

African lovegrass

Eragrostis curvula



Photo courtesy of Taroom Shire Landcare Inc.



A native of southern Africa, this grass was probably first introduced to Australia by accident as a contaminant of pasture seed. Different cultivars of this grass 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. It 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

Declaration details

African lovegrass 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 reflected in the local government area pest management plan.

Landholders are required 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.

Description and general information

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.

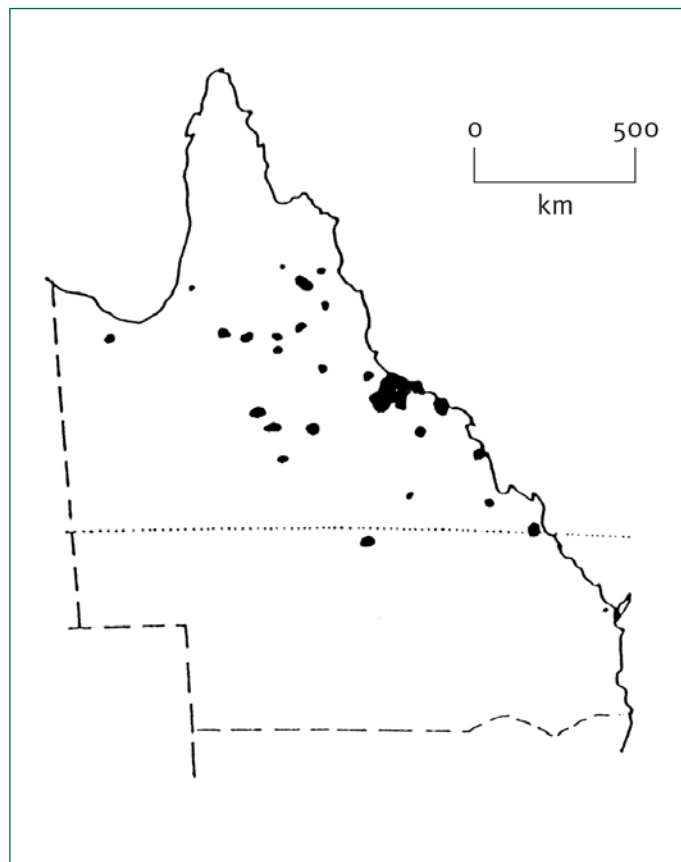
Habitat and distribution

Infestations of African lovegrass are found throughout the Burnett, Darling Downs and Granite Belt regions of Queensland; however, it has also been recorded in the pastoral districts of Leichhardt, Wide Bay, Maranoa, Port Curtis, Moreton and Warrego. It has the potential to spread widely.

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.

Figure 1 Distribution of African lovegrass



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

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 also 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 also 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 registered for the control of African lovegrass are listed in Table 1 (overleaf).

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.

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 lovegrass infestation. Keep bare patches of ground to a minimum, as lovegrass 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.

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland (call 13 25 23 or visit our website at www.biosecurity.qld.gov.au).

Table 1 Herbicides registered for the control of African lovegrass

Situation	Chemical	Rate	Comments
Pasture, non-crop and right-of-way areas	Glyphosate (360 g/L) e.g. Weedmaster® Duo	10 ml/1 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	33–66 ml/10 L spot spray	Refer to label for specific instructions.
Grass seed crop	Atrazine (500 g/L)	4.5–6.0 L/ha/year	Foliar spray
		Pre-emergent	Follow label instructions
Sorghum	Atrazine (500 g/L)	3.6 L/ha/year	Foliar spray
		Pre-emergent	Follow label instructions
<p>The following herbicide described is permitted under permit PER11837 (Queensland only), which expires 30 September 2015.</p> <p>This permit is issued by the Australian Pesticides and Veterinary Medicine Authority (APVMA) 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.</p>			
Pasture and non-crop areas	Flupropanate (745 g/L)	2–3 ml/1 L (spot spraying) 2–3 L/ha (ground and aerial application)	<p>Use lower rates on sandy soils.</p> <p>Avoid use in drought conditions.</p> <p>The is a withholding period for this herbicide that requires that livestock be removed from treated pasture and moved to untreated pasture at least 14 days prior to slaughter, on an <u>indefinite basis</u>.</p> <p>Please refer to the label for more information.</p> <p>Additional advice should be sought from the product manufacturer on appropriate withholding periods which apply to milk producing animals moved off flupropanate treated areas prior to commencement of lactation.</p>

Fact sheets are available from Department of Employment, Economic Development and Innovation (DEEDI) service centres and our Customer Service Centre (telephone 13 25 23). Check our website at 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, DEEDI does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.