

June field days report - at last!

I'm writing a new chapter called 'Trials' to show them with photos for those who were not at the field days. Most was about lime-plus and pasture sowing rate trials, so I have included trials from many soil types and new trials to cover the topic more thoroughly. Lime-plus, fertilisers, pastures, herbs, sowing rates, health and spreadsheets will be shown.

It should be in GrazingInfo > Chapters > Trials within a week or two. I'll tell you when, so you don't have to keep checking.

Updates - fewer cows for more profit

Many Spreadsheets have been updated so if you downloaded spreadsheets some time ago, check the dates of yours with the current versions.

Using 'Dairy cow numbers for max profit' which takes about five minutes to fill in, has made thousands of dollars for some dairy farmers. Not using it has caused some farmers to lose thousands of dollars annually and increased pollution through over-stocking.

If you have to buy supplements or any feed, except in exceptional droughts, floods, etc., you may have too many cows. Act now, not after having no option except buying feed when all around you are also short of feed and it is expensive, or for organic farmers impossible. If the payout was \$10 it might be profitable, but still stressful on all concerned including the cows and farm. PKE stresses and kills some cows every year because of its high copper, manganese and other problems such as some eating too much.

After you use the spreadsheet don't feel embarrassed about finding you have been losing thousands of dollars every year. About 80% of farmers are doing the same, sometimes encouraged by LIC staff arriving on the farm and saying, "Apply more urea and milk more cows." Today one can't believe anyone, least of all sales people. Some LIC staff look only at the farm's hectares and cow numbers. LIC wants more cows milked to test and sell more semen. One farm was steep at the back and parts flooded several times every year. Another was a peat farm which had raw, hungry, deep Rukuhia peat at the back that had not had lime applied for ages. It was due to incorrect advice from fertiliser sales staff, agents selling NPK (both to discourage lime sales) and most disgracefully, DairyNZ for quoting old scientists' wrong information, costing farmers who don't read GrazingInfo, thousands of dollars.

When you own the land, growing pasture costs from only 10 cents per kg of dry matter in spring to 30 cents in dry summers and the cold parts of winter. Buying, stacking and feeding silage costs up to 50 cents per kg of dry matter which gives no net profit.

A farm spending 31% of its expenditure on bought feed (PKE, bad fruit, etc.) went broke. The vendors and Fonterra benefitted (more milk) while the farmer suffered stress galore. Had the farmer used 'Dairy cow numbers for max profit' there would have been no problems and a profit. Using the two spreadsheet Budgets would also have helped.

Summer feed

Some of you will be planning your summer feed. Soils on 90% of farms in New Zealand are low in Ca, so if deficient (lower than 0.8% calcium in ryegrass leaves and stems) applying lime-plus soon will grow more pasture than any other fertiliser or other thing you can do. When Ca is deficient, borrowing to apply lime-plus can be very profitable and provided it goes

on soon enough to increase earthworms, will save zinc for facial eczema control. Read Elements > Calcium, then the Trials chapter due next week, and Animal Health > Facial eczema.

Remember that growing and grazing pasture and forage crops are profitable, whereas buying feed, or cutting, carting, feeding your own, and with confinement or cleaning up feed platforms and effluent, are not.

Canadian dairy farmer clients milking 600 cows at double NZ milk prices were on the verge of bankruptcy. They grew enough pasture to feed 300, so selling 300 saved them losing their farm. Many farmers find this hard to believe. Use the appropriate Budget spreadsheet and you'll apply it.

### Summer forage crops

Sun facing warm paddocks will do best with Nutrifeed or Shirohie millet at 10 kg, Pasja at 2 kg and chicory at 1 kg per hectare.

Colder paddocks and areas will not grow Nutrifeed.

Once cows know it is there, some will run to it. It is high in Mg and can be grazed every four or five weeks.

Analyse the ryegrass there or in an adjacent paddock. If Ca is below 0.8%, apply 4 tonnes per hectare of lime-plus and 750 kg of a Gafsa reactive phosphate separately. Calculate the mix using Lime and Fertiliser Nutrient Planner spreadsheets. Chisel plough them in. Read Cultivation to do it properly and see the photo of correct compaction.

If you apply half as much lime and fertiliser you'll grow a third less feed. Calculate what you'll lose (\$1,000 per hectare) and you'll apply what is needed. It will be a good paddock for years to come without so many grasses dying - provided you don't sow too many.

A two hectare summer forage crop sown last spring failed, because no Pasja was added. Another failed because rolling was inadequate. See Cultivation for a photo of how firm the seedbed should be. It may take several rollings. I frequently see higher germination in the tractor wheel marks, simply because of more compaction so more moisture is sucked up.

The Cultivation chapter shows how to save moisture loss by sowing a paddock a day after starting it.

### Over-sowing

A lot is spent by farmers over-sowing, and by Ruakura who used to drill  $\frac{3}{4}$  of their calcium starved pastures every year. They had clovers die out because of excess potash, and ryegrass pulling because of calcium at half the level it should be. DairyNZ Vaile Road farms now have almost no clover and open ryegrasses in pugged soils on flat land, partly because of no drains.

Once a farm has optimum levels of most minerals shown by pasture analyses (including calcium at 0.8% in ryegrass leaves and stems), the next way to increase profit is by over-sowing (not expensive drilling) thin pastures. This can be done in mid September in most temperate climates. It can be included in the lime-plus, but must be spread soon after mixing in the seed to avoid burning from boron in the lime plus mix.

Don't over-sow a single paddock until you find why the pasture failed. 90% are from low lime-plus and/or excess potassium.

Which varieties to sow?

Some publications have at last revealed the faults of Commando AR37. A farmer who promoted it with a testimonial for a vendor stopped sowing it after one year because of his cows not liking it.

Concern has been raised over severe ryegrass staggers from all AR37s which was not mentioned in its promotion. I tested Alto AR37 and found heifers grazed Bealey NEA2 short while leaving Alto A37 15 cm high. Exactly the same occurred with Commando AR37 and Bealey NEA2 in Gordonton trials, 15 minutes NE of Hamilton NZ.

Commando's severe ryegrass staggers which can be serious for horses and camelids was apparently not mentioned in promotional material. I'll bet they didn't measure milk somatic cell counts which increased when grazing Yatsyn, a high endophyte ryegrass, and dropped in a day when on low endophyte ryegrasses.

I thought that Grasslands would have learned and been more careful after their Matua Prairie grass failure 25 years ago. It cost our second farm many hundreds of dollars to sow it over 106 ha after the previous owner had gone broke growing maize. There was no Matua left after two years. It is still promoted here and overseas without mentioning its short life. In USA it gives NZ pasture seeds a bad name. They like it so much that they oversow it, and let it self seed, which is OK on cheap land.

The common dissatisfaction with ryegrasses dying out of pastures, is very seldom because of the variety or insects, but from low soil fertility, caused mainly by low lime-plus. I asked a farmer why by email. He blamed Black Beetle. I asked "How many are there?" He replied, "Plenty." When I told him I wanted to know how many per spade spit, he said they had all gone down deep. What 'bull'. Black Beetles can't go down into hard soils with hard pans like his, caused by low calcium and so aluminium. In summer you'll find them in the soft 'bull'!

November 2011 Country-Wide magazine was the first I saw to reveal some faults of Commando AR37. Avoid it and other AR37 ryegrasses because of the severe ryegrass staggers they can cause (especially if selenium is low, which it is in 80% of NZ soils because of low organic matter to reduce it leaching) and unpalatability. I tested Alto AR37 and found the same. It grows up to about 20 cm while right next to it, they graze Bealey NEA2 to the ground, exactly the same as with Commando AR37 and Bealey NEA2 in the Gordonton trials.

Commando's severe ryegrass staggers was apparently not mentioned in promotional material. It can be dangerous for horses and camelids.

### Best

On many dairy farms in many countries, grazing Bealey NEA2 tetraploid has given increases in milk production by up to two litres per cow per day. The newer Trojan NEA2 being a diploid is not as palatable, but like Bealey NEA2 is lasting well when correctly managed, which starts with the optimum sowing rate of no more than a total of 24 kg/ha in the complete mix, in correctly limed soils.

Some have not been happy with Bealey because of thinning, but when sown at 25 kg/ha it will have to thin. Some greedy seed merchants have recommended 33 kg/ha! Farmers who don't check sales peoples' figures deserve costly failures.

Bealey NEA2 is an animal friendly new-generation tetraploid perennial ryegrass which is clover and animal compatible. It combines high feed quality and palatability with high yields in winter and summer when feed is worth more, partly thanks to the new NEA2 endophyte which that animals like and Black Beetles don't like.

Oversow at kg per hectare -

Trojan NEA2 diploid 4 kg = 200 seeds/m<sup>2</sup>.

Bealey NEA2 tetraloid 4 kg = 100 seeds/m<sup>2</sup>.

Weka white clover ½ kg = 70 seeds/m<sup>2</sup>.

Kotare large leaf white clover ½ kg = 70 seeds/m<sup>2</sup>.

Tahora II small white clover ½ kg. It makes the most N and survives.

Grasslands Puna Chicory ¼ kg = 20 seeds/m<sup>2</sup>.

Tonic Plantain ¼ kg = 12 seeds/m<sup>2</sup>.

Total 6 kg per hectare.

Complete new pasture mixes should get about 50% more. See the Seeds chapter for more seed numbers/m<sup>2</sup>.

Kopu has been replaced by Kotare.

Kopu was developed by crossing Pitau with short lived Ladino. I've seen Kopu disappear in one year of overgrazing and in three years in my garden trials without any grazing. Half the trial was cut fortnightly and half monthly. Only one Kopu plant lasted three years in the monthly cutting.

Some may like to add the best red clover at ½ kg, but don't if your pasture K figure is above 3.4% because it won't last. Applying lime-plus as required and salt at 50 kg/ha reduce K levels. It is a pity that you can't sell it back to the adviser or company that sold it to you. German farmers sued their MAF a decade ago for wrong advice.

VJ prairie grass lasted for 30 years in one paddock and is being compared with Bareno prairie grass by Stephen Finch of Specialty Seeds NZ Ltd, Box 29-389, Fendalton, Christchurch 8540, NZ.

0800-727-8873 <http://www.specseed.co.nz/> [stephen@specseed.co.nz](mailto:stephen@specseed.co.nz)

VJ prairie grew better in winter when pasture is worth 40 cents a kg of dry matter, because to buy, store and feed it costs that. Spring dry matter is worth only ten cents and surpluses have to be harvested and fed at an extra cost of about 20 cents per kg.

VJ prairie seed from will not be available from Specialty Seeds for many years, so if you have plants I gave you, grow them where you can let them set seed and spread it over your pastures.

When getting quotes for seed above, ask Specialty Seeds. They have a good record.

The best fertilisers

Organic Lime-plus and organic reactive phosphate based phosphorus fertilisers (Gafsa, Sechura, etc.), when pasture analyses shows deficiencies, are the best by far. Most others are costly wastes of money. Soil test optimums are set to incorrectly apply too much P and K.

Another recent subscriber who has used Rok products for three years has milk solids production of only 700 kg per hectare. Three earlier subscribers using Rok(s) produced only 600. With such low production at the current low payout, it is difficult to find money for any proper fertiliser, let alone the six tonnes per hectare of lime-plus needed on almost all NZ soils. Pasture analyses after years of applying Rok products are very low in essential elements but usually high in potassium at \$900 a tonne of buyer's money.

