



Ultrastrike® film coat seed recommended

USES:



BEEF

DAIRY

SHEEP



SOWING RATE



RAINFALL / IRRIGATION

*Goliath® is a high yielding, multi-purpose forage rape that fits all farm systems.*

- Ready to graze in 90-120 days
- Hardiness that suits the Australian environment
- High quality feed
- Excellent animal productivity
- Very good Aphid tolerance

### Background

Forage rapes have been a valuable tool for temperate pasture systems in Australia for many years. They provide high volumes of extremely high quality feed at a time of year when the feed quality of pasture is starting to decline and this may coincide with when livestock are not quite in a condition for selling – lambs especially.

A lot has been learnt about how to best manage and utilise forage rape crops to minimise animal health complications and at the same time, achieve the greatest animal productivity returns possible from such a high quality feed.

Forage rapes offer the added benefit of being a valuable tool in a renovation programme. Because of the time of year that a forage rape traditionally gets sown, it allows for a good 'knockdown' herbicide to kill off all weeds that are actively growing prior to seed set. Forage rape also offers the potential for a disease break crop due to its natural bio-fumigation activity that most brassica species offer. By implementing a full renovation programme farmers benefit in both the short term and the longer term.

### Grazing Management

Goliath is a 'giant' type rape and the maturity, as a general rule, is later than that of the intermediate types (Titan) which can be a challenge in some years when rainfall is limited in a dryland situation. However, unlike older varieties of forage rapes where the leaves/ leaf margins are required to turn the characterised purple/bronze, Goliath's leaves stay a green colour. Goliath rape should still be grazed at the required grazing period of 90-120 days after sowing to maximise animal performance and limit the possibility of animal health issues whilst grazing the crop.

Animals should never graze an immature rape crop because of potential animal health risks. New generations of forage rape bred by PGG Wrightson Seeds have all, regardless of its parentage, been bred with the grazing animals as part of the breeding programme. This is to ensure that the production benefits of both the Goliath forage rape crop and the grazing animal are achieved.

### Grazing Management (continued)

For maximum regrowth and highest potential yield, rotational grazing rather than set stocking is recommended. Another method is to strip graze the crop, but be sure to use a back fence so that the crop recovery and subsequent regrowth is not compromised. Avoid hard grazing at any stage as this can cause damage to the crown of the plant and therefore affect the potential for regrowth and overall yield.

Feeding a good quality fibre source to all ruminants can aid digestion when utilising high quality feed such as forage brassica. The purpose of the fibre is to encourage the animal to chew. The chewing encourages salivation and saliva is a rich source of sodium bicarbonate which acts as a buffer that helps balance the acids produced during fermentation in the gut. Fibre also helps with firming up liquid dung that is often seen when animals are grazing high quality feed.

### Breeding

Goliath is a new generation rape/kale interspecies cross which gives Australian farmers a stronger performing forage rape that can withstand the rigours of the hot conditions of the summer months. The addition of the kale genetics gives Goliath the benefit of Aphid tolerance, greater environmental hardiness and a much higher preference for grazing by the animals. All animals, when introduced to a forage rape for the first time, will take some time to adjust to the different feed. Management techniques and the type of rape will determine the length of time that it will take for the adjustment.

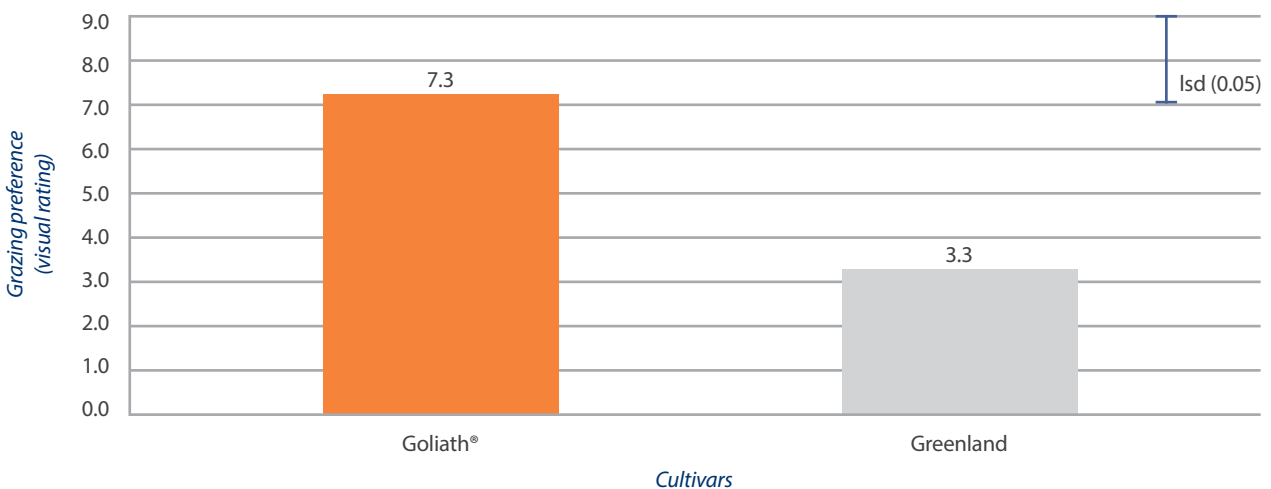
### Pest and Diseases

Goliath rape is tolerant to Aphids due to its breeding background. Aphids may still be present in small numbers. If high numbers are present, a foliar insecticide treatment may be necessary. Talk to your local agronomist on what insecticide to use and specific rates. Aphids in high populations can cause the quality and ultimately the palatability of the brassica to diminish very quickly which can result in feed wastage and animal weight loss.

Use Ultrastrike® treated seed when sowing Goliath so early emerging seedlings are protected during the critical time of establishment. Red Legged Earth Mite (RLEM) is a critical pest that, if not managed, can destroy a newly sown brassica crop. Monitor all new sowings to make sure that the crop of Goliath is successful.

### Trial Analysis

#### 2011 Gundagai - Stage II Rape Trial Grazing Preference Rating



The above graph shows the grazing preference at the 2011 Gundagai Forage Rape trial. The grazing preference is a visual rating (1-9), where a score of 1 indicates no preference for grazing and a score of 9 indicates a very strong preference over the grazing period.

#### Dry matter yield trial, multi-year, multi-site

	11 Gundagai	11 Ballarat	12 Ballarat	12 Gundagai	13 Ballarat	14 Ballarat	Ave. Yield
<b>Goliath®</b>	3605kg	6985kg	11949kg	4209kg	9795kg	9178kg	7620kg
<b>Greenland</b>	3731kg	7593kg	11698kg	4312kg	9134kg	9472kg	7657kg
<b>LSD5</b>	1004	1112	1687	1085	1341	1600	
<b>CV%</b>	19	10.8	10	18.8	8.8	11.3	

The table above shows the total dry matter yield of Goliath v Greenland for different trial sites and different trial years. The data shows that the two varieties produce very similar yields when grown in the same environment.

**Sowing and Establishment**

Goliath rape, like all forage brassica, is a small seed, so sowing depth and seed to soil contact are critical to the success of establishing a good crop. Sowing depth should be no greater than 10mm with good seed to soil contact to make sure that moisture gets to the seed. Rolling after sowing or the use of press wheels are recommended as this will give a more even establishing crop of Goliath.

Phosphorus is a critical macro nutrient that is needed for the early growth stages of any brassica crop. The best application is to have the fertiliser placed near the seed in the ground. Nitrogen is also an important nutrient at the time of sowing a brassica crop.

Be sure to have a soil test taken prior to sowing any brassica crop because it will indicate the status of not only the macro and micro nutrients, but the soil condition and if any corrective measures need to be implemented.

**Learning - Goliath**

*For more information on how Goliath can help work for you and your land you can access the following extra information from the Goliath page at [pggwrightsonseeds.com.au](http://pggwrightsonseeds.com.au)*

**Testimonials**  
Hear from the users

**Forage Focus**  
Understanding Brassica

**Goliath - Fast Facts**

<b>Class of Stock</b>	Dairy, Beef, Sheep	<b>Treatment recommended</b>	Ultrastrike®
<b>Sowing Rates</b>	3-6kg/ha	<b>Flower Heading Dates</b>	n/a
<b>When will feed be available</b>	Spring Sowing: late spring to early autumn. If managed well, can carry through into winter	<b>Ploidy</b>	n/a
<b>How can it be used</b>	Grazing	<b>Endophyte</b>	Nil
<b>Rainfall guide</b>	Minimum 500mm rainfall per annum unless irrigated		

**LET'S GROW TOGETHER**

Planning your forage and seed requirements in advance can make a big difference to your productivity. For over 75 years PGG Wrightson Seeds have been working with farmers to get the balance right.

**To discuss your growth plans call your Sales Agronomist now.**

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