



Organics in Canterbury

Issue No 28: April, 2005

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This newsletter is published by the Canterbury Commercial Organics Group, in association with Heinz Watties, MAF Sustainable Farming Fund, Central Canterbury Organic Growers Discussion Group, Canterbury Organics and the Biological Husbandry Unit, Lincoln University.

www.organics.org.nz/ccog/ccog.html

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Articles, letters to the editor and advertisements are welcome.

Organic Growers Risk Management Project

Field Day – Pasture Production Phase

Maintaining good soil fertility and a productive pasture phase were identified as the highest priority business risks by growers at the August 2004 Organic Risk Management Workshop. To improve our understanding of this most important phase in organic farming, the **Organic Growers Risk Management Project** has organised a field day OPEN TO EVERYONE at Geraldine on **Friday 13 May**.

This will be a great opportunity to discuss pasture options and see trials of different pasture species at David Musgrave's Waihi Bush property.

Date Friday 13 May 2005
Time 9.45 am to 3.00 pm
Venue am - Geraldine Crown Hotel, Main Street, Geraldine
pm – Waihi Bush Farm
Cost \$15 per person, includes lunch
RSVP 9 May to Sue Cumberworth, Ph/Fax: 03 329 6456
Or email sue@agribusinessgroup.com

Programme:

9.45 Morning Tea
10.00 Pasture Production Research Update. David Musgrave, Mike Daly, Dave Lucock
Benchmarking pastures between farms
ARGOS project update
12.00 LUNCH
1.00 Mixed pastures at Waihi Bush Farm – walk to view and discuss.
David Musgrave
2.00 Stripper Front – machinery for linseed crop risk management.
David Musgrave
2.30 General discussion, summary. Sue Cumberworth
3.00 Close (continued next page)





continued from page 1:

Field Day Objectives:

1. For participants to be updated on the research results of different pasture options and between farm benchmarking.
2. For growers to gain a heightened awareness and knowledge of the importance of the pasture phase in building soil fertility on organic farms.

Workshop participants will be asked to:

- Think about the success or otherwise of their pasture production phases in building soil fertility and the possible reasons why
- Bring along questions and issues regarding successful pastures in organic farming

Registrations for the day are essential (for lunch catering) but can be paid for on the day. Please contact Sue ASAP if you would like to come.

Organic Growers' Risk Management Project

The Organic Growers' Risk Management Project met in March to discuss the project to date and plan activities for the year ahead. A field day at Geraldine is organised for May (see page 1 for date and venue), looking at the pasture options, which, along with soil fertility was identified as a major area where risk needs to be managed.

Cover crops are also an area of interest to build soil fertility and structure. We will get a literature review completed this year to learn from previous work and to prevent repetition of work.

Two years of cover crop trials will be run:

1. 2005/06 – Late sowing of cereal cover crops
2. 2006/07 – Early and late sowing of cereal and legume cover crops

This years cover crop trial/demonstration has been sown at the BHU, Lincoln University, with the primary aim to compare crop species and their soil fertility effect at different late sowing times. Trial details are:

1. Crop species comparison - Oats, Oats & Vetch/Teres, Barley, Triticale, Fallow
2. Late sowing times – April and May (after onions, sweet corn, linseed, beans, carrots)
3. Grazing versus cultivation

Outputs

- Soil fertility effect and data
- Cover crop yield/grazing results
- Subsequent pea crop results and yield
- Financial results

Farmers are also encouraged to do their own on-farm/split paddock trials and comparisons. For more information on the project contact Sue Cumberworth, sue@agribusinessgroup.com or Phone/Fax: 03 329 6456 or come along to the field day!!

The ARGOS Research Programme

ARGOS stands for the Agricultural Research Group on Sustainability. It is a joint venture between The AgriBusiness Group, Lincoln University and the University of Otago and is funded by the Foundation for Research, Science and Technology (FRST) and various industry stakeholders. The research



commenced in October 2003. The goal of the ARGOS research is to facilitate innovation and improved performance in primary production systems. The research programme has secured 'long-term' funding for 6 years from FRST as a first step in a 20 to 30 year project.

The objective of the research is to examine the environmental, social and economic sustainability of New Zealand farming systems to better understand the environmental effects, and the social and economic consequences of three different farming types:

- Lowland sheep and cattle farms - 12 conventional, 12 integrated, 12 organic
- High country farms - 24 farms with different levels of intensity
- Kiwifruit orchards - 12 IPM (Zespri Green), 12 certified organic Hayward growers and 12 IPM Hort 16A (Zespri Gold)

An adjunct study of Ngāi Tahu land holdings will look at a variety of types of farming.

In future years, farms under conversion will be included to test whether the change in farm practice associated with IPM and organic certification actually caused the differences we may observe between already converted and control farms. An immediate goal of ARGOS is to compare the sustainability of conventional, IPM and organic approaches. However, it is also committed to discovering determinants of sustainability in general, irrespective of farming sector and the particular type of farming being applied. For more information see www.argos.org.nz/

Dave Lucock, who will be speaking at the Geraldine pastures field day, is the ARGOS Field Research Manager for sheep and cattle. He is now based in Christchurch after 20 years of sheep, cattle and dairy farming. His role in the ARGOS Programme is to coordinate the 'on the farm' research, facilitate discussion groups and manage the relationships between farmers, other stakeholders and the research team. He can be reached at: 03 365 6804 (work), 0272 580 771 (cell) or dave@agribusinessgroup.com

Calendar of Events

May 13 Pasture Production Phase Field Day; see page 1 for details

May 19 & 21 BHU Workshop: Pest Management

June 9 & 11 BHU Workshop: Winter pruning

July 23 CCOG Mid-winter dinner & speaker. Jeanette Fitzsimons will speak on Peak Oil and its Implications for New Zealand. Venue still to be decided. Mark this down in your diary now – it will be a very interesting night!

Organic Courses at CPIT Seven Oaks

The following short courses will be run at the Seven Oaks site in Opawa:

Composting Sat 7 May 9.00 am - 1.00 pm.

Earth & Straw Building Sat 7 May

Effective Microorganisms (EM) for Home and Garden 4 hours (9am - 1pm)

Dates: 14 May, 6 Aug, 3 Sep, 15 Oct, 19 Nov Fee: FREE

Introduces students to the principles and practice of using beneficial Effective Microorganisms (EM) to improve soil health and the quality and yield of crops. The EM Bokashi composting system for recycling food scraps will also be covered. For more information contact CPIT. **Ph: 0800 24 24 76 or 03-940 8074, Email: info@cpit.ac.nz www.cpit.ac.nz**



News from the BHU

BHU Workshops - details

May 19 & 21 Pest Management: Find out how to design the garden or farm to resist pest issues through strategic planting of flowering plants and shelter. Detailed protocols for commercial and garden biocontrol enhancement will be provided and discussed.

June 9 & 11 Winter pruning: Which branches to remove and detailed pruning. Focus on fruit and nut trees though other pruning also covered.

Fee \$10 per family. Bring own lunch & suitable footwear and warm/wet weather gear. No need to book.

Where: Lincoln University Horticulture Teaching Laboratory. Enter Lincoln University through Gate 2. Keep going down Calder Drive and turn right into Farm Road. Drive just past the nursery and a sign will indicate the Horticulture Teaching Laboratory (in the building just next to the Nursery). Signposts will be up. Running 10 am to 1 pm on Thursdays and Saturdays. To subscribe to the workshop email list, send an email to thebhu@quicksilver.net.nz with "subscribe workshops" in the subject line.

BHU Open Day Report

Over two hundred people gathered for the BHU (Biological Husbandry Unit at Lincoln University) Open Day on Sunday 3rd of April. Steve Wratten (BHU trustee, Lincoln University Professor and The Press garden columnist) entertained all on the theme of natural pest management. Steve talked from his vast experience in researching this field and even allowed glimpses of a younger self (he hasn't changed a bit) on video explaining the concept of "beetle banks". The take home message was that "beetle banks" which give habitat for predatory ground beetles and spiders, along with other ways of providing habitat or food for biocontrol agents, can minimise pest damage to crops.

A sumptuous lunch was then laid on and people made their way to the BHU demonstration garden. Here, Tim Jenkins gave a talk on vegetable garden diversity and its role in reducing pest issues. He also covered topics as diverse as seed saving, lettuce cultivar choice and the many benefits of various Asian vegetables including shungiku (edible *Chrysanthemum coronarium*). On the topic of natural pest management, this is the focus of the next BHU workshop, to be held on May 19 and 21. There you will be able to access detailed protocols for organic and integrated pest management.

Autumn Open Days are now going to be an annual event at the BHU and we invite you to become a Friend of the BHU to help support this valuable organisation and research farm. For more details contact the BHU: phone 325.3684 (Lincoln Univ extn 7684), www.bhu.co.nz.

News from Canterbury Organic (OFNZ Canterbury & Nelson Bays)

The AGM will be held in June or early July, please contact Hugh Mingard for details of date and venue.

Hugh Mingard, Administrator, OFNZ (Canterbury and Nelson Bays Regions), c/o Ngahuru, Ahuriri Road, RD2 Christchurch. Tel: 03 329 6569, Fax: 03 329 6568 Email: corganic@organics.org.nz



News from Kowhai Farm – Heinz Wattie’s Organic Farm at Lincoln University

This report summarises activities on Kowhai Farm for spring and summer 2004/05. Of particular note are the numerous changes made to the planned cropping rotation since the last report, summarised in the table below. Once the new rotation was established two areas each of onions, peas and sweet corn were grown. Cool damp weather, that followed the establishment of these crops, delayed mechanical weeding while at the same time promoting a lot of weed growth. This resulted in increased handweeding costs in the onions and one area of sweet corn was ultimately overrun with weeds and abandoned. On top of the weeds, thrips and downy mildew were both major problems in the onions this season.

To date the pea crops have been harvested and the onions have been lifted and are currently drying. No stock have been grazed on the property since the end of January and the two pasture paddocks, which have grown well over the last month, are likely to be sold as silage crops.

Paddock	Planned Crops Summer 2004-05	Actual Crops Summer 2004-05	Plan for Winter 2005
A1	Beans	Peas	Green Crop
A2	Linseed	Sweet Corn	Green Crop
A3	Onions/Beans	Onions/Peas	Green Crop
A4	Pasture	Pasture	Pasture
A5	Pasture	Pasture	Pasture
A6	Peas	Onions/Sweet Corn	Green Crop

Paddock A1 – Peas → Winter Green Manure Crop

Green beans were to have been the crop grown in paddock A1. However a reduction in the volume (and thus area) of organic green beans required by Heinz Wattie’s changed these plans and a second year pea crop was planned instead. The existing green manure crop of oats was quickly grazed and cultivated in preparation for drilling of the peas (*cv Aladdin*) which took place on 4 November 2004.

The pea crop emerged well in the presence of very few weeds and, like the previous seasons crop, did not require tine-weeding. The crop did not require any irrigation. Harvest took place on 27 January and the crop yielded 7.6 tonne/ha and paid a very handsome \$4174/ha. This excellent result, just short of our record \$4192/ha crop 2 years ago in A6 and even better than the 2003-04 pea crop in A1, was largely due to there being very few weeds to compete with the crop. The extremely low weed burden is certainly testament to the summer fallow carried out 6 years ago.

There was a huge amount of pea vine remaining in the paddock after harvest (too much to satisfactorily incorporate) so much of this was raked and baled making 72 medium square bales of high quality organic pea vine hay (17 bales/ha). The remaining vine has since been disced under and a winter green manure crop of oats or barley will be sown.

Paddock A2 – Sweet Corn → Fallow → Winter Green Manure Crop

Paddock A2 was cultivated out of pasture in September last year with the intention of growing a linseed crop. However again plans changed and instead the paddock was drilled in sweet corn, for Heinz Wattie’s, in late October. Before the final cultivation 500kg/ha of meat and bone meal was applied as a



source of nitrogen for the crop. Permission from BioGro was first sort before applying this product, with the stipulation that the paddock would not be grazed for 6 months following application.

The paddock was tine-weeded once prior to crop emergence and then, after a period of wet weather, we inter-row hoed the crop. More wet weather followed before it could be hoed again. Unfortunately the cool damp weather only worked to slow crop growth (turning the crop quite yellow for a time) while promoting excessive weed growth in what has always been a very weedy paddock. Consequently the decision was finally made to abandon the crop (in mid January) and it was disced under. Since then the paddock has been fallowed, with intermittent cultivation to control the weeds. Hopefully this will help to deal to the large weed problem in this paddock which includes Californian thistles. A winter green manure crop will be established in autumn.

Paddock A3 – Onions/Peas → *Winter Green Manure Crop*

Onion planting commenced in early September into a rather hurriedly prepared seedbed in paddock A3 and unfortunately the turf from the recently ploughed under pasture really hampered planting of the small onion seeds. Hence we decided to plant the remaining seed into paddock A6 and leave the rest of A3 for a pea crop. The onions in this paddock were treated the same as those in A6 (see below) however the paddock tended to be more fertile and also more weedy. Consequently it required more weeding but, on the other hand, the onions grew larger.

The A3 pea crop was drilled on 4 November into a somewhat cloddy seedbed which resulted in uneven crop emergence. The crop was tine weeded once, 2½ weeks after drilling, however a lot more weeds emerged soon after and really competed with the crop. The crop only yielded 3.1 tonne/ha, paying a rather poor \$1682/ha. Nevertheless there was still plenty of vine in the paddock and when raked and baled this produced 98 bales of organic pea vine hay (14 bales/ha). This has been covered and is also for sale. Like paddock A1, the remaining vine (and weeds) have just been incorporated with a set of large discs and autumn sown green manure crop is planned.

Two tonne/ha of Ravensdown BioGro certified Aglime was applied to the entire area of paddock A3 prior to preparing a seed bed for the onions and the peas.

Paddock A4 – Permanent Pasture

It is now one year since A4 was drilled and, with regular grazing and irrigation over the summer period, the mix of species has progressed well while the annual weeds have all but disappeared. The paddock was last grazed in late January then topped to control the Californian thistles and has been closed up since. Subsequent passes with the irrigator have promoted good pasture growth and, in the absence of stock on the property, it is likely to be sold as a silage crop.

Paddock A5 – Permanent Pasture

Paddock A5 has been treated similarly to A5 and is currently dominated by red clover, chicory and plantain. It too is likely to be made into a silage crop and sold off the property. While this practice may be criticised for its effect on organic matter and nutrient removal, the overall effect is likely to be minimal given that this and paddock A4 will remain in pasture for at least the next 1½ years, during which time they will once again be grazed. Selling the feed for silage as a cash crop will improve overall farm cash flow and aid overall farm profitability.

Paddock A6 – Onions/Sweet Corn → *Winter Green Manure Crop*

A6 was intended for peas but along with other changes to the crop rotation it ended up being planted in onions and sweet corn.

Onions followed a winter green manure crop of oats in the southwest side of A6 that had been in green beans last season. Following the application of 4 tonne/ha of Ravensdown BioGro certified Aglime to this



area of A6 (in order to lift the pH from 5.3) the soil was power harrowed, to produce a reasonably fine tilth suitable for onions. The paddock was finally finished off with a Combi-Dan leveller/packer (cultivator) to produce a firm seedbed and the onions were drilled in mid September. The beds were flame weeded twice before the onion seedlings fully emerged. The crop was inter-row hoed and hand weeded for the first time in early November. After several applications of kelp foliar fertiliser the crop was again hoed and hand weeded, at considerable cost due to a real proliferation of weeds, and then appeared reasonably weed-free.

Thrips began to appear in early December and several applications of Biosea fish fertiliser containing pyrethrum (restricted input) followed. However the thrip population did not totally disappear and, after a third and final weeding, further applications of pyrethrum were made. The onions were irrigated during January and just when the crop was looking really good along came the final problem - a period of humid weather that caused a massive outbreak of downy mildew in the crop. At first a high rate of Vitec King Kelp was applied, followed by an application of Copper Hydroxide (another BioGro restricted input), but it seemed to be a few hot days that dealt a blow to the disease.

Altogether it has been a challenging season for growing organic onions. Fortunately the extra efforts to produce a weed free crop, despite the conditions in early spring, paid off and the crop was lifted without any difficulties in late February. The onions are currently drying in the field and once dry, will be harvested into bins and transported to the packhouse for grading. Overall the size of the onions appears good although, like many onion crops around Canterbury, a number of bulbs have gone to seed (again as a result of the cool weather in spring) and will need to be removed during grading.

The sweet corn side of A6 had been in oats during last winter and these were grazed before ploughing. Once the paddock was rolled 2 tonne/ha of Ravensdown BioGro certified Aglime was applied, along with 500kg/ha of meat and bone meal prior to the final cultivation. The crop was drilled on 20 October; tine weeded on 27 October and started emerging 5 days later. Wet weather delayed the first post emergence mechanical weeding for almost one month, until late November, when the crop was inter-row hoed. The crop was hoed for a second time in mid December and this was closely followed by an application of Vitec King Kelp and Biosea fish fertiliser, to encourage plant growth.

By late December the paddock had fewer weeds than paddock A2 but the sweet corn plants still appeared to be short and weak. It was hoed for the third and final time in mid January. Some remaining fathen in the rows was hand pulled, leaving behind some black nightshade, wireweed and cornbind amongst the crop. Despite the weeds, the crop picked up considerably and grew well throughout February. Following harvest the crop residue will be thoroughly mulched and a winter green crop of oats or barley will follow.

Special thanks to Ravensdown Fertiliser for continuing to supply Kowhai Farm with solid fertiliser over the last year. This included R.P.R, elemental sulphur, trace elements and lime. Finally I'd like to thank Dean Judson from the Lincoln University Mixed Cropping Farm and Shanon Dunnnett (Kowhai Farm summer worker) for all their hand work on Kowhai Farm over what has been a really full-on season.

Anthony White, Farm Manager.

Denmark bans Roundup

In September 2003 Denmark imposed a ban on the spraying of Roundup following the release of data which found that glyphosate, the active ingredient in Monsanto's Roundup herbicide has been found in groundwater. The chemical has, against all expectations, sieved down through the soil and polluted ground water at a rate of five times more than the allowed level for drinking water, according to tests



done by the Denmark and Greenland Geological Research Institution (DGGRI). "When we spray glyphosate on the fields by the rules it has been shown that it is washed down into the upper ground water with a concentration of 0.54 micrograms per litre. This is very surprising, because we had previously believed that bacteria in the soil broke down the glyphosate before it reached the groundwater," says DGGRI.

Denmark obtains most of its drinking water from groundwater. Although concentrations in drinking water did not exceed permissible limits, it was "worrying" that unacceptable quantities of glyphosate and its breakdown product AMPA might build up via drainage in the uppermost levels of groundwater. From 15 September, autumn spraying of glyphosates will be banned on sites "where leaching is extensive because of heavy rain". There are a number of exceptions to the new restrictions, which are subject to revision after an interim consultation period. In a joint response, Cheminova, Syngenta and Monsanto, which manufacture or sell glyphosate in Denmark condemned the government's move as "unacceptable" for the producers or Danish farmers. Glyphosate could only be identified as a threat by ignoring "scientific findings and knowledge", they said. According to the firms, the restrictions appeared to be based on finding of glyphosate at one metre's depth in the soil. This "can hardly - and only with the most narrow political intentions - be regarded as groundwater, and certainly not as drinking water", they complained.

Advertisements – your ad could be here! Contact Mary to place your ad in the next issue.

Canterbury Commercial Organics Group Newsletter

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If any of your details are incorrect please contact Mary at the return address.

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