Canterbury Commercial Organics Group

Newsletter

Issue No 22: March 2003

Contents

Coming Events	*Date*
CCOG Field Day	30 Mar
BHU Workshop: Non-chemical pest control	20 & 22 Mar
Organic Festival	16 Mar
Soil & Health Conference	9-11 May

The Newsletter is published three times per year by the Canterbury Commercial Organics Group, a non profit charity run by volunteers. Advertisements and submitted articles are most welcome.

Subscriptions: $10/yr email copy, $15/yr posted.

Contact:
Mary Ralston
Back Track
RD 12 Rakaia
Email: kem@xtra.co.nz

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

NEXT FIELD DAY

Sunday March 30 – Trees

If you are interested in trees for nuts, timber, fruit, shelter or just to sit under on a hot day, then come to the next CCOG field day which will be held on **Sunday March 30 at the Quality Tree Company, Trents Rd, Christchurch, at 2 pm.** This is a good time of year to start planning your winter plantings!

Linda Gardner and Ross Jamieson run the Quality Tree Company which is a specialist tree nursery and advisory service. Ross advises small and medium scale landowners on the options for shelter belts and tree crops on their land, which depend on factors such as shelter, the site's soil type, water availability, climate, etc. Linda runs the nursery which provides high quality tree stock – walnuts, hazelnuts, timber trees such as oaks, and a range of fruit trees such as apples, pears, almonds, feijoas, and figs. Over 20 different varieties of Heritage apples are raised which are hardier and more disease resistant than the modern ones, and therefore more suitable for organic growing.

Ross and Linda will talk to us about their operation and some of the factors to consider when planning a tree planting project, and we will have a tour of the property to have a good look at the trees, finishing up with a look at the clay brick house they are building.

Directions: Coming from Christchurch, go to Hornby and turn left into Shands Rd, then after several kms turn right into Trents Rd. The Quality Tree Co is 1.5 km down Trents Rd on the right (green letterbox, Rapid number 205). Alternatively, travel down the Main South Rd to Templeton and turn left into Trents Rd (just past Cookie Time), go 2 km and the Quality Tree Co is on your left. Go down the driveway and park near the shed.

Date: Sunday March 30, 2003

Time: 2.00 pm at the Quality Tree Co, Trents Rd, Christchurch.

Bring: Coat and gumboots if wet, gold coin donation to help cover costs, all your friends who are interested in trees.

Enquiries: phone Mary Ralston 03 3029202.

Crop and Food Research Organic Cropping Guides

Crop and Food Research at Lincoln has produced draft organic crop guides for some arable and vegetable crops. Draft general guides on pests, diseases, weeds and soils have also been written. The guides can be viewed on the web at www.guidetoorganics.com and feedback is being sought. Any comments or suggestions are welcome and can be sent to Crop and Food through the website, or sent to Mary Ralston, email kem@xtra.co.nz, phone 03 3029202. If you do not have access to the web but would like a copy of any of the guides, contact Mary at the above number.

Guides have been written for the following arable crops: wheat, barley, borage, linseed, lentils, clover seed, grass seed, maize.

Vegetable crops: asparagus, capsicum, carrots, onions, peas, squash, vegetable brassicas, potatoes, tomatoes.

Organic Discussion Group

The Central Canterbury Organic Growers Technology Transfer Project (funded by the MAF Sustainable Farming Fund) met again for the first time in 2003 at a linseed field day at Rakaia held by Functional Whole Foods. More meetings are planned for this year. If anyone is interested in more information or in joining the discussion group, please make contact with Sue Cumberworth (sue@agribusinessgroup.com) or Anthony White (anthony.white@heinz.co.nz).

Canterbury Organics

If you are interested in information on the organic certification scheme for small scale growers at reasonable cost, please contact Stephanie Brown on 365 5038, or email corganic@organics.org.nz

Tree Crops Field Days

Sunday 23rd March Quince field day at Lowry Peaks, Culverden Contact person: Barbara Nicholas, ph. 337 2040

We will visit the property of David and Jocelyn Davison. This is a property with trees dating back over a hundred years, and more recent plantings. In particular we will be looking at the Quince orchard There will also be an opportunity to look at the recently established truffiére. We are invited to eat our lunch in the wonderful established gardens, before starting the field trip at 1 pm.

To get there: travel Christchurch to Culverden. Turn right by the Mobil Garage and drive down St Leonards Road. Follow road for about 6 km until you reach a T-junction – turn left (road becomes a gravel road). Entrance to Lowry Peaks is one mile along road, through stone gate on your right.

Fine lime boosts soil biology & productivity

Lime is usually applied to raise soil pH in acid soils or to maintain soil pH at desirable levels. Lime also has many other more startling but less well known benefits: in particular fine lime acts as a stimulant to encourage soil biological activity. The applications of small amounts of finely ground lime flour can generate a spectacular pasture response resulting from the increased levels and activity of soil organisms such as earthworms, bacteria and fungi. N.Z. soils tend to be acidic (low pH). Granular lime has been historically applied to counteract this and lift pH to optimum levels of between 5.8 and 6.2; in this range most of the nutrients required by pasture species are at their most readily available.

When lime is applied it supplies calcium to the soil – when very fine lime is used instead of granular lime, there is an immediate lift in soil solution pH because of its fine particle size and therefore greater surface area. Also, for his reason, less weight of lime needs to be supplied. Calcium supplied by the lime is released faster than the soil can buffer it, leading to a boost in soil biological activity and an increase in the uptake and availability of many nutrients. Earthworms are among the most responsive of the soil biota to changes in the calcium level within the soil solution. (*from Canterbury Farming, Feb 2003*)

Workshop for Organic Growers at BHU

NON-CHEMICAL PEST CONTROL

BHU Workshop for Small Growers
March 20 & 22 10 am - 4 pm

The Workshop will cover theory and practice of controlling or avoiding pest problems in organic and sustainable farming and gardening systems; how to design a resilient system with less requirement for intervention, and when intervention is required, what the best practices are.

Check out our website www.bhu.co.nz. This has details on workshops and other activities at the BHU (Biological Husbandry Unit). We are keen to have more people subscribe to our emailing list for info on future workshops and research reports. Email thebhu@quicksilver.net.nz or phone 325.3684 to be put on our mailing list or for further information.

Workshop Details

Thursday March 20th and repeated on **Saturday 22nd 10 am to 4 pm**

Fee $10 per family; bring appropriate gear for outside including boots if wet.

Directions: Enter Lincoln University through Gate 2 (Calder Drive) and take first right up Farm Road, past nursery and cricket grounds, straight through at the intersection into the Horticultural Research Area (Biological Husbandry Unit signposts begin). Park in the areas indicated.

Organic Food and Wine Festival, Oamaru 15-16 March

Saturday: Dinner with guest speaker Tim Jenkins 15 March (bookings essential)

Sunday: 10 am – 5 pm Festival held in the historic precinct, Harbour St, Oamaru. Organic food, wine, beer stalls; music, performers, artists and crafts. Discussion forum. For more information ph Marie 03 434 7573, or email organic_coop@hotmail.com

Mechanical Weed Management of Cereal and Vegetable Crops

Bo Melander, from the Danish Institute of Agricultural Sciences, visited Lincoln in October 2002 and gave a presentation to the Central Canterbury Organic Growers Technology Transfer Project. This is a summary of his presentation, which was originally written for the above group and appeared in their newsletter in November 2002.

Weed control in vegetable crops

1. Intra-row (i.e. within the row)

- Hand weeding is essential in direct sown and slow developing crops, e.g. onions and carrots. 200-500 hours per ha is common, although this can be reduced to 100 hrs/ha. In transplants (e.g. cabbage, celery and leek) only 5-50 hrs/ha may be needed. Weeding is usually done by 12-13 people lying on a tractor-drawn bench.

2. Inter-row (between rows)

- Should not be a problem with good machinery. Protective discs can be used to protect crop. S-shaped tines and goose feet are very popular. Finger tines can also be used which are easy on soil structure.

- When weeds are too large for tine weeding (e.g. after a spell of wet weather), emergency solutions need to be used, e.g. PTO mounted brush weeder which is very popular in Europe with vegetable growers. This can control large weeds even in wet conditions.

- It is common to have two implements in Germany – hoe and brush or rotary cultivator.

- Steering is crucial! The old method is to have person sitting on the implement mounted on rear of tractor; or implement can be front mounted (for the highly skilled!). Nowadays there are automatic steering systems that have a camera box which senses crop rows.

Weed growth stage is significant

Example: *Chrysanthemum segetum*

1. white thread stage – mechanical weeding very easy; flame weeding no effect

2. cotyledon stage – mechanical and flame weeding easy with all implements

3. two true leaves – harrowing possible but high intensity may be required; flaming possible, hoeing, rolling cultivator, brush weeding, rotary cultivator: all easy

4. seven true leaves – harrowing and flaming no effect; hoeing possible; brush weeder and rotary cultivator: easy

Pre-emergent methods

- Improve the effect of subsequent post-emergent treatments.

1. Cultivation in darkness

- Many weed species need light to break dormancy and germinate, so cultivating in the dark can reduce weed seed germination.
- Reduces number of weeds, delays germination.
- The benefit is not so much a reduction in weed numbers but delay in germination.
- A cheap but difficult technique.
- Highly complex – interacting factors of dormancy, soil conditions (structure, humidity, temperature), composition of weed flora.
- Other methods still needed.
- No need to do it at night! A light-proof cover can be put over the cultivator.

2. False (stale) seedbed

- The longer the duration of the false seedbed the better the effect.
- Several cultivations are used to try to deplete weed seed bank.
- Good effect on early germinating weed species (25-100% reduction, depending on weather conditions); for late germinating weeds there may be the opposite effect (up to 400% more).

3. Pre-emergent flame weeding (see picture)

- For best results do as near to crop emergence as possible (if possible 1 day beforehand).
- Can combine with stale seedbed technique.
- Gas consumption 50-60 kg/ha at a driving speed of 5-6 km/hr.
- Temperatures reach 800-900 deg C under shield.
- Flaming more effective than harrowing but more expensive and less sustainable

4. Pre-emergent harrowing (see picture)

- Both flaming and harrowing methods create favourable conditions for subsequent post emergent treatments by reducing weed numbers and delaying early weed growth.
- Pre-emergent harrowing is only suitable for crops sown deeper than 2.5 cm.
- Risky operation, but some crops (e.g. onions and leeks) can compensate for reduction in plant numbers.
- Use of both pre-emergent flaming and harrowing is most effective in slow germinating crops.

Post emergent methods

1. Harrowing (tine weeding)

- Simple technology, low purchase and operational costs.
- Use on well-established crops – otherwise too much damage.

2. Finger weeder

- Wheels with rubber fingers – effective on small weeds and well established crops.

3. Brush weeder

- Vertical brushes on either side of crop row (e.g. onions).
- Can move soil onto row or away from it.

4. Torsion

- Goose foot and fingers with protective shields

5. Hoeing close to row

- 50 cm row space/ 2.5 cm from crop plants in single rows (steering crucial!!). Soil can be marked with conical wheel to make steering easier.

Strategies for direct sown onions

- Start with false seedbed and delay sowing
- Sow in single rows
- Pre-emergent flame weed or harrow
- Possibly flame weed at flag leaf stage – risky
- Vertical brush weed at 6-8 cm (moving soil away)
- Second brush at 8-10 cm (move soil in)
- Hand weed
- Brush or weed harrow at 10-12 cm if necessary
- Inter-row harrowing if required

Strategies for direct sown carrots

- False seedbed and delayed sowing
- Preferably sow in single rows
- Use a competitive variety with a large canopy to suppress late emergent weeds
- Pre-emergent flame weed
- Hand weed twice
- Regular inter-row hoeing close to the rows, ridging when possible

Weed control in cereal crops (Using weed harrowing and inter-row hoeing with increased row spacing)

Strategy for weed harrowing in spring cereals

- Pre-emergent – 1-2 days before crop emerges and before the weeds develop true leaves
- Post emergent – when the crop is at 2-3 leaf stage. Very effective but risk damage. If very competitive weeds are present, the sooner the better.
- Selective – when crop starts to elongate. Effective against weed species with a prostrate growth habit and no tap root. Controls weakly rooted and climbing weeds species very effectively; high crop tolerance; can go fast (8-10 km/hr) with little damage; row space 25 cm (but could use 12 cm).
- Some farmers use only one – most use pre and post. If doing pre always follow with post

Factors to consider

- Growth stage difference between crop and weeds
- Pre-emergent harrowing important
- Weed species composition and weed pressure affect timing
- Seed bed preparation (level) important
- Crop seed vitality and variety important and sowing rate increase by 10-20%
- Nutrient placement (use of slurry in Europe)
- Weather

Inter-row hoeing

Advantages of hoeing

- Effective inter-row control of troublesome weeds (e.g. taproots)
- Some control of perennials
- Less sensitivity to timing
- Breaks soil crusts

Disadvantages

- Steering is crucial
- Low intra-row weed control
- Low working capacity
- Yield decline due to wider row space

Key notes

- The above techniques are a "toolbox" of possible methods. The appropriate ones will depend on the crop, the growth stage of the weeds, weather, etc.
- In Denmark/ northern Europe summer temperatures are lower and it is usually less windy than in New Zealand so farmers are not as concerned about cultivating and losing organic matter.
- Weed growth stage is significant (see box).
- Try to get rid of perennial weeds.
- Avoid stony soils.
- Heavy and wet soils are more difficult.
- Hand weeding may still be needed.
- Need to have intensive weed control in other crops in the rotation.
- Start on a small area.

Effects of Green Manure Crops on Nitrogen Loss and Availability

C.J.E. Fowler, Lincoln University

This article is a very short summary of Caroline Fowler's Honours dissertation. For the full dissertation, contact Bruce Snowden of Heinz-Watties, bruce.snowdon@heinz.co.nz.

Introduction

Nitrogen is the nutrient required in the largest quantities by arable crops, and it is the most difficult nutrient to manage in arable cropping systems due to the complex physical, biological and chemical transformations in the soil and its susceptibility to loss through gaseous emissions and leaching. Reducing losses of N to the environment is now a major aim of agriculture. As certified organic farms are prohibited from using soluble N fertilisers, crop rotations which fix and retain N are the primary means of maintaining the supply of N to crops.

Green manure crops can improve the efficiency of N use in both conventional and organic cropping systems. A green manure crop is a crop grown during the autumn and winter, during which time it accumulates N from soil reserves and/or the atmosphere through N fixation. N accumulated in the green manure can then be made available to subsequent crops when it is incorporated into the soil.

The environmental and agronomic benefits of green manures depends on many factors (such as climate, soil type and crop species) which affect the ability of a specific green manure to grow and accumulate N. The N benefit to the subsequent crop is dependent on the release of N from the green manure coinciding with the N demand of the main crop.

The objective of this study was to improve the understanding of N accumulation by legume and non-legume green manures, their efficacy in preventing N leaching loss during winter and supplying N to the subsequent crop. To achieve this, green manure crops were grown and N leaching losses monitored. An annual ryegrass crop was grown after green manure incorporation to determine N availability.

Background

In Canterbury, there is over 750,000 ha of mixed cropping farmland. A drawback of this system is that a substantial amount of N can be leached following ploughing of pasture, particularly if this occurs in autumn. Many New Zealand aquifers have nitrate concentrations which exceed nitrate drinking water guidelines, and in Canterbury, the ploughing of pasture is considered one of the main sources of groundwater contamination. In organic systems, the supply of fixed N from the pasture phase is the primary source of N for arable crop nutrition. Leaching is therefore not only environmentally undesirable but undermines the ability of an organic system to produce profitable yields. Green manures provide a management tool for conserving soil N during winter when nitrate is most susceptible to leaching and transportation into groundwater. In addition, legume green manure species may contribute large net additions of N to the cropping system.

The Nitrogen Cycle

New Zealand soils contain about 0.1-0.6 % N in the top 15 cm, most (> 95 %) of which is present in soil organic matter and therefore not immediately available for plant uptake. The major biological source of N is through symbiotic N fixation. *Rhizobium* species convert dinitrogen gas to ammonia which is then utilised by the legume to form amino acids and protein. The N is released into the soil during microbial decomposition of legume plant biomass and decay of roots and root nodules. Also, in grazed systems large amounts of N can be returned in urine and dung, with the N loading rate under a sheep urine patch estimated at 500 kg N/ha.

Gaseous losses of N occur through the processes of **volatilisation** and **denitrification**. Volatilisation of ammonia is associated with surface applications of soluble N fertilisers and urine and dung. Denitrification losses can occur through biological or chemical processes carried out by anaerobic microorganisms and is therefore most likely to occur in poorly drained soils.

N can be leached out of the root zone into ground and surface waters. Ammonium ions are unlikely to be leached as they are fixed by clay lattices, but nitrate is readily leached when water drains through the soil profile. The magnitude of N loss is proportional to the concentration of N in the soil and the volume of leaching water.

The conversion of organic N (eg. crop residues, green manure, animal waste, soil organic N) into plant available forms occurs via the process of **mineralisation**, a complex process which is carried out by a range of soil microorganisms. Organic N firstly forms ammonium which is then oxidised to nitrate (**nitrification**). Ammonium and nitrates released from organic matter are taken up by plants or assimilated into the soil organic matter via microbial **immobilisation**. Mineralisation and immobilisation occur simultaneously and the amount of N available for plant uptake depends on the C:N ratio of the organic matter, which is usually required to be less than 25:1 for net mineralisation to occur. Also, mineralisation is affected by levels of soil microbial activity, which is in turn affected by factors such as pH, moisture and temperature.

Leaching is unlikely to occur in summer but poor uptake of N by crops during dry summers can lead to an accumulation of N in the soil with the potential for higher leaching losses over the following autumn and winter. Mineralisation and nitrification of N is enhanced in autumn as warm moist conditions promote microbial activity. Most N leaching occurs in the winter/early spring when rainfall exceeds evapotranspiration and crops are not taking up large amounts of N due to cold temperatures or if the ground is in fallow.

Green manures are non-commercial crops which can be grown in sequence with cash crops, occupying land which may otherwise be fallow. They are also referred to as cover crops, catch crops and break crops. A broad range of legume and non-legumes are used. Legumes include vetch, lupins and clover. Non-legumes which can be used alone or in mixtures with legumes include oats, ryecorn, barley, and brassicas such as mustard and turnip, and annual ryegrass. The initial purpose of a green manure is to protect N

from leaching loss during drainage events, although the N mineralised after its incorporation may also be leached.

Legumes or non-legumes?

In situations of low soil N the growth and N uptake by non-legumes may be limited by the N supply. However, in conditions with large amounts of available N, non-legumes are found to take up more than legumes. Despite fixing a proportion of their own N, legume green manures can still conserve substantial amounts of residual soil N. Also, legume green manures can continue to grow after soil mineral N has been depleted. Mixtures of legumes and non-legumes may also more efficiently exploit available light, water and other nutrients. Nitrate which is deep in the soil profile is more at risk of being lost to leaching, so N taken from deep soil layers by a plant with long roots will reduce N losses more than uptake of a similar amount from upper soil layers. Also, N fixed by green manure crops is important because it represents a net increase in N to the soil – plant system.

Green manure N supply to subsequent crops

Although it is well documented that green manures can considerably reduce nitrate leaching loss, their effect on N supply for succeeding crops is less clear. Legume green manures can normally supply all or some of the N requirement of the following crop but consistently large reductions in N availability and crop yield have been observed following the incorporation of non-legume green manures. The negative effect of non-legumes on subsequent crop yields is usually attributed to net N immobilisation due to the relatively high C:N ratios.

N accumulation by green manures appears to be poorly related to N supply to the following crop. It was found that wheat recovered 14 % of green manure N from a lentil green manure. N recovery seems higher from leguminous green manures. It has been suggested that the primary advantage of green manure production may be the replenishment of stable organic matter reserves.

Green manure N not accounted for in subsequent crops or in soil organic matter is assumed to be lost from the system via leaching or gaseous losses by denitrification and ammonia volatilization. Unaccounted for N is usually in the vicinity of 20-30 % for legume residues and 9-16 % for non-legume residues.

Factors affecting green manure mineralisation rate

Mineralisation depends on a range of factors which affect microbial activity, especially the C:N ratio of the decomposing material. In agricultural soils, the C:N ratio should be less than 25:1 (>2 %N) for net mineralisation to occur. Leguminous plant material typically has a C:N ratio in the range 13:1 to 25:1; cereal straw and mature plant stalks fall between 60:1 to 80:1. Foliage usually has a lower C:N ratio than roots and stems. Temperature is a major factor influencing microbial activity and therefore decomposition. Soil microorganisms function at maximum growth and activity in the temperature range 20 – 30 deg C, but most can survive low temperatures (<0 deg C).

The pH is an important factor influencing decomposition. Decomposition proceeds more rapidly in neutral to slightly alkaline soils. The rate of N mineralisation from organic matter generally increases with increasing soil moisture content.

Other effects of green manures

Green manures may improve the availability of other nutrients, eg phosphorous. Much of the P accumulated in green manures can be directly utilised by the following crop. A green manure crop can suppress weeds. Changes in soil physical properties associated with green manures include improvements in aggregation, infiltration capacity, bulk density temperature and hydraulic conductivity; these changes are generally associated with the addition of young organic matter. Green manures can have a direct effect on soil erosion by providing the soil with a living or mulch cover.

Experimental design

The experiment consisted of four green manure crop treatments, replicated four times and arranged in a completely randomised design. The treatments were sown on 15 March at Kowhai Farm, Lincoln, a Bio-Gro certified property:

1) bare fallow (regularly weeded)
2) lupins
3) oats
4) oats - lupins

Results

All the green manure crops significantly reduced the amount of N leached in comparison to the fallow control. N losses were very similar for all the green manure crops. Total N loss from the fallow

control was approx. twice that of the green manure crops.

Above ground dry matter production of the ryegrass was significantly greater following the oats-lupins, than the fallow treatment. The N concentration of ryegrass above ground dry matter was highest following the lupins and lowest following fallow, and the opposite trend was observed for C:N ratio. Total N uptake by the ryegrass crop was significantly greater following the oats-lupins than the fallow but there was no significant difference between other treatments.

Conclusions

1. All the green manure crops reduced the amount of N leached through the winter compared to the fallow.

2. The legume, non-legume and bicultural green manures were equally effective at reducing N leaching losses.

3. Most of the N loss from the green manure treatments occurred during the first drainage event in mid April. This demonstrated the importance of having an established green manure prior to the onset of autumn rain.

4. N loss from all the treatments was low indicating that the soil used for the experiment was low in available N.

5. The green manure crops produced a similar amount of dry matter but N uptake by the crops was greatest for the lupins and oat-lupins crops, due to N fixation.

6. All the green manure crops increased the availability of N in the soil, compared to the fallow.

7. Dry matter production of the succeeding ryegrass crop was greatest following the biculture green manure, despite the fact that this crop accumulated less N than lupins alone.

8. N availability from the lupins may have been compromised by greater losses of N through leaching and denitrification, resulting from rapid N mineralisation after incorporation.

9. Green manure crops are an effective method for conserving N during the winter and improving N availability in conventional and organic cropping systems. Further research is needed to substantiate other non-N benefits associated with green manures, such as pest, weed and disease control, and improvements in soil physical properties.

Organic Websites

CCOG's home page –
www.organics.org.nz/ccog/ccog.html

Organic Garden City Trust –
wwww.organics.org.nz/

Organic Certifiers – www.biodynamic.org.nz
www.agriquality.co.nz
www.bio-gro.co.nz

Crop & Food Research's draft guides to organic crops – www.guidetoorganics.com

Lincoln University's Biological Husbandry Unit – www.bhu.co.nz

Organic Products Exporters of New Zealand Inc – www.organicsnewzealand.org.nz/-

This website is particularly good – has links to everywhere, lots of news and the publications library has lots of information. The Organics New Zealand Library contains over 400 publications with many hardcopy documents available for download. Alternatively, the site provides links to the source location of some material. The directory also contains over 560 company listings - all companies who are active in the New Zealand organic industry. In addition, the Educational Database provides links to current New Zealand courses available in organics. The library and directory has been developed by OPENZ - Organic Exporters of New Zealand Inc. with assistance from the MAF Sustainable Farming Fund.

Soil and Health Assn – www.organicnz.pl.net/

Kiwitaiki – organics for tomorrow website – www.kiwiorganics.co.nz

New Zealand Nature Farming Soc – www.emnz.com

Letters to the Editor, news items and notices of events are welcome. Please send any newsletter material or feedback to the editor, Mary Ralston, Back Track, RD 12, Rakaia, email kem@xtra.co.nz

New certified organic source of potassium

NSD (Nodulated Stack Dust), a source of potassium sulphate, has been certified by AgriQuality as a certified organic fertiliser. NSD is produced by nodulising the stack dust extracted from the exhaust gases leaving the cement kilns at the Holcim Cement works at Cape Foulwind. The dust is granulated and converted into nodules for clean and easy application by ground spreading or aerial topdressing. Bruce Hamilton, Chairman of the Buller Community Fertiliser Company, says the NSD product has not changed in the process of attaining organic certification and still delivers the same nutrient and cost benefits it always has.

Murray Craighead, a consultant agronomist from Christchurch based Nutrient Solutions, says NSD is a particularly effective fertiliser for horticulturalists and dairy farmers. "NSD is a good option for dairy farmers wanting to replace potassium losses on their farms. The potassium is in the sulphate form which is the preferred form for crops. It is by far the most cost effective source of potassium sulphate and on top of that are the added liming benefits the product offers."

(*From Canterbury Farming, Feb 2003*.)

National Conference of Soil & Health Association of NZ

9-11 May 2003, Christchurch

Organic Solutions - Cultivating Organic Communities

Registrations are rolling in now for this organic event of the year. Join the other participants and come along and learn more about organic practices, see organic school gardens in action, visit community gardens, learn more about soil and health, practice organic networking and participate in the growing organic community of Aotearoa-New Zealand.

There will be plenty of opportunity for the general public to find out more about organic growing practices. The conference is to be held at the Christchurch Polytechnic Institute of Technology's (CPIT) city campus. On Saturday an Organic Trade Exhibit will be held, open to conference participants and the public in the Rakaia Centre at the city site of CPIT. The conference will host commercial growers, home gardeners and consumers of organic food.

INFORMATION ABOUT THE PROGRAMME

FRIDAY 9 May: 3pm Registration etc. Opening; Keynote speakers

SATURDAY 10 MAY: Trade exhibitors; Parallel workshop sessions; Dinner

SUNDAY 11 MAY: Field trip to BHU at Lincoln. Closing Session; Lunch; AGM

Any enquiries, phone either 09-419 4536 or 03-365 5038. Check the website www.organicnz.pl.net for more information.

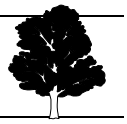
Advertising

Advertising rates are $1 a line (8 words a line) up to a quarter page, $25 per quarter page, $50 half pg, $90 page. Enquires to Mary kem@xtra.co.nz, or phone 03 3029202.

FOR SALE Bio-gro apples available from late March at Robbie's Patch, Bethels Rd, Ellesmere, OR by courier – 18 kg for $25. Gala, sunset, royal gala, fiesta, and later braeburn, grannies and sturmer. Can order a rainbow mix! Phone 329 5725 and leave a message.

Organic Oasis has shifted and our new contact details are:

Organic Oasis Ltd
48 Watsons Rd, Harewood
Christchurch 5
Ph: (03) 359 7409
Fax: (03) 359 6301
Email: organicoasis@organics.org.nz



Canterbury Commercial Organics Group - Newsletter

C/- Mary Ralston
Back Track
RD 12 Rakaia

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