



Canterbury Commercial Organics Group

Newsletter

Issue No 8 : July 1999

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<i>Coming Events</i>	<i>Date</i>
Midwinter Feast	24 Jul
Field Day	10 Oct

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Midwinter Feast

Bring a pot luck organic dinner to share for some good ole midwinter organic feasting at 6.30pm on the 24th July. Well not strictly midwinter but certainly cold enough. The venue is the Springston South hall on Days Road. Days Road is on the right hand (south) side of the Lincoln Springston road 1km after Springston heading towards Lincoln. The hall is about 100m North of the Days and Powells Road intersection. Easy eh! The evening starts at 6.30 with Holger Kahl speaking on genetic engineering from an organic viewpoint. Following this we have Tony Mallard describing and reflecting on his time in organics. Also the local action man-designer of the tee-shirts with the GE message will give us an update on protest plans. Should be a great evening, it's an ideal time to catch up with all your organic friends, and as always the more the merrier so let's see you there. Refreshments will be provided. Anyone needing more details or space for the night give us a ring at Robbies Patch Ph 3295725

Field Day Advance Notice

Spring is coming believe it or not and we are going to visit Joy and Pete McLeod's property at West Melton to see the blossom on their sour cherries and nashi. They also grow meat chickens so this will be a great visit. - October 10th at 10a.m. so keep it free, full details in the next newsletter. Hope you saw the neat write up of our last field day in the June issue of the Southerner - next to the article on the benefits of genetic engineering!

Organics at the A & P Show

I have had some really encouraging response to this plan. Soil and Health have confirmed that they will be involved so that will bring experience and some manpower and their magazine on genetic engineering to sell. Bio-Gro has committed funds and some material as has the organic course at the Polytech. Demeter will decide at a meeting this month. What we need from growers is more offers of produce or product for display and / or tasting, and photos please. You must have some neat photos of your organic paradise so please send them in. We will be working out a roster for manning the stall so the time on the stall sharing your enthusiasm and experiences with the organic consumers of the future will not be too long. So far I have three lonely names on this list so there's plenty of room for more - come on don't be shy! I know the show is a long time ahead but remember those of us on the organising front are busy people too and need time to make the best of this display. This will be Canterbury organics on show and we want to make it a cracker. The show runs from November 10th to the 13th. Contact Robyn Patchett Ph 3295725 or e-mail Robbie123@xtra.co.nz

Robyn Patchett



LINCOLN UNIVERSITY WORKSHOP

Lack of consumer knowledge about organic produce was identified as a key issue holding back development of an organic industry infrastructure within New Zealand, reported one discussion group to the plenary session of Canterbury Commercial Organics Group (CCOG) and Community Information Service (CIS), 30th April workshop at Lincoln University. The Community Information Service is part of Work and Income New Zealand (WINZ), with a remit of increasing the level of employment in rural areas via information provision, "Today we want to identify both the problems we face and the solutions we need. We want the workshops to identify potential ways forward, and also suggest how we are going to implement them." said Charles Merfield joint workshop facilitator for the day. The workshop was attended by 53 people including organic growers from all over Canterbury and one from Marlborough, plus academics and researchers from Lincoln University and the nearby CRI's such as Hort. Research and WRONZ.

The workshop was first addressed by five speakers chosen for their widely differing perspectives on the organics industry. "The international market for NZ organic produce is steadily growing," Jon Manhire of Organic Producers Export Group told the workshop. "Demand for organic produce outstrips supply for most of the companies in OPEG. Last year \$30 million was exported, and this year I anticipate it may be touching NZ\$50 million. We're aiming at exporting around \$200 million by the year 2004." The largest export market is Japan, Europe second, followed by the USA and Australia, Jon says. "This successful organic exports growth is partially contributed to by the development of specialist supermarkets like Wild Oats in America, which are growing at 25% annually. The organic market in the USA has been growing at 20% plus for the last seven years. Other chains like Tesco and Sainsburys in the UK are demanding environmental integrity, and that NZ suppliers must meet that grade." Most Canterbury organic producers run mixed cropping farms, which rely on the market for a whole basket of other produce. "They need a market for meat and wool, as well as vegetables and grains. Another constraint is the relatively undeveloped NZ market for organic produce - the export market is helped by a healthy local market, but the domestic market was estimated at only \$10 million two years ago. This is an opportunity for the lifestyle block producers to work together to supply the undeveloped local market."

Interest in organic produce is customer driven, says organic dairy farmer and Federated Farmers vice-president Tom Lambie of Pleasant Point. "Much of the credibility organics gets today is due to companies like Heinz-Watties and the kiwifruit industry who have been willing to put some horsepower into it. They've helped with the transition from conventional production and given a guarantee of payment." This is crucial, because there's a long lead-in time to production and its mostly seasonal, while the domestic consumer demand is year-round. "More research needs to be done into the practical ways of implementing organics. It comes back to the commercial drivers who need to explore this further and help growers make the transition to full Bio-Gro / Demeter status. We need well-financed, credible organic industries processing the product and marketing it."

"The obligation of the processor is to find out what the consumer demand is, and pass this information to the producer to ensure what's being produced we can sell," Only Organics baby food general manager Almeric Cheng told the workshop. "Secondly, ensuring that the produce supplied meets the organic standards set is really important - the whole NZ organic industry would be ruined if we ever supply products which are tested by the customer, who finds they are not." Almeric says there is an important role for education and research institutions to do the research and develop the technology to improve current production, while looking ahead to what the market is likely to demand and developing the technology to comply with those demands.

"Organics in my view needs to achieve greater recognition from the government sector and associated funding bodies," say Lincoln's Director of Post-Graduate Research Studies, Dr Bill Kain. "There's not a lot of work going on in research into organic systems within the sectors which organics operates. A lot of work is going on into things which do have relevance to organics, but in terms of binding them up into a system, there's not a lot happening." Dr Kain says the university sees itself in a sector-focused role, linking the biological sciences with commerce. Lincoln also has a competitive advantage because of the collaboration around it: Crop & Food, ESR, Landcare and AgResearch. "Each works in promoting and enhancing each others capabilities in science, consultancy and education. What's now coming together is a very coherent approach to education and research consultancy, focussed on the three main themes at Lincoln University: Tourism/Recreation & Leisure, Food/Fibre/Beverage production quality and safety, and the management of land and water associated with that."



"The arable industry in NZ isn't in great shape, yet we seem to have trouble persuading people to make the jump from conventional production to the organic scene. Why is this?" Waihi Bush Organic Farm flax seed oil producer David Musgrave (M.Ag.Sci.Dip.Hort.Sci) asked the meeting. "We can feel great about having the best organic standards in the world, but is this helping expand the organics industry so we become more mainstream and get other producers into it?" David says the only way to get increased production, and the only way to do that is copy what Heinz-Watties have done. "It comes back to education - there's now no supply of graduates from tertiary institutions who have had a training in organics, and it's a major problem. Perhaps the government could help with some funding for consultancy services, because I find the people who really need the help can't afford it." Although Waihi Bush is a certified Bio-Gro supplier, David believes Bio-Gro has an exclusivity about it which needs to change: "Any organisation trying to grow today needs to be inclusive and bring people into it. The barrier to certification in the past was raised really high. Growers are making a business decision to go into an area seen as high risk, and that's scary. To be knocked back by the certification agency and all the paperwork is a really off-putting experience. It's really important that we nurture and include new growers coming into the system."

The workshop was split up into five working groups after lunch, and each was asked to focus on the following questions: What needs to be overcome to allow organics to develop? What tools/strategies may assist? Which individuals, organisations or partnerships do you see assisting in addressing such strategies? The final plenary session saw the group contributions compared, and common themes and pathways identified. Technology transfer, co-ordination between consumers and markets and leadership issues were seen as important by group one, reported Charles Merfield. "It was strongly felt there's a lot of research/information already there which doesn't need to be replicated. What we do need to do is get the information together and get it out there to the people who need it. We were looking to independent professional bodies, processors, universities and polytechnics and networks like CCOG to do it." "We came up with ignorance and prejudice as the key issues holding up organics. Education is the strategy to address this, and it needs to begin at pre-school/primary age, carrying on to secondary/tertiary to industry and government levels," reported back group three. "We couldn't give a time frame or budget, but there already are models like this working locally with Kids Edible Gardens

and the BHU." "Education we focussed on as the critical area, and who is it who most needs to be educated? Politicians should be the first target, and who's going to educate the politicians? Groups like Bio-Gro, Demeter, Soil & Health, and the Organic Garden City Trust," reported Rex Verity for group four. "Individual members of all these groups can lobby through letters, telephone calls and appointments. Lack of money is our biggest constraint but it costs hardly anything to do it this way. Empowering the members of these groups to do this is the key, empowering those individuals to make such a cacophony the politicians will have to take notice."

The objective of the day was to come up with clear points of agreement as the critical things that need to be done next, says joint workshop facilitator Jenny-Kaye Potaka. "Education is really important here, and Kids Edible Gardens is doing this in Christchurch. Everyone here is probably a member of at least one group in common, whether its Bio-Gro or Soil & Health. So when you talk about the groups doing it, you're really talking about yourselves doing it." Soil & Health member Nicole Buhrs told the workshop she had just taken on the co-ordination role for introducing the KEGs programme nation-wide.

The last word on the workshop came from Bob Crowder "We've come a long way in organics since I started in it. What's lacking today however is the true spirit of organics, the holistic relationship with the living earth. I want you to remember to practise what you preach. Don't lose the philosophy behind organics."

Mark Hill

Lincoln Organic Workshop - Post Mortem

The CCOG committee has had mixed feelings about the effectiveness of the 30th of April Lincoln workshop (see Mark Hill's Article for the write up). We felt the morning seminars to have been very worthwhile. It provided the attendees with valuable information and opinions, on the current state of organics and the problems facing it, from a number of key players in the industry including Jon Manhire Senior Consultant with Agriculture New Zealand and Co-Chair of OPEG, Tom Lambie VP Fed Farmers, Almeric Cheng CEO of Only Organics, David Musgrave of Waihi Bush and Bill Kain, Director of the Post Graduate and Research School at Lincoln who is responsible for the BHU and the expansion of organics at Lincoln.



The overall aim of the day was to try to bring academics, (which includes teachers and researchers) together with the Canterbury based organic movement to improve the communication between the two groups. We were also aiming to increase the amount of research and education of organics by the academics. In the end this did not happen. It appears that the full day was too much of a commitment for the academics and most were not around for the afternoon session when we were aiming to build on the ideas from the morning presentations. We also ended up focusing on impediments to the expansion of organics. This evolved out of the idea of trying to get academics to start working on issues, so we felt we should identify them. The issue of identifying these impediments has been extensively researched already, by a number of different people, so we essentially ended up rehashing the issue, with less rigour and impartiality than the existing studies.

Having identified impediments in small workgroups, each groups suggestions were brought back to the plenary session to be amalgamated into a prioritised list and have people and organisations commit themselves to address them. Most of the impediments identified were of a considerable scale - e.g. lack of technology transfer / extension, and could not be addressed by the attendees or even by organisations such as Bio-Gro or Soil and Health without considerable external financial help. Other issues were really the province of the market, e.g. forming a co-operative or acting as a broker co-ordinating supply for organic produce. We therefore ended up with an incomplete, somewhat biased list of problems, with few people present being able to address them. One notable exception was the need for a National Organic Voice, which has already been addressed in the form of the Organic Federation of New Zealand (OFoNZ), composed of Bio-Gro Soil and Health OPEG and Demeter.

We also unfortunately lost a speaker from Woolworth's; both he and a New World representative we had organised as a back up cancelled at the last moment. This was a disappointment as it would have been valuable to have a retailing perspective in the presentations. We had also hoped to have Bio-Gro representatives present unfortunately they also withdrew at the last moment.

Returning to the positive side it is even more clear to the committee that one of the most valuable things about such meetings is the ability to talk and catch up with a large number of 'organic' people. We believe the value (and fun) of such 'networking' has been underestimated and we will be making sure that future events will have more time devoted

to it and less to presentations. The midwinter feast will be the first test of that idea.

The CCOG Committee

Consumer Co-operatives in Japan

Nobuhiro Yagishita, from Japan, is currently studying organics at the Christchurch Polytechnic. He has worked for the Seikatsu Club Consumers Co-operative in Japan for 8 years. Due to increasing interest in organics they sent him to study organics in New Zealand. In this article he shares his experiences of the Japanese consumer co-operatives.

Consumer co-operatives in Japan have similar rules to New Zealand co-ops. They exist for the benefit of, only sell to, and are owned by, the members. This contrasts with companies where the consumer and owners (share holders) do not have to be the same people. Therefore the relationship between a consumer or a shareholder and a company is quite different to the relationship between a co-op and their members. Co-ops have a number of financial advantages including some tax exemptions. However there are also restrictions on reinvesting profits and broadening the business area. Profits are therefore normally shared among members.

There are about 600 regional consumers co-ops in Japan with more than 10 million families as members. My co-op, the Seikatsu Club Consumers Co-operative, is one of the biggest. There are 250,000 member families, 1400 full time staff, and a turnover of almost 80 billion Japanese yen (1.2 billion NZ dollars) per year.

Japanese consumers demand high quality food so most of the consumer co-ops are focused on supplying food. The co-op uses "advance order collective buying" system based on a "han". A "han" is a group of about six households, and is the fundamental group among the consumer co-ops. Each "han" places a single order, that is delivered once a week from the producers to the "han" by the co-ops staff. The need for the "han" members to meet weekly to order and collect food facilitates communication among the members.

The choice of foods sold by the co-op is decided by member representatives, unlike supermarkets where they are chosen by management. Many of the supermarkets in Japan have a very limited knowledge of GEO's in their products. This is because their suppliers do not know because their



suppliers, the multinational trade companies, do not inform them of the ingredients. This has caused increasing suspicion among consumers about the motives of the supermarkets. In comparison our co-op's producers are very open about how they produce their food. They encourage the members to visit their farms and factories; thousands of visits per year are organised.

Another aim of the co-ops is to match demand and supply so that only the volume of food required is produced. This means that foods have to be ordered in advance - sometimes up to a month. Traditionally the Japanese like to go shopping frequently buying small amounts. In our co-op the price and volume of many products, e.g. rice, are set two or three years ahead. For new members to the co-op this is a major change to their shopping habits and can take some time to adjust to. [Many of the box and CSA (community supported agriculture) schemes in Europe and North America work on this principle as well. With customers agreeing to purchase a specified value of produce, on a regular basis, with limited control of the contents, for several months, sometimes with advance payment as well - Merf]. This however enables the producers to ensure that they can produce a high quality crop and ensure that it will have a market. This enables the price to be kept low, while still supplying the high quality demand by the members.

This also means that the members are more aware of the demands and rigours of crop production, and also the negative sides such as chemical use. The considerable knowledge gap between members (consumers) and producers has been identified as a major issue for the co-ops. So while most of the foods purchased are not organic, and those that are, are not certified due to the limited number of certification agencies in Japan there is expansion of demand for organics in the co-ops because it is perceived to be higher quality and safer than conventional produce because it does not contain pesticide and herbicide residues. However there is still a need to continually inform members about organics, particularly those joining the co-op, to explain why organic food can cost more than the equivalent conventional product. This is critical in changing passive consumers to active ones.

The member based structure of the co-op is particularly advantageous for disseminating this kind of information. Consumers in Japan are increasingly sceptical about impersonal advertising claims. However they are much more open to information from their fellow members. The co-ops are thus able to debate and discuss these issues within themselves. This led to a change two years ago from purchasing Canadian canola to Australian,

because Australia can guarantee its canola to be GE free, while Canada can not. There is increasing concern among consumers in Japan, not just co-op members about GE food and particularly its safety. [Food safety has been identified as the primary motive for purchasing organic food in Japan - Merf]. A growing opportunity therefore exists for New Zealand to be a GE free nation enabling it to supply premium markets, such as Japan and Europe, with GE free food backed by a watertight guarantee of their GE free status.

As consumers we have changed ourselves and our means of buying food by linking with our producers in a co-operative arrangement. I would like to say that the most important thing is to change consumers if we are to address the many problems with our food system. To do this they need to understand how food is produced and the people that grow it. I.E. the producers active involvement is critical. Our common enemies are multinational companies. We need co-operation.

Nobuhiro Yagishita edited by Merf

Editor and Committee Members Wanted

With Merf finishing his MSc early next year we are looking for a new newsletter editor-writer-producer. It is envisaged that this will be a fully paid position, depending on the amount of funding we are able to obtain. Key skills required are; a good knowledge of the organic industry and movement, the ability to write well, able to produce final copy from a computer program such as a word processor or graphical layout program. Main tasks will include identifying and collecting information of interest to people in the Canterbury organics industry, writing articles, production of the newsletter by the deadline. Will need access to your own computer and printing facilities. An email connection would be valuable. You do not have to be resident in Canterbury.

The committee is also keen to have new members on board. We have an informal meeting once a month, in members homes, to discuss and plan the groups activities. This is also a rather social event with the host traditionally providing soup and bread and giving everyone the chance to catch-up with the latest news and have a bit of a gossip! So if you are not too far from Christchurch and would like to join us please give us a phone 349 6947.

CCOG committee, Chris, Mark, Merf, Rex, Robyn, Tim and Yoep



Bio-Gro Meeting Report

Local organic growers met with the new Bio-Gro C.E.O. Elspeth McMillan at a recent meeting in Hornby. She spoke of the rapid increase in interest in organics, resulting in a total of 500 certified Bio-Gro growers nation-wide. New export requirements to meet ISO 65 accreditation came into effect this month with little warning. Elspeth sees a need to set up three separate divisions within Bio-Gro-services; technical and advisory; and verification. There is still much work to be done on setting up this structure. A new database to provide better information about growers is underway. Seager Mason, the certification manager raised many issues relevant to growers. He is moving to shorten the inspection -certification time and forms will be simplified. Seager sees a need to make the next standards review more open to debate and discussion with any difficult changes maybe needing a phase in period. Cathy Tait-Jamieson, a Bio-Gro director who owns the Biofarm yoghurt business spoke of the many challenges the Bio-Gro office has faced in the last years especially with the rapid growth in licensees. She praised the work of the new C.E.O. and current directors. Peter Riley, the treasurer of the Board reported a difficult year with many extra costs resulting in a financial loss. He sees a need for a streamlined system for appeals against loss of certification. The evening progressed with a report on the local anti- GMO action, and progress in the planning for an organic stall at the Christchurch A&P Show.

Robyn Patchett

Farmers must Consider modified food debate

NEW Zealand politicians and farming leaders should be doing more to encourage organic food production as farmers are missing out on a great opportunity. This is the view of organic farmer Pauline Blaikie who recently returned from a study of North American and European markets. She says NZ is years behind Europe and North America in embracing organic farming. By 2006 the international market for organic production is expected to increase from \$11 billion to \$100 billion. "That's huge."

Mrs Blaikie and her husband John run an organic poultry and cattle operation at Hunterville. They are concerned about the lack of leadership over genetically modified organisms (GMOs) in NZ which may scuttle organic export markets. European growers

may use GMOs as a trade barrier. She says Federated Farmers wants growers to be able to choose what production system they want to use, but GMOs will take away the choice of organic farming.

In Britain the land under conversion or already organic has jumped from 54,000ha to 274,000ha in the past year. Organic food sales have risen from \$NZ582m to over \$NZ1000m since 1995.

Organic feed wheat is about \$630 per tonne and the UK 38, 000t a year, about half its need. The rest is imported from Europe or Australia.

Denmark farming is aiming to be totally organic by 210. But farmers are receiving huge subsidies to do so. The Danish government plans to pump \$NZ582m in support payments to increase organic exports.

Terry Brosnakan St Furrow 8 June

Pauline Blaikie is the chair of the Central Districts Organic Growers Network.

Organic Weed Control Part 6

Sowing, Planting, Mulches and Covers

While sowing and planting have a more minor (and often neglected) role to play in controlling weeds in organic systems, they are still an important part of the overall weed control strategy. If they are not done well they can create considerable problems later on.

Timing of Sowing and Planting

Most weeds have a period when their germination rate is highest. Most peak in the spring with a second flush at the start of autumn. In comparison a few, such as cleavers and black grass, predominantly germinate in the autumn. Crops also have preferred germination times and conditions when they will rapidly germinate and out grow weeds. For a limited number of crops, mostly cereals and large seeded crops e.g. peas or maize, it is possible to sow at the time of minimum weed germination and maximum crop growth, thus producing valuable weed control. For example a change from autumn sown cereals to spring sown where there is a high level of autumn germinating weeds. In other crops, e.g. maize, avoiding early sowings which when the crop germinates slowly is also valuable. More precise use of these techniques are limited by the need for detailed knowledge of each weeds germination pattern, the variations in the



seasons, and compromises due to crop scheduling and field conditions.

Sowing Rates

Most sowing rates have been optimised for conventional systems, where the interaction between the crop and weeds is not an important factor. For a number of broad acre crops, such as legumes and cereals a 5% - 15% increase in the sowing rate can significantly improve the competitiveness of the crop over the weeds, predominately by reducing the time taken for the crop to form a canopy which shades out weeds underneath. This technique is of more limited use in intensive crops such as carrots as sowing rates are a major determinant of final crop size.

Row Spacings

Row spacings are predominately determined by the type of post emergence hoeing equipment to be used and the crop being grown. For many broad acre crops such as legumes and cereals the same spacings as conventional crops are used. However there can be advantages in other spacings. Some farmers use modified sugar beet hoes in crops such as cereals, drilling rows 30cm apart with double the rate of seed in each row. While costly in terms of capital equipment and rate of work in the field this provides very good weed control, especially in fields with a high weed seed burden. This drilling arrangement can also be useful when using implements such as harrows and tine weeders. These rely on the crop being relatively 'immune' to the weeding action. By increasing the density of the crop in the row this can reduce the effect of the weeders on the crop, it increases the ability of the crop to swamp weeds in the row where the weeders are less effective, and reduce the percentage of the field in crop rows so more area is open soil where weeds are more easily killed. For this to be successful the crop needs to be fast growing and dense so that it can create a complete crop canopy over the inter-row areas and swamp weeds that have germinated after the last pass of the weeding equipment. Wider rows also mean that tractor wheels can fit in the inter-row space so reducing damage to the crop. An alternative is cross drilling where the crop is drilled first in one direction, then over-drilled at 90 degrees to the first drilling. This helps establish a crop canopy quicker, especially on wider spaced crops, but it is unsuitable for a number of crops and weeding regimes.

For farms growing a range of row crops (e.g. vegetables), a lot can be gained by standardising on a single interrow spacing for all crops. While crops will produce the greatest yield per plant when they are planted on the 'square' (i.e. the inter-row space = inter-plant space in the row), much of

the cost production of organic row crops is in weed control - both time and capital equipment. The loss of yield on a per ha basis due to standard row spacings, is more than compensated by the decreased cost of field operations. Many drills, planting rigs, and particularly weeding equipment, such as hoes, take a considerable time to set up. The down time required to change equipment from one spacing to another can often take as long as the field work, and at times such as spring when there is much work to be done is an uneconomic use of time. The benefits of a standardised row spacing increases as the number of crops grown increases, the areas of each crop decreases and the number of separate plantings increases (due to each planting needing attention at different times). Standardisation often means that more effective (and thus normally expensive) equipment can be purchased. It also means that novel crops can be introduced, or uneconomic crops discarded, with minimum cost, due to there being few changes to equipment or practices required.

Accuracy in Row Crops

The need for very accurate drilling and accurate set up of machines cannot be over emphasised for row crops that will be hoed after the crop has emerged. The margin or error for most hoeing operations is about five centimetres or less. Deviations of two - three cm in the setup of drills or hoes therefore cut the margin of error by half resulting in crop loss. The tolerance for setting up any equipment used for drilling or hoeing row crops should be less than 1 cm. Symmetry of crops rows around the centre line of the tractor / bed is as critical. Symmetry means that the left side of the bed or equipment is an exact mirror image of the right side. This means that post drilling operations can be done from either the same, or opposite direction, as the crop was drilled, saving considerable time and hassle in the field and also reducing crop loss due to mistakes. It is essential that not only the drills and hoes are set up symmetrically on their tool bar, but the centre line of the tool bar is exactly halfway between the tractor wheels (i.e. the centre line of the tractor) and that there is no sideways movement of the equipment in relation to the tractor, i.e. check chains and stabiliser bars must be tight.

Many people when setting up seed drills measure the distance between the drill units or hoes along the tool bar. A vital final check should be to measure the distance between the drill coulters or the hoes where they engage the soil. This should be done by measuring from a single outside coulters or hoe across all the others, not from one to the next. Coulters and hoes should also be checked at this point for excessive sideways movement; more than



one cm of movement is likely to be a problem and should be fixed.

Die straight rows and driving is also vital, (except for contour cropping!) because it allows faster work later on and reduces crop loss and driver effort - straight rows only require minor infrequent corrections by the driver, bent rows require constant adjustment. Straight driving also means that the inter-bed space is always the same ensuring that hoeing equipment covers the inter-bed areas without endangering the next crop row or missing areas.

Accuracy in Broad Acre Crops

Accuracy in broad acre crops, while not as tight as the tolerances for row crops, is still important. The most critical part is accurate matching up of drilling bouts to ensure no gaps occur between the runs, headlands or corners. Crop competition can account for a significant proportion of weed control in broad acre crops. Bare patches can produce considerable quantities of weeds that are difficult to control, and produce a copious quantities of seed. Width / bout markers are a valuable aid to ensure accurate matching of succeeding drilling runs.

Plastic and Paper (sheet) Mulches

While less common in New Zealand (partially due to a milder climate), sheet mulches are widely used in Europe in both conventional and organic systems. They provide very effective weed control for the life of the material. However the high cost of the material and laying mean that it is only economic for higher value crops that grow for a whole season or perennials. Plastic mulches are not the most environmentally friendly and are often time consuming to remove and pose a disposal problem. They are

difficult to recycle due to contamination from soil and organic mater, they must be burnt at very high temperatures to avoid producing toxic combustion products such as PCB's so they mostly end up in landfills. Paper mulches suffer none of these drawbacks, as they could be incorporated into the soil to decompose. However, they are often more expensive than plastics, have a shorter life span and until recently many suffered from expansion and contraction problems when they were wetted and dried out, causing them to work their way out of the soil.

The effectiveness of mechanical sheet mulch layers varies considerably and it well worth while trailing a machine under the conditions it will be used on your property or talking to several farmers that use them in a similar situation to you.

Crop Covers (Frost Cloth)

Again these are less common in New Zealand while widespread in Europe. They have limited role in weed control, however they can cause considerable problems. The increased temperature and moisture found under covers often provides ideal conditions for weed germination and growth. It is vital therefore to very regularly check crops under cover to make sure weeds do not gain the upper hand. I have seen too many cases where crops were lost or large weeding costs incurred due to the 'out of site out of mind' effects of crop covers. For high value, difficult to weed very early sown or planted crops, crop covers can be used as part of the stale seedbed technique (see CCOG newsletter No 7) to stimulate weed germination prior to flame weeding.

Charles Merfield © 1999

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Canterbury Commercial Organics Group - Newsletter

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