires 30/11/25) e.g. 150–300 mL/100L 1.5– 3 L/ha 500 mL/10L	APVMA Minor Use Permit 9792 (expires 30/11/25) See general advisory notes and critical use comments on page 13 and 14. See specific critical use comments for flupropanate on page 15 and 16. See *withholding periods for flupropanate on page 22. Spot spraying Boom spray Wick wiper/blanket wiper
Various See APVMA Minor Use Permit 9792 for details	Registered products Containing: glyphosate 360g/L or 450g/L or 540g/L	Various See APVMA Minor Use Permit 9792 for details	See APVMA Minor Use Permit 9792 (expires 30/11/25)
Various See APVMA Minor Use Permit 9792 for details Tank mixes can only be use in situations listed for both herbicides	Tank mixes of registered products Containing: 745 g/L Flupropanate and registered products Containing: glyphosate 360g/L or 450g/L or 540g/	Various See APVMA Minor Use Permit 9792 for details	See APVMA Minor Use Permit 9792 (expires 30/11/25). Tank mixes can only be used in situations listed for both herbicides. See general advisory notes and critical use comments on page 13 and 14. See specific critical use comments for flupropanate on page 15 and 16. See *withholding periods for flupropanate on page 22.

* Withholding period Flupropanate Broadacre: DO NOT graze or cut for stock food for at least four months after application. Spot spray: DO NOT graze or cut for stock food for at least 14 DAYS after application. Stock are not to be grazed in treated areas for at least 14 DAYS prior to slaughter. DO NOT graze lactating cows or goats in treated areas.

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

01/24