



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

## Swede

### Scientific name(s)

*Brassica napus* ssp. *napobrassica*

### Strengths

- Vigorous growth in cool climate where there is adequate moisture.
- Summer-autumn growing fodder crop with excellent feeding value.
- Holds quality well so valuable for grazing in winter.

### Limitations

- Slow growing.
- Sensitive to waterlogging

### Plant description

**Plant:** leafy plant up to 0.75 m tall if grown at a high plant density; swollen stem forms an edible bulb at base. Slow growing but can be very productive. No regrowth after grazing

**Bulb:** larger than turnip; white or yellow fleshed (suited to storing for late grazing)

**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 late spring/early summer to provide late autumn/winter grazing in ~3 months time. Can be used as a pioneer crop or to provide weed control and soil preparation prior to renovating with perennial pasture. Useful as a break crop after cereal.

### Where it grows

#### Rainfall

> 600 mm or irrigation

#### Soils

Tolerates a broad pH range. Needs moderate-highly fertile soil. Ensure Mo and B not deficient

#### Temperature

Requires cool, moist climate. Tolerant of cold. High frost tolerance.

### Establishment

#### Companion species

Sometimes grown with Kale or with turnips.

#### Sowing/planting rates as single species

0.5 - 1 kg/ha depending on row width. Consider ridging to avoid waterlogging. Plant with 20 cm row spacing to 600 cm for low rate. A low rate encourages good bulb development and enables winter grazing. A high rate aids rapid early yield and a high leaf:bulb ratio. Sow shallow (10 mm) in a finely worked firm, moist seedbed, cover with roller/mesh. Only suitable for direct-drilling in friable soil.

#### **Sowing/planting rates in mixtures**

0.5 kg/ha

#### **Sowing time**

From Oct - Dec

#### **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**

Do not graze when immature. Where yield is high, strip-graze dairy cattle along a long front - to minimize trampling losses. A back fence may maximise regrowth. Use a maximum 33% in the diet of dairy cows - 100% OK for lambs. Beef cattle OK up to 70%. Allow "run-off" access to pasture/stubble, hay/silage for fibre. If grazing leaves first then keeping bulb, avoid damage to bulb as may rot later. Stock require sound teeth if grazing bulbs.

#### **Seed production**

-

#### **Ability to spread**

-

#### **Weed potential**

-

#### **Major pests**

Not as vulnerable as rape. Aphis, red-legged earth mite, slugs, 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**

Club root, dry rot

#### **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

Usually require a 4-6 months growing period. Up to 20 t DM/ha where moisture is available and soil fertility is high. Leaf may deteriorate if stockpiled for a long period but bulbs keep very well

## Livestock disorders/toxicity

Vaccinate and drench before grazing stock on Brassica. Monitor stock frequently. Red water/kale anaemia can occur especially where soil sulphur levels are high. Scouring, and nitrate poisoning (especially if molybdenum is deficient and/or if overcast conditions prevail). Avoid sudden and unrestricted access; do not provide Brassica crops as the sole ration straight off scarce/low quality pasture. Provide good source of water. Begin 1-2 hr access daily and take 7-10 days before reach maximum allowance.

## Cultivars

Group	Cultivar	Seed source/Information
Early-mid	Major Plus	Wrightson Seeds
	Winton	AusWest Seeds
Mid-late	Highlander	Wrightson Seeds
Late	Champion purple top	Stephen Pasture Seeds
Very late	Dominion	PGG Seeds

## Further information

Pasture & forage brassica management - PGG Seeds  
Species for profit: a guide for Tasmanian pastures and field crops

## Acknowledgements

Seed companies, DPIs

## Author and date

Kevin Reed

December 2008