

Forage Rape Best Practice

Forage rapes are a multi purpose forage option which can be fed to all stock classes for summer and/or winter grazing. In drier areas or on lighter soils, forage rapes may be a better option than turnips, especially when fed to finishing stock or as a portion of a milking cow's diet. Following these best practice guidelines will help achieve a large amount of high quality feed consistently within a 70-110 day growing period. New cultivars such as TITAN™ and GOLIATH® forage rapes can be both spring and autumn sown and when managed correctly will re-grow for a second grazing when sown in late spring to early summer.

How to grow (checklist)

Ground preparation

1. Spray the paddock in late-September to early-October with the correct rate of glyphosate to remove existing perennial weeds. It is recommended to include an insecticide and broadleaf herbicide to help control insects and weeds such as clover during crop establishment. The same guidelines should be followed for autumn sowing, with spraying in late-December to early-January for a mid to late January sowing.
2. Cultivate to prepare a fine, firm, weed free seedbed. Alternatively the crop can be established using well planned no-tillage techniques, which includes a double spray of glyphosate. An insecticide should be included with the second spray.

Pre-sowing Fertiliser

As brassica crops are often sown in the poorest quality paddock on the farm, it is recommended to soil test six months prior to sowing, so deficiencies can be corrected pre-sowing. Soil pH can take six months to correct with the application of lime. Optimum pH for brassicas is about 5.8-6.2 (1t of lime will raise the pH by ~0.1 pH point).

Like all brassicas, forage rapes respond strongly to high rates of Nitrogen (N) and Phosphate (P). Base fertiliser should be applied during cultivation or down the spout in direct drilling situations.

Recommended rates for the first application

Nitrogen 30-40 kg/ha

(N.B Direct drilled crops may have a higher N requirement than conventionally drilled crops).

Phosphate 60-90 kg/ha.

Soils naturally low in Potassium (K) will need 40-60 kg/ha.

Sowing

Forage rapes can be sown into a cultivated seedbed, or direct drilled. Regardless of the establishment method, seed should be sown no deeper than 1 cm deep to ensure maximum germination.

Cultivated situations

1. Sow forage rapes around mid-late October, especially in dry areas. Forage rapes should be sown at 3-4 kg/ha using ULTRASTRIKE® or SUPERSTRIKE® treated seed to aid establishment and lift overall yields.
2. It is crucial that cultivated paddocks are rolled after sowing to retain moisture in the soil.

Drilling situations

1. If direct drilling or drilling into cultivated soil, seed should be sown at approximately 1 cm deep and then rolled. If roller drilled, seed should be covered with chain harrows.



Post Emergence Weed and Pest Control

There is a list of herbicides registered for weed control on forage rapes depending on the weed spectrum. A post emergence grass control is effective for summer germinating grass weeds, products such as Gallant or Centurion Plus can be used. Versatil and Radiate can be used for broadleaf weed control (including thistles). Dicamba is very effective on difficult broadleaf weeds in forage rape crops, but should not be used on bulb crops. Dicamba should not be applied before the 4-6 leaf stage of the crop.

(Please note: these are only some of the herbicides available).

Aphids can be controlled by chlorpyrifos. A systemic insecticide such as Dimethoate should be used (mixed in with the herbicide) for the control of Leaf Miner. A second application of Dimethoate should be planned for late-December to early-January for control of Aphids, White Butterfly and Diamond Back Moth. From this stage, crops must be monitored for further insect attack.

(Please note: these are only some of the insecticides available)

Post Emergence Fertiliser

More nitrogen and phosphate should be applied 3-4 weeks after emergence, the second dressing should include Boron and Molybdenum (this may not be necessary if autumn sown).

Consult with a fertiliser and chemical company representative or retailer representative for specific recommendations on the use of fertiliser, insecticides and herbicides.

Grazing Recommendations

The above practices will assist in providing a high yielding crop. To best utilise the feed, the following grazing guidelines are recommended.

1. Feed dry stock no more than 70-80% of the diet as brassicas, and feed dairy cows no more than 33% of their diet as brassicas if milk is being sent to the factory.
2. Livestock need to be introduced to the crop, initially for 1-2 hours per day, building up to a maximum allowance over at least a 7-10 day period to allow rumen microbes to adjust to the high quality forage.
3. Break fencing with a long narrow break generally increases utilisation and allows all animals' access to the crop.
4. The quality of feed consumed is reduced the lower down the stem the animal grazes. A crop residue of 25-35 % should be left to maximise animal performance. (This applies for short regrowth rapes of 4-6t, but not always for much taller crops; with more stem). The following example is for a 10tDM/ha crop @ 70% utilisation.

This means 7tDM/h will be eaten by the animal. In the case of a milking dairy cow with a daily intake of 12kgDM/d then 4kgDM crop needs to be eaten (1/3 of the diet). This means that 5.7 kgDM/head/day will need to be offered (4kg/70% x 100). This is 5.7m² per cow per day based on the yield of the crop being 10tDM/ha.

5. Back fencing will maximise re-growth when using cultivars such as TITAN™ and GOLIATH®
6. Feed extra fibre prior to and while grazing forage rape crops. Extra fibre should be given prior to and throughout the brassica feeding period, through access to pasture, hay or straw. This will help prevent gorging, help rumen microbes adjust to the feed and help to maintain normal rumen function. It is suggested that 20-30% of the diet is fed as hay, straw, or run-off pasture.
7. Drinking water should be available to stock at all times.
8. Do not feed frozen brassica to stock, feed silage/hay in the morning then shift the break in the late-morning/early afternoon.

Ripening of Forage Rapes

All forage brassicas contain non-protein nitrogen (NPN) compounds which could possibly cause some animal health problems such as nitrate poisoning. To help avoid potential health issues, follow the above grazing recommendations. Best practice is to test the crop for nitrate levels in the plant. A simple test kit can be obtained from your local veterinarian and this can give an indication of when your crop is safe to graze or a sample can be sent to your local feed laboratory for more accurate measurements. For summer fed crops allow forage rapes to ripen first, this should reduce the risk of rape scald. Ripening is indicated by a change in colour from a bright green to a dull darker green – purple colour. However, this may not occur when the crop is autumn sown.

Nitrogen fertiliser can also increase the NPN levels in the plant so it is recommended that no nitrogen fertiliser be applied within the last month before grazing.

Cultivars

PGG Wrightson Seeds has two new 'Performance Bred™' forage rapes that have been bred in New Zealand for the New Zealand environment (see table below).

Cultivar	TITAN™	GOLIATH®
Days to Grazing	70 - 90	90 - 110
Yield Potential	10t	10.5t
Re-growth Potential	High	Moderate – High
Height	Intermediate	Tall

Please note: This is intended as a guide only. For specific recommendations for your property please consult your local farm retailer or call PGG Wrightson Seeds on 0800 805 505.