

# Organics in Canterbury

Issue No 41: July 2009

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This newsletter is published by the Canterbury Commercial Organics Group, in association with Heinz Wattie's, Canterbury Organics and the Biological Husbandry Unit, Lincoln University. Back issues of the newsletter (and other exciting information!) can be found on our website: [www.organics.org.nz/](http://www.organics.org.nz/)

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Articles, notices, letters to the editor and advertisements are always welcome.

## CCOG & Canterbury Organics mid-winter event

### Speakers & organic lunch – Sunday July 26, Lincoln

**Topics:** Preservation & restoration of Waiwera – Robin Wybrow  
Organic farming in Ireland – Charles Merfield (Merf)

**Time:** 10.30 – morning tea & speakers, 11.45am – lunch  
After lunch – Canterbury Organics AGM (no pressure to stay!)

**Cost:** Lunch/speakers \$20, speakers & morning tea \$5. Pay at the door. **Venue:** Biological Husbandry Unit, Lincoln University. **Bookings:** Please book by 16 July. Contact Gilda at Canterbury Organic [corganic@organics.org.nz](mailto:corganic@organics.org.nz), ph 325.1344, or Mary Ralston [mary.ralston@xtra.co.nz](mailto:mary.ralston@xtra.co.nz), phone 03.302.9202.

**Directions:** Signs will be out. Enter Lincoln University on Calder Drive (Gate 2) from Ellesmere Junction Rd. Go past Student Union building, turn right, go past tennis & cricket grounds, cross gravel road into BHU & Organic Training College grounds.

**Speakers:** 1. **Robin Wybrow** (Upoko o Te Runanga O Wairewa) will speak about preserving and restoring nature's balance & plans for organic farming. His focus will be on discussing the restoration of Te Roto o Wairewa (Lake Forsyth), the institution of a maitaitai out from Te Oka Bay southwards and plans for an farm which spans Te Oka Bay to Magnet Bay and up to 900 m (1900ha). Robin would like to farm this organically. Robin is on the Board of He Oranga Pounamu and Te Runanga O Ngai Tahu and has worked for Ngai Tahu as a Project Development worker for 8 years.

2. **Charles Merfield (Merf)** (organic researcher, grower, consultant & one of founding members of CCOG) will speak on organic agriculture and horticulture in Ireland.



CCOG



Merf is originally from the UK where he studied commercial horticulture before managing organic vegetable farms in the UK and then NZ where he has spent most of the last fifteen years. This included studying for his masters and PhD at Lincoln University in agro-ecology and organic crop production. He also spent much of that time working with Tim Chamberlain, developing cropping systems and machinery, as well as being the founding chair of CCOG, and editor of the newsletter.

Merf has just finished a two year contract in the Republic of Ireland working for Teagasc - the Irish Government's Agriculture and Food Development agency - as the only dedicated organic scientist in the country. After initially working on nutrient management strategies for organics he then worked on pretty much anything that farmers and growers had problems with including weed management, machinery, soil ecology, pests and diseases, research and extension, such as field days and workshops. Now back in NZ, he is working on a number of projects including consulting, research, a weeding machinery company [www.physicalweeding.com](http://www.physicalweeding.com) and an organic farmland investment company [www.agro-ecological.com](http://www.agro-ecological.com).

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### **Demand grows for organic milk & wool** *from an article by Colin Willisroft, Rural News*

Demand for organically produced dairy and wool goods continues to grow. Fonterra recently ran a recruitment drive to increase its number of organic producers, as it eyes overseas markets. Fonterra Organics category manager Rick Carmont says the co-op wants to triple the 17,000 organic cows it currently has to supply a large potential market in the United States, as well as the Asian market. He says organics is becoming a mainstream option for dairy farmers, with many of those who have made the conversion have been attracted by the economic benefits.

Figures produced late last year by the Agricultural Research Group on Sustainability – a project run by Lincoln and Otago universities – shows the operating profit of the medium organic dairy farm in the North Island was \$1736/ha, compared to \$1581 for a traditional farm of a similar size in the same area. 'That's clear, independent evidence that organic dairy farmers are being rewarded for their efforts,' Carmont says.

Fonterra offers an organic premium of \$1.05/kgMS, and 45c/kgMS during conversion. Last year Fonterra processed more than 40 million litres of fully certified organic milk. Its exports of organic dairy products have grown from nearly nothing five years ago, to more than \$30m last year, including organic cheese, yoghurt, milk powder, butter and milk protein.

The demand for more organic producers is mirrored by the wool industry. Wool Partners International chief executive Iain Abercrombie says demand for organic wool in the United States is currently outstripping supply. He said the company's export arm, Bloch & Behrens, has been working with organic wool growers for two years and has established regular business in the US in a joint venture with a large importer in that market.

Abercrombie says the US organic wool customer is currently paying \$1 per clean kilo over market prices and is willing to provide a further incentive in the form of payment towards shearing costs. The supply will be primarily for use in soft furnishings and as knitting wools. He says the customer has committed to pay a further \$0.50 cents per clean kilo towards the shearing of wool that meets organic certification requirements and is committed under contract. 'We would be delighted to hear from growers who would be in a position to supply into this order.' **Wool Partners International Limited can be contacted on phone: 03 357 0082, fax 03 357 0083, or email [info@woolpartners.com](mailto:info@woolpartners.com)**

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## Calendar of Events

**26 July Mid-winter organic lunch & speakers.** All welcome, please book by 16 July. See front page for details.

### Organic Dairy & Pastoral Group (ODPG) Upcoming South Island Organic Field Days

Date	Type of field day	Destination
Mid October	Sheep/beef and other options	North Canterbury
Late October/early Nov	Sheep/beef	Southland
Late November	Biodynamics - cropping/livestock	Canterbury

Dates, venues and more information will be given in future email notices and newsletters, or contact Dave Lucock, phone (03) 365 6804, [dave@agribusinessgroup.com](mailto:dave@agribusinessgroup.com)

**November 13-15 Second National Organic Conference** (organised by OANZ). University of Waikato. Theme: "Innovate: Go Organic!" The conference will focus on innovative ways to produce, market, and use organic products. Registration & information: [www.goorganic.org.nz](http://www.goorganic.org.nz).

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#### FOR SALE

**ORGANIC BALEAGE** 27 Individually wrapped Medium Square Bales of very good quality organic ryegrass and clover baleage for sale. \$120 + GST . Metabolic Energy value is 9.7, Dry Matter 43%. This has been tested by Hills Laboratories. Baled November 2008. Located in Motukarara, near Christchurch. Organic Rating C1 (Assure Quality). Please contact Simon Manson phone 03 3297807 or 027 3333 216, email [myra.manson@xtra.co.nz](mailto:myra.manson@xtra.co.nz)

**KELP** The world's richest source of iodine. Fresh, wild harvested certified organic NZ Giant kelp. Dried and milled for sale. Great fertiliser/stock health food. As seen on Country Calendar. Buy direct from us. Orders taken any size. Ph: 03-322-6115, Fax: 03-322-6132 or email [nzkelp@farmside.co.nz](mailto:nzkelp@farmside.co.nz)

**GREENHOUSE EQUIPMENT** 2 metal tables with coralite (corrugated plastic) tops, each 10 m long (they come in 3 sections for easy transportation) \$150/table. Growing trays, approx 200. Electric heaters for greenhouse (4). Fogger. Ph Mary or Kem 03-3029202 or email [kem@xtra.co.nz](mailto:kem@xtra.co.nz)

**FRUIT TREES** Certified Organic (OFNZ) Hazelnuts and Cherries.

**Hazels** - 1 to 1.5 m tall, 5 to 6 yrs. Whiteheart, Butler, Barcelona, Lansing, Ennis plus pollinators. 700 in total.

**Cherries** - Espalier trained, 2 m tall, 5 to 6 yrs. Sweet - Bartlett, Rossane, Rainier, Lapin, Stella (80 in total). Sour - Fanal, Montmorency, Richmorency (65 total). Numbers to suit any requirements. Located 20 km south of Timaru. Lifting this winter and sell bare rooted. \$22 each plus shipping. Also available tree guards and irrigation, please call to discuss. Contact Nathan [nath@treehugger.co.nz](mailto:nath@treehugger.co.nz), Tel 03-6126092 / 021-2292793.

#### WANTED

**CHEF/COOK FOR ORGANIC CAFE** Innovative and motivated person wanting to set up organic cafe/restaurant in South Canterbury. Situated on State Highway One at the Arowhenua Hotel and Camping Ground. Approx 35,000 to 50,000 people pass a day. Run as your own business if wanted and have total control and freedom over menu. Please contact Karen Collings [fish@opihiriver.co.nz](mailto:fish@opihiriver.co.nz)

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**ORGANIC GARLIC WANTED.** Contact Maree Hartley ph 03 3088977, email: [MareeH@spraymarks.co.nz](mailto:MareeH@spraymarks.co.nz) or [hartleys7@xtra.co.nz](mailto:hartleys7@xtra.co.nz)

### **LAND FOR LEASE**

**FULLY CERTIFIED LAND AVAILABLE** Approximately 9 ha of fully certified fertile ex-dairy land for lease. This land is close to Christchurch and has market gardening adjacent. Irrigation available. Please contact Simon on 03 3297807 or 027 3333 216 or email [myra.manson@xtra.co.nz](mailto:myra.manson@xtra.co.nz) to discuss.

**HORTICULTURAL SITE FOR LEASE** Spreydon Christchurch 3550 sqm 14 tunnel houses, some heated. Front shop & carparks, traffic flow 8200 cars per day, shade house area for produce. Site sheds, separate back access, workshop, soil mixing machine, garage, pits for soil. Lease full or part negotiable. Call Vanessa Anderson, ph 3430898 email [office@homescape.co.nz](mailto:office@homescape.co.nz)

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## **ODPG Field Day: Clearwater's Dairy Farm, Peel Forest**

The Organic Dairy and Pastoral Group held a field day at Jackie and Bryan Clearwater's dairy farm at Peel Forest in March. The Clearwater's farm, "Peelview", is 110 ha and has full organic certification. Jackie & Bryan Clearwater have been dairying for 15 years. They were sharemilkers, then leased a farm before buying "Peelview" in 1999. They always had a concern for the environment and were interested in organic farming since WOOFing days in Europe. Bryan has always felt that sustainability and organics should be something New Zealand farmers should embrace rather than feel threatened by, so they began their path to organic certification and are now fully certified with AsureQuality.

**Pastures and soil** Pastures are mixed species pastures with ryegrass, tall fescue, timothy, red and white clovers, chicory and plantain. 15 ha of barley is grown for silage and a brassica grown for winter feed. Bryan finds it hard to get the tall fescue established, so has relied more on ryegrass. With irrigation restrictions looming, they will try tall fescue again, which is deeper rooting and hence more drought resistant. Pasture is grazed on a 20 day rotation. Rainfall is 750 mm per year, with uneven distribution. Two soil types prevail: Mayfield silt loam which has good waterholding capacity, and Ruapuna silt loam which tends to be drier. Both have good nutrient status, and they regularly use soil tests and fertilise with solid fertilisers (RPR, quick lime, elemental sulphur, trace elements, potassium, humates, seaweed and organic sugar). The Clearwater's are also interested in the ideas of Elaine Ingham and the soil foodweb, and incorporate compost teas into the fertiliser programme.

**Irrigation** The Clearwater's have a 40 m well from which they can irrigate, however Environment Canterbury has found that their well is linked to Cooper's Creek, a local spring-fed creek that is the water supply for Peel Forest village. They may have irrigation restrictions in summer if the levels in the creek drop below a certain threshold. It seems that there is leakage from the shallow aquifer that feeds Cooper's Creek into the deeper aquifer that their well taps. There was discussion of the options the Clearwater's could use if restrictions were imposed:

- Building of gravity-fed ponds to create water storage – an expensive option, also uses good soils, and there will be considerable evaporation, so not ideal
  - Digging deeper wells – expensive and not necessarily a solution
  - Planting of alternative pasture types that would do well in non-irrigated summers and could "tap into" deeper soil moisture. Lucerne is deep rooting, can do well in a mixed pasture and produces well in summer. Kelvin Hicks at Hororata said he has had good success cross-drilling lucerne with fescue pasture mix, and by drilling alternative rows with lucerne and grass. The lucerne variety Torlesse did well and should be allowed to flower once each
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season (although some years it doesn't flower). "Revolution" was a fescue/ryegrass cross with good summer production.

- Stop water leaking down – by re-drilling with a cable rather than a rotary drill which may allow water to run down outside the pipe.
- Can the measuring point be changed?
- Indoor fodder sheds – growing supplementary feed with very high nutritive value which could cover gaps in pasture production.

**Stock** The Clearwaters milk all year round, with a maximum of 220 cows in spring until the end of January, and 50 in winter. The herd is a mix of Jerseys and Friesians, although they are moving towards more Jerseys because the milking shed is a bit small for many of the large-framed Friesians. Animal health is generally good, with a very low incidence of mastitis. Some of the younger cows develop Johne's disease symptoms, the cause of which they do not know at present. They have tried homeopathic remedies for mastitis without success, but a drenching programme of garlic and cider vinegar is 60 - 70% effective.

**Adding value to their produce** An important addition to the dairying operation is a yoghurt-making business. They milk all year round so they can maintain milk supply to the yoghurt business. Development of this business has increased the workload markedly but the Clearwaters were always keen to add value to their product, and a premium yoghurt, made in the pot with non-homogenised, whole organic milk gives them a "point of difference" in the marketplace. They wanted to create a product that could tell a story of a sustainable organic farm, which a brand could be built around. Yoghurt is also an easy product to manage because of its low pH (low risk of disease contamination compared with cheese which is higher pH).

The milk is sold at a premium to the yoghurt business, which is owned half by the Clearwaters and half by Ad Sintenie, the chief yoghurt maker, and his wife Catherine. Ad has brought food industry experience to the business, as well as specialist yoghurt making skills. He experimented with different cultures before they settled on the current blends. To ensure consistency in the market place, absolute control of cultures is required, and it is this, as well as temperature, which gives the Clearwater yoghurt its unique flavour. Production has gone from 40 litres to over 2000 litres per week over the last 3 years. They are confident that they have a top quality product made from sustainably produced milk, which the market values.

The yoghurt factory has been built in a series of shipping containers at the side of the milking shed (no food miles here!). As they had a steady income from selling the bulk of their milk to Fonterra, there was little risk by starting on a small scale, testing the product on families and friends, then selling to small shops after a favourable response. The yoghurt still only uses less than 10% of the farm's milk, and is made only 2-3 days per week, so there is plenty of capacity that can still be filled. Yoghurt making requires milk that is consistent, and high in milk solids, which is one reason why barley silage is given to the cows to increase their dry matter intake.

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## **ODPG Field Day – Maurice & Neroli Hellewell's farm, Waimate**

The ODPG (Organic Dairy and Pastoral Group) held a very successful field day at Maurice and Neroli Hellewell's farm, near Waimate on 5 May. The Hellewell's farm is 65 ha of heavy fertile soils where they fatten cattle and lambs and have a small breeding flock of sheep. In the 1980s Maurice "tried and failed" with organics, then carried on with conventional farming. He worked off-farm for many years, then he and Neroli decided to try organics again, as they were both interested in the idea. They wanted to produce healthy, high quality, nutrient-dense food, and be involved in the marketing, rather than merely selling commodities. With only 64 ha, it had to

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be high value, and with organic premiums available they thought that they could have an economically viable unit.

The big difference between organics in the 80s and now is that back then, “you almost didn’t admit you were organic farmers,” said Maurice. Now there is great support and appreciation of organics, with a lot more information, mentors and field days.

Conversion to organics was done slowly, and the farm was fully certified with Biogro in 2006. The Hellewells are interested in biodynamics and are moving towards that certification. WWOOFers have been a great asset to the farm and an education for the Hellewells, for instance many young Europeans are vegetarians because they think it is wasteful and inefficient to raise stock on grains, and are amazed to see that in New Zealand cattle and sheep are grass-fed. Maurice is pleased to show them that he produces grass-fed high quality stock, which have meat with high levels of Omega-3 and other nutrients.

**Stock** The 150 ewes are a cross between Wiltshires and poll dorset texel cross. 150% lambing is achieved with all ewes and hoggets. They are never drenched, crutched or vaccinated, and have no problems with flystrike, footrot or internal parasites. Bought-in sheep do get flystrike at times. Lambs are sold to Canterbury Meat Packers and achieve a premium, although that finishes in May.

Cattle were the backbone of the farm during the conversion. The land is “too good” for breeding stock, so calves are bought in and fattened. They are held in a quarantine paddock for 24-48 hours, weighed and tagged so that weight gain can be ascertained, and so that the return from fattening can be compared with the return available from grazing dairy heifers. They were buying in steers of 450kg and fattening to 600kg, which gave a return of 70c-\$1/day. Now they buy in younger stock (250kg) and fatten to 500, with a net return of \$1-\$1.50/day, better than can be achieved from grazing other farmers’ stock.

A “home-made” techno-system is used so that pasture can be break-fenced. The cattle we saw would probably be sold on the conventional market. One section of the pasture was a “health strip” – an area of red clover and grasses. In the 1980s Maurice tried to rest one-seventh of the farm, but then decided a better practice would be to rest one-seventh of the paddocks at a time. The major part of the pasture was 8 years old, consisting of ryegrass, plantain, red and white clover and high sugar grass. A bale of straw was available for the cattle, to raise the level of dry matter in their diet.

**Cropping** The Hellewells have begun cropping as a way to increase farm profitability and as a route to pasture renewal. Linseed and barley were grown last season, although the wet February made things difficult. Maurice is finding that there is a great market for organic crops, and a good return although a high level of risk. Cultivating pasture in spring for summer crops is too tight a time frame but summer cultivation in a dry period, then planting a winter feed crop such as triticale allows for another cultivation and drilling to be carried out in spring. Stale seed beds are used to control weeds and the crops are tyne weeded. Green manure crops and undersowing are used to boost nitrogen levels in between crops.

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**Bruce McGill** (of Country Calendar fame) talked about his organic farm near Owaka in Southland. He described it as “large-scale management of an organic specialist production system, producing high quality food for niche markets”. He went into organics for health reasons, with the aim of producing better quality food with lower costs. The organic system gave a better profit margin. He has 660 ha, running 2500 ewes, 700 hoggets and 150 cows, and emphasised that organic farmers should concentrate on profit rather than maximising production.

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In the 1980s he believed superphosphate would solve production issues and then phased in a low-input system, and became organically certified in 2000. RPR and lime is applied on his hill country by plane. Bruce is emphatic that farmers should become familiar with basic soil science and make sure they understand their soil test results rather than leaving interpretation to a fertiliser rep. He recommends the Albrecht system (used by many soil testing services, such as Hills Labs), and the book "Science and Agriculture", by Arden Andersen.

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**Grant Howie** of Silver Fern Farms (SFF) gave a run-down on the current export market conditions for organic lamb. The main market is UK and Europe which is suffering badly from the global recession. This has meant supermarkets are discounting organic lamb to the price of conventional product, and both price and volume have taken a hit. Previously there was a 16% annual growth in sales which has now stopped. However many consumers still want high quality and Grant is confident for the long-term future of organic lamb. Many consumers have a lot of money to spend on quality food and are prepared to pay for it; and even when buying organic are not prepared to forego quality (tenderness, taste, flavour, consistency of quality). This is hard to achieve but if farmers can do this, there will be a market. Customers are also demanding convenience: many only want to spend 15-20 minutes preparing a meal so the wholesaler needs to supply many different cuts of meat, e.g., boneless alternatives to the traditional leg of lamb.

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**Aaron Mickle** discussed the role of Meat and Wool NZ. This organisation is a statutory body funded by levies on sheep, beef and goat meat, and wool. \$42 million a year is generated. Funds are spent on "industry good" research to benefit these rural industries, and compilation of statistics. Projects that are funded need to be ones that will offer an adequate return on investment but not necessarily be ones that a commercial company would investigate, for instance, monitor farm programmes such as the recent one run in the fine wool sector.

Meat and Wool NZ also run the Economic Service and Data Base which is available to farmers and industry. It shows long-term trends so is useful for forecasting before making investment decisions. The Economic Farm Survey has been going for over 50 years and surveys 550-600 farms annually. This survey has shown that the contribution of agriculture to the economy has grown 98% in the last 15 years, while the rest of the economy has grown 15%.

Market development is another area that Meat and Wool NZ is involved in. A successful recent campaign has been the promotion of red meat using the Evers-Swindell twins in advertising. Skills and education for the rural sector is also promoted by Meat and Wool NZ.

Twelve field staff are employed doing extension work and are "there to be contacted" says Aaron. Information and services available from Meat and Wool NZ include the inclusion of dates in an e-diary, speakers for functions such as this field day, statistics, R & D reports, a website, guidebooks, etc.

Any reasonable requests for funding for research or projects that would benefit the sheep, beef, goat and wool sectors will be considered. There are two types of funding pools that could be used: the Farmer Initiated Technology Transfer (FITT) fund, and the Research Fund. FITT funds demonstration projects up to \$10,000 + gst, for example on-farm trials and books. Application forms are available from Aaron.

**If anyone has any ideas for research trials or projects in the organic sheep or beef sectors, please contact Mary Ralston [mary.ralston@xtra.co.nz](mailto:mary.ralston@xtra.co.nz) or Dave Lucock [dave@agribusinessgroup.com](mailto:dave@agribusinessgroup.com) to discuss and we could put in an application to Meat and Wool for funding.**

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## Dung beetles may be introduced into New Zealand

**Background** New Zealand lacks native pastoral dung-burying beetles. A tropical species was introduced in 1956 but only established at Whangarei, probably due to poor climate matching. Two accidentally introduced Australian species are widespread, but have little impact because they are not abundant enough too small to move large volumes of dung; and are poorly adapted to feed on pastoral dung.

Dr Shaun Forgie, of Landcare Research, Auckland, has 3 year funding from the Sustainable Farming Fund to research the introduction of dung beetles into New Zealand. The project has applied to ERMA (the Environmental Risk Management Authority) for permission to introduce the dung beetles into the country. If successful, the beetles will be mass-reared at both Auckland and Lincoln and introduced onto organic farms nationwide. Organic properties will be crucial because of the risk that chemical residues from drenches on conventional properties may be toxic to the beetles. However in the long-term, Dr Forgie wants to see the beetles on both organic and conventional properties.

**Why are dung beetles so useful?** Dung beetles feed and breed in dung only! These beetles are so well adapted to a diet of dung that adult mouth parts have evolved to be able to feed on dung and nothing else. It is because they spend their adult lives burying dung in tunnels beneath all types of fresh animal dung, feeding and laying eggs in dung that they are considered an essential part of pastoral farming everywhere else in the world. Without them, dung sits around on pasture surfaces and accumulates to the point where worms and other insects can't deal with it. As a result, less forage is available for livestock grazing and long term pastoral productivity is reduced significantly.

**The benefits** Potential environmental and economic benefits of introducing specialist dung-feeding beetles into farms in New Zealand include:

- *Improved soil health and reduced runoff.* Increased aeration and water penetration into the soil, through beetle tunnels. Beetles reduce urine and liquid dung runoff, reducing microbial contamination, and pollution of waterways.
- *Reduced nitrous oxide emissions.* Herbivore dung accounts for 50% of New Zealand's animal N<sub>2</sub>O emissions. 80% of the nitrogen content of animal dung is lost by volatilization when dung remains on the pasture surface, compared to only 10% loss of nitrous oxide when buried by dung beetles.
- *Greater pasture productivity.* Stock will not graze around dung pats, reducing pasture productivity. Dung burial by dung beetles enhances grass growth, reducing reliance on fertiliser inputs.
- *Reduced fly pests and human disease.* Nuisance flies breed in dung. New Zealand has a very high rate of seasonal, sporadic campylobacteriosis compared to other OECD countries. Cattle dung and flies are believed to be the main source and vector of this disease.
- *Reduced infection by parasitic worms of livestock.* Dung burial significantly decreases the infective stages of parasitic worms of livestock when dung containing eggs and free living stages of parasites are buried greater than 10-15cm beneath the pasture surface.

**Impacts on native dung beetles** New Zealand has approximately 17 species of native dung beetle. Virtually all of them live in native forests but a few species are known to exist in high country tussock regions of the South Island. None have been found in un-natural (i.e., modified) pastoral environments, thus it is not expected that exotic dung beetles will impact on native dung beetle fauna.

*Thanks to Dr Shaun Forgie for permission to use this article.*

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## Monitoring the Whole Farm Business *John King*

Looking at situations from a holistic perspective is challenging. Many of the tools we use to measure business progress (gross margins and other financial and production measurements) are often too simple and specific. Conventional thinking argues that by looking at smaller and smaller pieces, we can explain the whole situation. The more specific measurements become, the less they can account for the synergy that whole situations radiate, that is, “the whole is greater than the sum of its parts”.

If you are interested in the sustainability of a farm business, web graphs are an ideal device. Web graphs are simple visual tools that show change in relationships over time. They are flexible and can contain as many different axes as the farmer wants to measure. The farmer can base these indices on extensive calculations or rough estimates. The idea is to capture a small number of indicators so farmers can easily view the overall progress of their situation.

Cuban scientists have been using web graphs for many years to help farmers view trends and patterns with their businesses and properties. Cuba has long recognised the land is the engine room of farming and food production. This changes the nature of business as Cubans focus on how the environment can substitute inputs because they can't buy them. The impact of energy restrictions and sheer necessity have promoted the need for ecologically sound enterprises, an interesting window for the rest of us given today's economic and energy circumstances.

The purpose of web graphs is to stimulate thinking by presenting changes over time. Below is an example of an American organic sheep dairy farm. They have decided to measure the following but note they are not simple indicators but often reflect complex relationships linking the environment to the sustainability of the farm business:

**Productivity:** They measure the weight of cheese/acre (rather than head) to directly link to the environment. While it does little to describe sustainability, it bridges the relationship between land and income.

**Sheep Health:** This indicator combines many other possible measurements associated with soil health and grazing management. Reducing the need for costly health interventions creates greater flexibility for cash surplus and recognises the soil-animal relationship. They chose the majority of the flock that are healthy as their measurement.

**Lamb Growth:** Each year they try to sell as many lambs to the works off the ewe as possible because selling stores wastes the income potential of the animal. The robust nature of the lamb crop reflects many other environmental relationships around animal health, genetics, and grazing management.

**Input Self-Sufficiency:** They use this indicator to show the reduction in major expenses such as hay, animal health, fertiliser, and maintenance. They use net income as a proportion of gross income, which is emphasising cash surplus and free money they can choose to put where they want.

**Fertiliser Production:** Their belief in generating their own fertiliser is so important in farming sustainably they have made this a separate indicator from input self-sufficiency. They measure it with loads of compost as a percentage of the total fertiliser needs of the property.

**Energy Self-Sufficiency:** They look at this separately because all activities on the farm require it. While primarily its focus is animal power on this property, later it will include purchased energy like solar and wind energy, gravity water systems, and more efficient horse drawn machines.

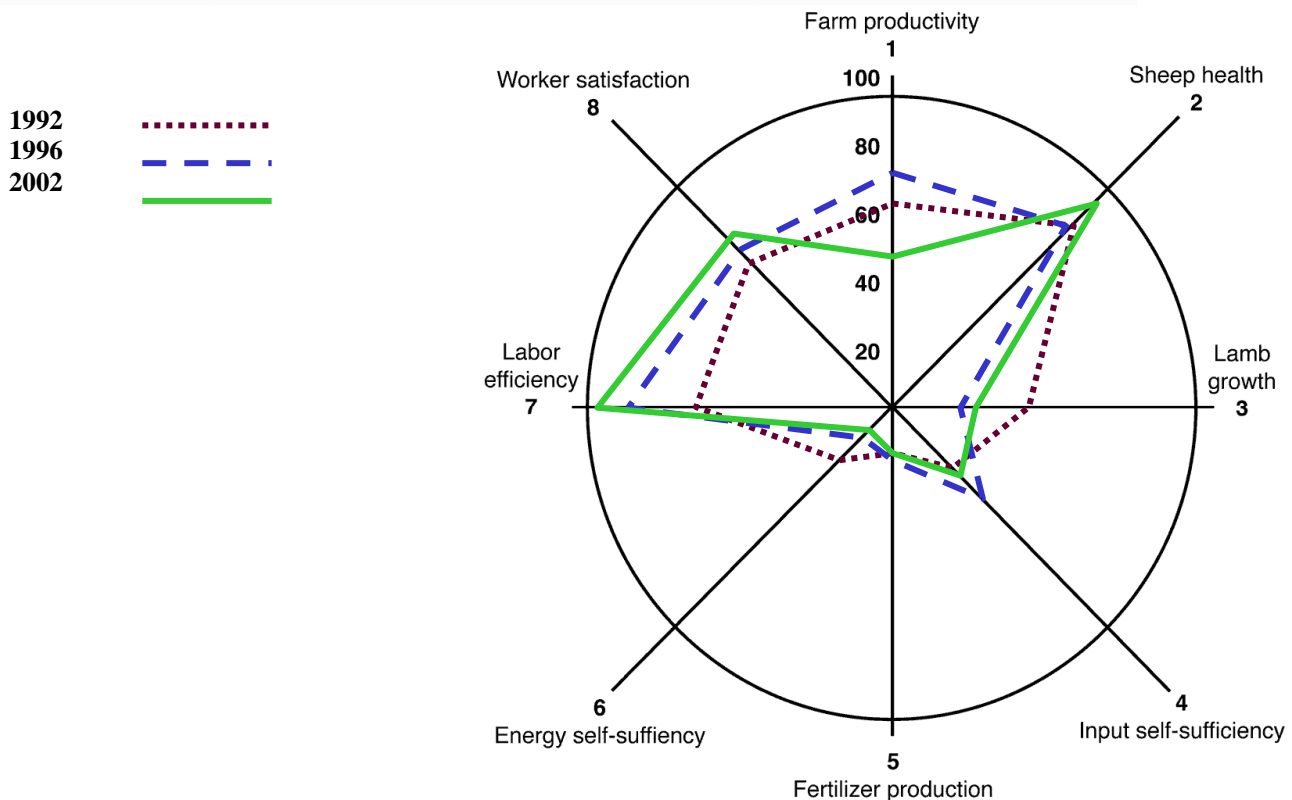
**Labour Efficiencies:** They focus on finding ways of using nature to substitute for human labour. They based their calculations on the French working week (35 hours or the farm equivalent of 2 people working 100 acres at 6 hours/day).

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**Worker Satisfaction:** While impossible to quantify, this couple uses the value statements in their holistic goal as a reference as to what is happening on their farm, as well as in their community, nation, and the world.

**Units, scale, and progress in sustainability indicator: Sheep Dairy**

Indicator	Units	raw scale	% scale	% 1992	% 1996	% 2002
1.Farm productivity	lb. of cheese/acre	0-50	0-100	62	70	48
2.Sheep health	% without health problems	0-100	0-100	79	78	94
3.Lamb Growth	% reaching market weight (70 lb)	0-100	0-100	40	19	23
4.Input self-sufficiency	\$ net income as % of gross income	0-100	0-100	28	42	36
5.Fertilizer production	Spreader loads of compost/acre	0-15	0-100	16	20	17
6.Energy self-sufficiency	Animal traction hrs as % of energy \$ spent	0-50	0-100	26	14	10
7.Labour efficiency	hours/day/acre of land under management	0.48-0.12	0-100	63	83	98
8.Worker satisfaction	% of quality of life values satisfied	0-100	0-100	60	65	70



In my recent OAP financial classes, I have been asking farmers to use similar indicators to monitor and link the environment to their finances and long term sustainability. Only by looking at trends and patterns over a length of time do people see the impact of the decisions they

make. While you might have to make money at the expense of the environment, if you do not address the causes of your problems, an unhealthy environment costs you money in the end.

*John King is the director of Succession and a Holistic Management Educator.*

## **New market for organic beef**

Most organic farmers in New Zealand have to sell their organic beef to conventional markets. Neville Parkinson, an organic farmer from Southland and ODPG Councillor, has been working on finding a market for organic beef. He has had success working with an existing processor supplying the domestic market and then Europe as supply and demand grows.

Neville's aim is to bring organic beef producers together for strength of supply. He would like to see not just finishers, but also breeders of organic calves working together. At the moment too many organic calves are sold conventionally, but if breeders and finishers work together we can have a voice in the market place.

Anyone interested in more information, please contact Neville Parkinson either by phone 03 246.9539 or email [nmparkinson@farmiside.co.nz](mailto:nmparkinson@farmiside.co.nz)

## **BHU news**

**Opening of new propagation house** A new state-of-the-art plant propagation house was officially opened at the Organic Training College on 17 May by Dr Jon Tanner, Chief Executive of OANZ (Organics Aotearoa New Zealand). The \$20,000 greenhouse will provide students at the college, located at the Biological Husbandry Unit (BHU) at Lincoln University, with facilities for propagation of seeds and cuttings, and ideal conditions for young seedlings, said Bill Martin, Course Coordinator of the college. The new propagation house has been specifically designed for propagation, with twin-skin construction to reduce heat loss, a mist unit for cuttings and a seed bed heated to a constant temperature of 20°C so that cuttings will strike easily and seeds will germinate even in winter.

First and second year students will use the propagation house to grow plants for their individual gardens, and it will also be used in the second year course on more advanced propagation techniques. Before the propagation house was built, Lincoln University facilities were used, but having this unit situated right at the college was much more convenient, said Bill Martin.

The Canterbury Community Trust donated \$6000 towards the cost of the propagation house, with the BHU Trust funding the remainder. Jon Manhire, Chairman of the BHU Trust, said he was delighted with the new building and said it showed the confidence that the Trust had in the future of organics and the Organic Training College. He acknowledged the active support of the college given by Lincoln University, Work and Income New Zealand, OANZ and the Telford Rural Polytechnic, and thanked the Canterbury Community Trust for their generous donation.

Dr Tanner said there has been tremendous world-wide growth in organics in the last 10 years and he is pleased to see institutions such as the Organic Training College moving forward the image of New Zealand as a truly clean, green and sustainable nation. OANZ, as the umbrella organisation for organics in New Zealand, is promoting organic agriculture as a profitable alternative to conventional agriculture and horticulture. "Organic and ethical products have shifted from the fringe to the mainstream, and world markets are demanding organic food. We are in a unique position to sell quality organic food to local and overseas consumers," he said.

**Future research options** The BHU Trust, as well as supporting the college, is also involved with organic research and extension activities at the BHU site. Possible future activities includes

producing and distributing high health varieties of apples (Monty's Surprise and Hetlina) and tomatoes (Oxheart and Matt's Wild Cherry) to the public. Other research may include collaboration with Lincoln University on internal parasite resistance in sheep, with the aim of developing organic management strategies to minimise parasite impact.

**Next course enrolments open** The next course at the Organic Training College starts in October, and there are already some students enrolled. Currently there are 18 Year 1 students and eight in Year 2. The Year 2 students, as well as studying theoretical and practical subjects, have a small semi-commercial plot for growing organic produce which they are able to sell under organic certification held by the BHU.

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**Minimum tillage DVDs** If you have not seen these excellent DVDs and would like to, please contact [mary.ralston@xtra.co.nz](mailto:mary.ralston@xtra.co.nz). These are very good and have been extremely popular. Also could I remind those who have them to return them promptly (within 2 weeks).

**CCOG website:** See <http://www.organics.org.nz/> for more organic information including back issues of the newsletter, organic updates, links to certifying agencies, etc.

**Organics in Canterbury  
Newsletter**

C/- Mary Ralston  
Back Track  
RD 12 Rakaia 7782

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

Disclaimer. While every effort has been made to ensure that the information in this publication is accurate, the Canterbury Commercial Organics Group, and the members thereof, do not accept any responsibility or liability for error of fact, omission, interpretation or opinion which may be present, nor for the consequences of any decision based on this information.

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