Prairie grass

Technical Note F22

Management level	★★★
Yield	★★★★
Quality	★★★★
Water use efficiency	★★★
Reliability	★★★
Versatility	★★★

Where ★★★★★ is the highest rating.

Purpose

Prairie grass is an alternative to ryegrass on fertile well drained soils as it does not tolerate pugging by stock. It can be annual in the subtropics, but about 2/3 of plants will persist into the second year and the sward can self seed from year to year if the sward is grazed fairly lax (leaving a few seedheads) from November onward at 3 week intervals. The grass performs better at the lower latitudes of the subtropics.

Establishment

Prairie grass establishes best into a prepared seedbed because it is slower to establish than ryegrass. Ideally it should be sown in late March as it is less tolerant to cold at establishment than ryegrass. It can be direct drilled into a 'clean' site during March and April at 40 - 60 kg/ha. Use harrows and roll. Prairie is not suited to over sowing.

Prairie grass should self seed each year germinating in February and March. If pasture becomes infested with summer grasses, spray the area with 2 - 3 L/ha of glyphosate in early/mid February. This will allow shed seed to rejuvenate the pasture. Whilst prairie grass plants will also be killed, the seed will be unaffected and germinate in autumn.

Water use

Need approximately 6 ML/ha of irrigation although this varies between season and region. Preferably apply water each 3 days during establishment.

Location	ML/ha
Allora	6.0
Beaudesert	6.2
Gatton	7.0
Gympie	5.1
Monto	7.7

Irrigation requirements for prairie grass based on average evapotranspiration rates less rainfall for 12 months (1970 to 2007).

Nutrient requirements

Nutrient requirement	N	P	K
Nutrient (% DM)	3.7	0.5	2.4
kg applied (/ha)	370	48	240

Typical mineral content of prairie grass when vegetative and requirements to produce 10 t DM/ha yield.

Diseases and pests

There are few pests of importance, and grazing often is sufficient for control. Army worms may invade pasture.

Growth and grazing

In the first year grazing occurs in 8 - 10 weeks. In subsequent years light grazing continues during establishment. A rotational grazing system is essential, using a front and back fence. Normally pasture is grazed when 3 - 4 leaves have been produced per tiller, and to a residue of approximately 15 cm.

Grazing is managed to allow seed set during November, allow 6 - 8 weeks interval commencing in October to form a senescent mat and to allow seed set and shed. In practice the grazing rotation varies from 20 - 40 days.

Pasture yield is typically in the range 8 - 14 t DM/ha. Often higher yields are the result of later grazing in spring and early summer.

Nutrient quality

Forage quality is high, with similar CP and NDF to ryegrass during the cooler months.

Quality (% DM)	Average	Min	Max
Crude protein	23.5	18.2	28
Starch	5.2	-	-
Sugar	4	1-2	8
NDF	48	44	51.7
Fat	4	3.2	4.9
ME (MJ/kg DM)	11.1	9.7	10.5
DM (%)	27.8	24.5	30.6

Range in forage quality for prairie grass

Weeds

Similar to ryegrass.

Animal health

Similar to ryegrass. Prairie grass may be low in magnesium content and if cows graze prairie continually, it is recommended they be supplemented with magnesium.

Silage and hay

As for ryegrass.

Further information

Contact the DAFF Customer Service Centre by Phone 13 25 23, or
Email callweb@daff.qld.gov.au

More technical notes can be found at:
www.dairyinfo.biz

Lake (1995). Dairying Technical handbook.

New South Wales Department of Primary Industries, Agnote DPI-286. (2004).

Callow et al. (2013) Successful Dairy Production in the Sub-Tropics

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