

Millet

Technical Note F15

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

Where ★★★★★ is the highest rating.

Varieties

There are three distinct types, not crossed, and open pollinated millets:

1. Temperate millets (*Echinochloa* spp.) include Japanese, Shirohie, Siberian.
2. Forage pennisetums (*Pennisetum glaucum*, pearl millet) can be open pollinated (Tamworth, Katherine) or hybrids (Nutrifeed).
3. *Setaria* (*Setaria italica*) are tall types (Panorama)..

Establishment

All small seeded, require even, fine seedbed. Zero till possible if not compacted and clear of trash. Suited to light to heavy soils, but not crusting. Avoid the cultivar Nutrifeed on heavy soils. Temperate millets Japanese and Shirohie establish early (10 cm soil temperature above 14oC) and grow quickly (graze 60 to 70 days). *Pennisetum* and Siberian require soil temperature above 19oC. *Pennisetum* has a longer vegetative growth phase. Plant at 8 - 10 kg seed/ha dryland and 12 - 15 kg seed/ha irrigated, 3 cm deep and 18 cm row spacing. Press wheels beneficial, 4 - 8 kg/cm.

Soil fertility

Prefer high fertility soils, apply 5 - 10 kg P/ha if needed when P < 25 mg/kg, Colwell test). Recommended to apply 30 - 50 kg N at planting, similar rate after grazing for regrowth.



Diseases

Millet is generally resistant to most diseases. Late plantings of temperate millets may fail due to the stem boring shoot fly or maize sterile stunt virus.

Growth and grazing

Graze at 20 - 30 cm tall (temperates) and 40-60 cm (*pennisetum*). Expect dry matter yield in the order of 50 - 70% that of forage sorghums, but generally higher in quality. Temperate millets expected yield is 3 - 6 t DM/ha dryland, *pennisetums* 6 - 12 t DM/ha dryland or 12 - 15 t DM/ha when supplemented with irrigation. At optimum grazing height expect 15 - 17% CP and 9.5 MJ ME/kg DM.

Temperate millets often have just one main grazing whilst *pennisetums* will regrow multiple times if not grazed below 20 cm stubble.

Nutrient quality

Quality (% DM)	Average	Min	Max
Crude protein	6.8		
Starch	4.3		
Sugar	-		
NDF	65.6		
Fat	1.5		
ME (MJ/kg DM)	7.8		
DM (%)	91.2		

Animal Health

Unlike sorghum, millet plants do not accumulate prussic acid. Nitrate poisoning is possible in lush, heavily fertilised crops. Nutrifeed is sometimes unpalatable, maybe linked to dry conditions and high soil fertility.

Silage

Suit as opportunity silage crops, cut at milky dough stage. Sometimes used as specialist hay crops, under irrigation, and cut just before early head emergence.

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

Collett I.J. (2004). Forage Sorghum and Millet. New South Wales government fact sheet.

Kaiser et al. (2003). Successful Silage. TopFodder.

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Stuart P. (2002). Forage Book.

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

The project is funded and supported by the Department of Agriculture, Fisheries and Forestry and Dairy Australia.

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