



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

Rape, Radish and Hybrid rape

Scientific name(s)

Brassica napus var. *napus* - rape

Raphanus sativus - radish

"Hybrid rapes" represent various *Brassica* interspecific crosses

Strengths

- Vigorous summer growing fodder crop with excellent feeding value; high leaf:stem.

Limitations

- Sensitive to several common insect pests

Plant description

Plant: leafy, plant 0.6-1.2 m tall; deep tap root, no bulb. Some varieties regrow to allow 1-3 repeat grazings

Leaves: large, flat leaves, 30-50 cm long and 20-40 cm wide; yellow, cross-shaped flowers with four petals; and all produce sickle shaped pods containing tiny round seeds.

Seedhead: yellow, cross-shaped flowers with four petals; produce sickle shaped pods

Seeds: pods contain tiny round seeds

Pasture type and use

Sown in spring adjacent to a run-off pasture to provide summer grazing in ~3 months time. Often used to provide weed control and soil preparation prior to renovating with perennial pasture. Also useful as a break crop after cereal.

Where it grows

Rainfall

>600 mm or irrigation

Soils

Tolerates a broad pH range. Rape is more tolerant of low soil fertility than other Brassica fodder species. Ensure MO and B not deficient.

Temperature

Some varieties are well able to withstand heavy frost and retain leaf.

Establishment

Companion species

Herbs: plantain, chicory

Legumes: white clover, red clover

Sowing/planting rates as single species

3-4 kg/ha. Sow shallow (5-10 mm) in a finely worked firm, moist seedbed, cover with roller/mesh. Suitable for direct-drilling

Sowing/planting rates in mixtures

1-2 kg/ha

Sowing time

From August through spring

Inoculation

Not applicable

Fertiliser

Sow with ~20 kg P/ha as triple super or MAP/DAP. Ensure molybdenum and boron adequate. Molybdenum coated seed is available.

Management

Maintenance fertiliser

Nitrogen (50 kg N/ha) maybe applied at 4 weeks.

Grazing/cutting

Graze when mature at 10-13 weeks-depending on cultivar; 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. Use a maximum 33% of rape in the diet of dairy cows - 100% OK for lambs. Beef cattle OK up to 70%. Crops thin after each grazing. Allow access to pasture/stubble, hay/silage for fibre.

Seed production

-

Ability to spread

-

Weed potential

-

Major pests

Red-legged earth mite, slugs, Aphis, cabbage moth, cabbage white butterfly, diamond black moth, cutworms, lucerne flea, wingless grasshoppers and leafminers. Insecticide coated seed is available to aid establishment.

Major diseases

Rarely a problem. Varieties tolerant of clubroot and dry rot are available. Fungicide treated seed is available to protect damping off of seedlings. Susceptible to some viruses

Herbicide susceptibility

Glyphosate

Animal production

Feeding value

Excellent - low fibre is associated with a high rate of digestion which facilitates a high intake. ME approx 12 MJ/kg DM.

Palatability

Readily acceptable

Production potential



Up to 10 t DM/ha where moisture is available and soil fertility is good.

Livestock disorders/toxicity

Vaccinate and drench before grazing stock on Brassica. Monitor stock frequently. Scouring, nitrate poisoning (especially if molybdenum is deficient and/or if overcast conditions prevail), red water and photosensitisation/rape scald may occur if grazed while immature. Avoid sudden and unrestricted access; do not provide Brassica crops as the sole ration straight off scarce/low quality pasture. Begin 1-2 hr access daily and take 7-10 days before reach maximum allowance

Cultivars

Group	Cultivar	Seed source/Information
early	EMX 1.6	Wrightson Seeds
	Leafmore	PlantTech AusWest Seeds
mid	Maxima Plus	Wrightson Seeds Stephen Pasture Seeds
	Pulsar	?? check link
	Hobson	AusWest Seeds
	Striker	AusWest Seeds
late	Giant Emerald	Stephen Pasture Seeds
	Bonar	AusWest Seeds
	Rangi	AusWest Seeds
	Spata	Seed Force NZ
	Goliath	Wrightson Seeds AusWest Seeds
	Greenland	Seed Force NZ

Type	Maturity	"Hybrid rape" Cultivar	Seed source/Information
Turnip (4n) x an Asiatic leaf vegetable	very early	Hunter  (T4nxCC)	PGG Seeds
Radish, <i>Raphanus sativus</i>		Graza 	PGG Seeds
Turnip x Kale	early	Winfred	PGG Seeds
Turnip (4n) x an Asiatic leaf vegetable		Pasja (T4nxCC)	Wrightson Seeds

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

Further information

Pasture and forage brassica management
Species for profit: a guide for Tasmanian Pastures and Field Crops

Acknowledgements

Seed Companies, DPIs

Author and date

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