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Couch/ Bermuda grass – *Cynodon dactylon*

Couch/ Bermuda grass is a strong perennial grass which has both stolons and rhizomes. Couch grass can be used as a cover crop in orchards and used for erosion control purposes. This grass produces good quality hay, grazing and foggage. This grass is best adapted to areas where the annual rainfall varies between 600mm and 1750mm.



Strengths

- 5 – 12 t DM/ha/season
Depending on environmental conditions and management
- Perennial species
- Palatable when fertilised
- Widely adapted to varying soils and climate
- Can tolerate heavier grazing
- Tolerant of salinity
- Tolerant of flooding
- Excellent ground cover for soil conservation

Limitations

- Low production yields unless well fertilised
- Can become a weed in cultivation
- Difficult to eradicate

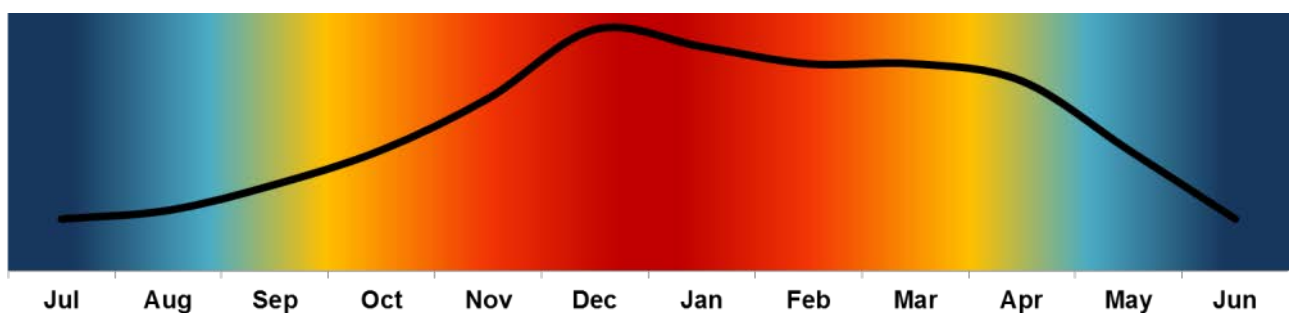


What can it be used for?

- Grazing:** Quality is maintained by grazing regularly.
- Hay:** Dries rapidly after cutting and produces hay of good quality.
- Foggage:** Couch grass retains its quality during winter (while dormant). Strip-grazing during this time ensures optimum use.
- Cover Crop:** Couch grass is including in a cover crop blend for long term erosion control. It stabilises the soil aggregate stability and builds organic material in the soil. The adaptability to saline soil conditions in the soil and the ability to extract heavy metals from the soil, makes Couch grass popular in rehabilitation.
- Turf Grass:** Couch grass is a popular turf grass due to the fine texture and drought tolerance.

Production potential: The average production range from between 5 – 12 t DM/ha/season. This depends on soil fertility, environmental conditions and frequency of utilisation. If well managed, 3 – 4 cuts of hay can be achieved per season ^(1, 2).

Rejuvenate by ploughing or discing when sod-bound



Relative growth curve of an established Couch/ Bermuda grass stand - one year cycle

Metabolic disturbances in animals on cultivated pastures:

Prussic acid poisoning: Couch grass is inherently capable of causing prussic acid poisoning. Hydrogen cyanide can reach toxic levels in stressed (drought stressed or fresh regrowth) plants.



SEED



SEED TREATMENT



FORAGE

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LAND REHABILITATION



COVER CROPS



Advance Seed

Establishment

- Climate:** Optimal growing range for Bermuda/ Couch grass is 17 – 35 °C. Growth is slower below 15 °C. It is very frost tolerant.
- Moisture:** Minimum rainfall required for production is 600 mm per annum, but can survive in areas with rainfall as low as 400 mm per annum.
- Soil:** Bermuda/ Couch grass grows on a wide range of soils, but grows best in relatively fertile, well-drained soils. Adapted to a soil pH (KCl) of 4.5 - 8.5. It is not tolerant to high aluminium saturation but shows good tolerance to salinity.
- Fertilization:** It has a high fertility requirement for good production. A soil analysis before establishment is essential ^(1, 2, 3).

	N (kg/ha)	P (mg/kg soil)	K (mg/kg soil)
Requirement for establishment***	20-40*	15-20	100-120
Seasonal application (kg/ha)	60-220**	Use removal rates	
Production - Removal rates (kg/ton):			
Good quality fodder	25	3.2	22.9
Average quality fodder	16	2.2	19
Poor quality fodder	10	1.4	16

*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 ⁽⁵⁾. It is however necessary to do annual soil analysis to determine the level to which recycling occurred. The difference should be fertilized.

- Methods:** Seed into a firm, fine, weed free seed bed. Consolidating (rolling) the seedbed after sowing/planting will ensure good seed-soil contact and subsequently better germination and establishment.



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Our prescribed seeding rate:

Forage:

Rows ^(1,2)

Broadcast ^(1,2)

Uncoated	AgriCOTE®	Uncoated	AgriCOTE®
7-10 kg/ha	10 kg/ha	7-10 kg/ha	10-15 kg/ha

Turf Grass:

25 – 30 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 temperature exceeds 16°C), whenever rainfall is the most reliable.

Management

Utilisation:

Frequent grazing and N application will optimise the quality of the stand. Cutting for hay or silage is optimal at a pasture height of 30-40 cm (or at the onset of flower initiation). Cutting height of 5-10 cm is ideal. This will optimize yield and regrowth of the stand. Sward density can be used as indicator for production potential.

Resources

1. Pasture Handbook, Kejafa Knowledge Works, ISBN 0-620-31994-1
2. Tropical Forages - http://www.tropicalforages.info/key/Forages/Media/Html/Cynodon_dactylon.htm
3. Feedipedia - Animal feed resources information system – Couch/ Bermuda grass (*Cynodon dactylon*) - <http://www.feedipedia.org/node/471>
4. FAO - <http://www.fao.org/ag/agp/AGPC/doc/Gbase/data/Pf000208.htm>
5. Dannhauser CS. 1991. Die bestuur van aangeplante weiding in die somerreëval-dele, vol. 1. Warmbad
6. SANSOR - <http://sansom.org/sub-tropical-grasses/>



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