

# Pastures for Profit<sup>®</sup> Tips

## Summer 2010



Welcome to the summer 2010 version of Agricom's Pastures for Profit Tips<sup>®</sup>.  
As always, we hope you enjoy our latest edition.

### New Ryegrasses Come Under Fire

**Some farmers in the top of the North Island have blamed modern cultivars of ryegrasses for the poor persistence of their pastures, but is this assumption correct?**

A major drought in 2007-08 and a smaller drought in 2008-09, warmer summers and greater black beetle pressure, have resulted in many pastures being decimated. This has forced precious money to be spent renewing them, or where this has not been possible, farmers have to put up with weedy pastures with low production and quality.

One farmer said publicly that his old Ellett perennial ryegrass pastures had survived better than those he had planted in the last ten years in modern cultivars. However in many cases the difference is not caused by cultivar, it is the endophyte choice that will be contributing to the problem. In the last eight years he has used ryegrass seed with AR1 endophyte, to overcome the animal health and production disadvantages of the standard endophyte in Ellett (and other old ryegrasses). Unfortunately AR1 provides only moderate protection from black beetle compared with standard endophyte. Black beetle populations have become too severe for AR1 on many farms, due to milder winters and warmer summers, and possibly due to the increased area of AR1 encouraging their survival and reproduction.

Thankfully, many other farmers have already found there is a good option available, with AR37 endophyte in a range of ryegrass cultivars. AR37 provides resistance to black beetle, but does not appear to reduce milk production like standard endophyte does. Farmers have been pleased that AR37 pastures have consistently shown strong resilience to the recent droughts and insect pressure. Also worth remembering is that AR37 has been shown to increase pasture production by 15% in the Waikato/BOP and 21% in Northland regions when compared with standard endophyte. AR1 farmers in other regions less common or severe.



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### Cows Value Shade

Most farmers in regions with warm summers know that cows prefer to have access to shade, but there is often debate about what the benefits might be.

Even mild heat stress can cause production loss. During moderate weather in the Waikato in 2006, cows provided with artificial shelter produced 1.7 percent more milksolids per day than those without shade. The average temperature humidity index (THI) in this trial averaged only 63, which at 25% humidity would have meant temperatures averaged just 19°C.

If average temperatures were 30°C and humidity 80%, milk production from Friesian cows would be reduced by about 150 g MS/cow/day, worth \$412 per day over 500 cows at \$5.50/kg MS. This would buy a number of deciduous trees.

The main cause of lost production is through reduced feed intake and increased energy trying to stay cool (e.g. faster breathing rates).

*G. Verkerk, 2009. In summer, shade rules. The science behind why trees help maintain dairy production. Primary Industries Management, Vol 13, No. 1, March 2009.*

It is possible that grazing pastures with endophyte which produce ergovaline may reduce the cow's ability to cool, in much the same way as a high temperature humidity index does in the research described above. Ryegrass endophytes that do not produce ergovaline include AR37 and AR1.



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### Successful Brassica Establishment

The key to successful brassica establishment is planning; ensuring that all aspects that you can control are done correctly. This includes a clean, firm and fine seedbed if drilling into cultivated ground, or weed and insect-free paddock if using direct-drilling. Treated seed (Superstrike, Ultrastrike, Gaucho) is advised in all direct-drilled situations and also in cultivated ground if insects are likely to be a problem. Sowing brassicas with a DAP-type fertiliser with the addition of boron is advisable, but the exact fertiliser make-up will depend on background soil fertility and the type of brassica being sown.

Once the brassica has germinated, weed and insect monitoring is vital as the end yield of your brassica crop can be severely reduced if not controlled. Insect control is vital as this has a direct affect on the yield of the crop. Insects like *Nysius*, springtails, slugs (especially in direct-drilled situations) and grass grub are the main insects to look for and to spray if affecting the crop. It is a lot easier and cheaper to control weeds when they are at a small stage than when they are well established. Brassicas are also used to clean up paddocks for following crops/pastures, so any weeds that re-seed is a backward step in cleaning up paddocks. Speak to your local field representative to get the correct chemical to control your weed spectrum.

A side dressing of 30-40 kg/ha of nitrogen is advised 4-6 weeks after sowing to encourage the plant to out-compete any remaining weeds, and also to increase the leaf area of the brassica to intercept more light, thus increasing the end yield. In all brassica establishment it is advisable to include boron with the establishment fertiliser. This is essential when establishing winter bulb-crops as boron applications reduce the chance of brown heart in the bulbs.



Aphids on a rape plant

After the establishment phase (4-6 weeks), the crop must be monitored for further insect attack to ensure that your well established brassica crop doesn't get eaten by aphids, diamond back moth, leaf miners or white butterfly.

Refer to Agricom's Brassica and Forage Cropping Guide or [www.agricom.co.nz](http://www.agricom.co.nz) for more information.

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### Grazing Summer Brassicas

To get the best out of your summer brassicas the grazing management has an important role to play.

The introduction of stock to any brassica should be done in a controlled manner, ensuring that the stock aren't put onto the crop hungry, can't gorge themselves, and have a fibre-based supplement for the initial stages. In the case of dairy cows, summer brassicas shouldn't make up more than 1/3 of their total daily diet. Even if these steps are followed, stock monitoring is essential to ensure that if there are any animals not coping they are removed to a non-brassica feed as soon as possible.



There are three types of summer brassicas; leaf turnip (Hunter), bulb turnip (Rival, New York) and rape (Winfred, Spitfire). Leaf turnip and rape are multi-graze forms of brassica, and the bulb turnips are a single graze.

Bulb turnips (Rival, New York) provide a standing volume of high energy and protein feed, which helps maintain milk production under periods of pasture stress. The ideal grazing for bulb turnips should aim to reduce the amount of wastage occurring because of stock trampling, which reduces utilisation. This may mean that the break fence is shifted more than once a day. In a perfect world making the cows eat under the wire, to reduce any trampling damage, would be ideal but individual paddock dimensions means that this is not always possible.

Leaf turnip (Hunter) is widely used as a feed source for finishing lambs on relatively fertile and summer-moist environments. Traditionally lambs have been set stocked on leaf turnips, but two years of experiments completed by Agricom have indicated that providing the lambs with an allowance of 2.0–2.5 kg DM/head/day in a rotationally grazed system, is the best way to maximise per-hectare productivity. This can be done by having four grazing 'cells', either in one paddock or four different paddocks, and rotating animals round the different cells on a weekly basis, allowing each cell 21 days re-growth after grazing.

Rape (Winfred, Spitfire) is a versatile brassica suited to a wide range of soil fertility and environmental conditions. Winfred is well suited to stock finishing in dryland environments. Again grazing trials indicate that to get the most effective liveweight gain per hectare, offer the lambs 2 kg DM/ha/day using weekly shifting in a rotation grazing system. The aim should be to graze all the leaf and the top ½ of the stem before shifting the stock to the next paddock/cell.

For more information refer to Agricom's Brassica and Forage Cropping Guide or [www.agricom.co.nz](http://www.agricom.co.nz)

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### Advantages of Pasture Renewal

Pasture renewal is an essential part of a farming programme. As pastures age they become less productive, thus costing valuable feed for your stock. It has been said that 'a lift in pasture renewal rates could add NZD1.6 billion in farmgate income' (The New Zealand Farmers Weekly, November 30, 2009). This figure is a result of what the extra pasture production can do directly for farmers and all the flow-on effects to other businesses.

Modern cultivars can have different growth patterns to the older cultivars, which can be used to grow feed when it is most profitable to your farming situation. An increase in winter growth might mean you can fatten stock over winter, or have more feed on hand when the dairy cows are coming back onto the farm. An increase in late-summer/autumn growth might mean that you can milk longer while maintaining pasture cover and cow condition on dairy cows before sending them away for the winter, or have good quality feed for flushing ewes.

There have been many comments saying that the newer cultivars don't last as long as the older types. This is true with the older cultivars to a degree but the goal posts have changed, and it must be mentioned that there were issues such as ryegrass staggers, continual seed-head emergence, low winter growth, poor animal and pasture production. The newer cultivars can have a reduced or no risk of ryegrass staggers due to novel endophytes being used, they are bred for low seed-head emergence over summer, increased winter growth, and increased animal and pasture performance.

Understanding the different endophyte options is the key to increasing the persistence of your new pastures. The new novel endophyte AR37 is the latest tool available to increase pasture persistence without compromising liveweight gain in lambs, or milk production in cows.

The advantages mentioned above can be used as part of a whole-farm approach to increasing productivity, and ultimately, profitability for your individual situation.

Coming soon! – The new Agricom Autumn Pasture Sowing Guide and Agricom Dairy Guide, available on our website ([www.agricom.co.nz](http://www.agricom.co.nz)) from January – delivered through Straight Furrow in January. To make sure you receive your copy, contact us to check your details are correct [info@agricom.co.nz](mailto:info@agricom.co.nz)