



A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

Forage oats

Scientific name(s)

Avena sativa

Strengths

- Fast establishing autumn-winter growing fodder crop with high feeding value
- High leaf to stem ratio
- Opportunities for silage/hay/grain production

Limitations

- Susceptible to pugging; avoid grazing if waterlogged - regrowth will be compromised

Plant description

Plant: tufted annual grows to nearly 2m tall

Stems: Stout hollow culm with conspicuous nodes

Leaves: flat & narrow and veined; taper to a fine point. Rolled in bud

Seedhead: large pendulous spikelet, 15-30 mm long; 2-3 florets

Seeds: ~50,000/kg

Pasture type and use

Sown in autumn for winter milk. Some varieties suited to multi-uses - e.g. high quality hay export/grain production.

Often used to provide weed control and soil preparation prior to renovating with perennial pasture. Robust so often used as a pioneer crop on new land.

Where it grows

Rainfall

> 400 mm

Soils

Well drained. Tolerates a broad pH range.

Temperature

Avoid sowing when soil temperature <12°C or >25°C

Establishment

Companion species

Legumes: clovers, peas, vetch, medics

Sowing/planting rates as single species

Sow into a cultivated seedbed to a depth of 35-70 mm at 25 - 120 kg/ha depending on soil type/region and expected rainfall.

Sowing/planting rates in mixtures

15 - 50 kg/ha

Sowing time

Sow late summer/early Autumn. Can be sown dry (sow >50 mm).

Inoculation

Not applicable.

Fertiliser

Sow with 10 kg P/ha. If using MAP/DAP sow separately from the seed.

Management

Maintenance fertiliser

35-70 kg N/ha, ensure P, K, S, Zn are adequate

Grazing/cutting

Graze prior to stem elongation. Leave 12 cm residues/lowest stem node. Repeat grazings after a month's recovery. Where yield is high it is usually strip-grazed by dairy cattle along a long front - to minimize trampling losses. A back fence may maximise regrowth.

Seed production

Widely cultivated grain crop. Prolific seed set if not kept grazed or cut.

Ability to spread

Regenerates from self-sown seed.

Weed potential

Dropped seed may see plants regenerate for a season or two.

Major pests

Cereal cyst nematode, stem nematode, red-legged earth mite, snails, cereal aphid (re BYDV transmission), cutworms, webworm, lucerne flea, army worm, Bruobia mite, wingless grasshoppers and Australian plague locust

Major diseases

Leaf rust, stem rust, Septoria blotch, bacterial blight, barley yellow dwarf virus, halo blight, stripe blight, powdery mildew

Herbicide susceptibility

glyphosate

Animal production

Feeding value

Winter feed typically 70% digestibility, 7-8% crude protein.

Palatability

Readily acceptable

Production potential

Up to 7 t DM/ha by spring where moisture is available and soil fertility is good

Livestock disorders/toxicity

Young plants can accumulate a high level of nitrates and lead to nitrite poisoning, especially in cattle. Slow growth, hot dry conditions or frost/hail damage can elevate nitrate level.

Cultivars

A great number of oat cultivars are available. Some are bred for hay, grazing/hay or grazing/grain. Current grazing cultivars include those listed below

Maturity	Cultivar	Seed source/Information
Early	Yiddah [Ⓟ]	GRDC/NSWDPI
Early/Medium	Brusher [Ⓟ]	SARDI
Medium	Volta [Ⓟ]	QDPI&F Heritage Seeds
	Drover [Ⓟ]	Pacific Seeds
Medium/Late	Outback	Seed Distributors
	Graza 51 [Ⓟ]	Austgrains Pty Ltd
	Panfive	Panorama seeds, Pittworth, Qld
Late	Nugene [Ⓟ]	QDPI&F Heritage Seeds
	Targa [Ⓟ]	TDPIW
	Moola	Queensland Agricultural Seeds Pty Ltd
	Graza 80 [Ⓟ]	Austgrains Pty Ltd
	Dawson [Ⓟ]	Pacific Seeds
	Riel [Ⓟ]	Queensland Agricultural Seeds Pty Ltd
	Taipan [Ⓟ]	Pacific Seeds
	Enterprise [Ⓟ]	Heritage Seeds
	Genie [Ⓟ]	QDPI&F/Heritage Seeds
	Galileo [Ⓟ]	Heritage Seeds
	Bass [Ⓟ]	TDPIWE

[Ⓟ] Denotes that this variety is protected by Plant Breeder's Rights Australia

Further information

Weblinks:

QDPI&F - Forage oats variety guide 2009

NSWDPI - Dryland Forage Oats: Guide to dry matter production and consumption

VicDPI - Oats

Acknowledgements

DPIs and Seed companies

Author and date

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