

# Weeping Love grass – *Eragrostis curvula*

Weeping Love grass is a summer growing perennial forage crop producing dense tufts. This grass is used for pasture and hay production. The drooping leaves, mostly concentrated at the base of the plant, together with the extensive root system, makes Weeping Love grass ideal for combating wind erosion, stabilization of road verges and terraces and growth in water discharge areas. This grass is best adapted to areas where the annual rainfall is 650 mm per annum, but can survive in areas with an annual rainfall as low as 550 mm per annum.



### Strengths

- 6 15 t DM/ha/season
  Depending on environmental conditions and management
- Strong Perennial
- Grows on soils with low-fertility
- Establishes easily
- Good cold tolerance
- Valuable in erosion control
- Long growing season

### Limitations

- Not adapted to heavy clay soilsNutritive value declines rapidly
- following the initiation of flowering
- Intolerant of long-term water logging
- Requires average to high rainfall



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# What can it be used for?

Hay:	Good quality hay can be produced and should be cut before initiation of the flowering stage.
Grazing:	Weeping Love grass provides excellent grazing when grazed in early spring.
Cover Crop:	Weeping Love Grass is included in cover crop blends for long term erosion control. It stabilizes the soil aggregate stability and builds organic material in the soil.

**Production potential:** The average production ranges between 6 – 15 t DM/ha/season. In more favourable environments yields of 20 - 30 t DM/ha/season can be achieved. This depends on soil fertility, environmental conditions and cutting frequency<sup>(2)</sup>.





#### Metabolic disturbances in animals on cultivated pastures:

No toxicities have been recorded

## <u>Establishment</u>

**Climate:** Optimal growth occurs between 17 and 32 °C, with some growth still taking place at 7 °C. It is very frost tolerant and can survive temperatures as low as -20 °C (assuming proper management)<sup>(2)</sup>.





- Moisture: Under dryland conditions, optimal production requires at least 650 mm per annum, but can be successfully cultivated in areas with rainfall as low as 550 mm per annum.
- Soil: Performs well on well drained, acid sandy to loamy well drained soils. For optimal growth, the ideal soil pH (KCI) is above 5, but it grows well in soils with a pH as low as 4.5. It can also tolerate acid saturation levels as high as 50%. It is susceptible to iron deficiency on calcareous soils.
- **Fertilization:** Weeping Love grass is tolerant of soils with low fertility, but productivity is severely compromised. A soil analysis before establishment is essential <sup>(1, 2, 3)</sup>.

	N (kg/ha)	P (mg/kg soil)	K (mg/kg soil)			
Requirement for establishment***	20-40*	12-20	80-120			
Seasonal application (kg/ha)	80-220**	Use removal rates				
Production - Removal rates (kg/ton):						
Good quality fodder	21	1.8	17			
Average quality fodder	14	1.2	11.6			
Poor quality fodder	9	0.9	8.8			

\*Fertilizer just after establishment (kg/ha)

\*\*Selected rate should maximise profit

\*\*\*Determined by production potential

Phosphorus (P) and Potassium (K) can be recycled back to pastures when grazed by animals. This is dependent on the grazing system and the type of animals used. Up to 40% of P and 90% of K can be recycled <sup>(5)</sup>. It is however necessary to do annual soil analysis to determine the level to which recycling occurred. The difference should be fertilized.





Methods:Establish on a firm, fine, weed free seed bed. Consolidating (rolling)the seedbed after sowing/planting will ensure good seed-soilcontact and subsequently better germination and establishment.

#### Our prescribed seeding rate:

Rows <sup>(1,2)</sup>		Broadcast <sup>(1,2)</sup>	
Uncoated	AgriCOTE®	Uncoated	AgriCOTE®
7-10 kg/ha	10 kg/ha	7-10 kg/ha	10-15 kg/ha

Under ideal environmental conditions, combined with excellent seedbed preparation and equipment, the seeding rate of uncoated seed can be lowered.

Planting time: Optimal establishment periods are between October and February (or as soon as average minimum soil temperatures exceed 16°C), whenever rainfall is the most reliable.

### **Management**

**Utilisation:** Cutting at the onset of flowering stage provides optimal yield and quality. If grazed, it should be done early in spring or 2-3 weeks after cutting (depending on rainfall).

# **Cultivars**

### Ermelo

The most common cultivar cultivated in South Africa is Ermelo. It is very leafy and more palatable than natural ecotypes. It also has a longer growing season.





## **Resources**

- 1. Pasture Handbook, Kejafa Knowledge Works, ISBN 0-620-31994-1
- 2. Tropical Forages http://www.tropicalforages.info/key/Forages/Media/Html/Eragrostis\_curvula.htm
- Feedipedia Animal feed resources information system Weeping Love grass (*Eragrostis curvula*) <u>http://www.feedipedia.org/node/441</u>
- 4. FAO http://www.fao.org/AGP/AGPC/doc/Gbase/Safricadata/eragcur.htm
- 5. Dannhauser CS. 1991. Die bestuur van aangeplante weiding in die somerreënvaldele, vol. 1. Warmbad
- 6. SANSOR http://sansor.org/sub-tropical-grasses/
- Truter, WF. Dannhauser, CS, Smith, H. and Trytsman, G. 2014. *Eragrostis curvula* (Weeping lovegrass). Integrated Crop and Pasture-based livestock production systems. Conservation Agriculture – Part 2. SA Grain. ISSN 1814-1676. Page 45-47.

