

Organic News

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Pace quickens to establish National Organic Research Centre

Leanne Fitzpatrick, bid manager CRC for Organic Food & Farming Systems.



Following a dynamic industry workshop in late 2003, the Australian Organic Development Group (AODG) reactivated its networks to progress the establishment of an international research centre in Organic Food and Farming Systems. Almost simultaneously the Commonwealth Government announced the 2004 application round for its Cooperative Research Centres (CRC) program, including announcing significant changes to the application process and requirements.

The AODG members are moving quickly to respond to the new demands of the application process, build on the strengths of the prior 2002 CRC funding attempt, engage with large and small players in the organic food supply chain and realign the research program with emerging organic business opportunities and needs.

National Organic Research Centre

The AODG was established in February 2003 to act as a focal point for developing a national organic research effort to accelerate the

development of the Australian organic industry. Its members include food companies, farm suppliers, certification agencies and a national network of leading Universities, State agricultural departments and the Rural Industries Research and Development Corporation (RIRDC). AODG members were actively involved in 2002 in the development of an application to the Commonwealth government aimed at establishing a national organic Cooperative Research Centre (CRC).

The target – a \$90 million research investment over seven years to bring together a mix of business and research skills in conventional and organic, agriculture, food production, distribution and marketing to tackle:

- Quality and consistency of organic food and beverage products.
- Viable and substantiated organic food supply chains.
- Human health benefits of organic food and beverage products.
- Environmental impacts and benefits of organic production systems.
- Validated efficacy and modes of action of biological inputs to farming and food processing.

Participation in the proposed CRC for Organic Food and Farming Systems will provide organic businesses / operators with access to national, integrated, world-class, market-focused research capability specialising in Australian organic food supply chains.

The CRC's programs will integrate all facets of the food supply chain – from soil health to products that meet growing consumer demand for organic and healthy foods.

The CRC will provide a vehicle for developing certified organic alternatives for existing product lines and, new products and processes that provide competitive advantages. Businesses will prosper from a share in benefits gained from training programs, best practice protocols, process manuals and the development of new talent as well as CRC patents, licenses and spin-off company equity.

CRC Program

The Commonwealth CRC Program enables businesses to leverage substantial government research investment and strategically partner with other businesses and leading research organisations.

New CRCs can expect \$15-30 million of Commonwealth investment over 7 years. The CRC program was founded in 1991 to enhance the development and competitiveness of Australian industry.

There are currently 71 CRCs all of which are joint ventures between the participants and the Federal Government. Further information on the CRC program is available at: <http://www.crc.gov.au>

The 2004 CRC application round will be conducted in two stages:

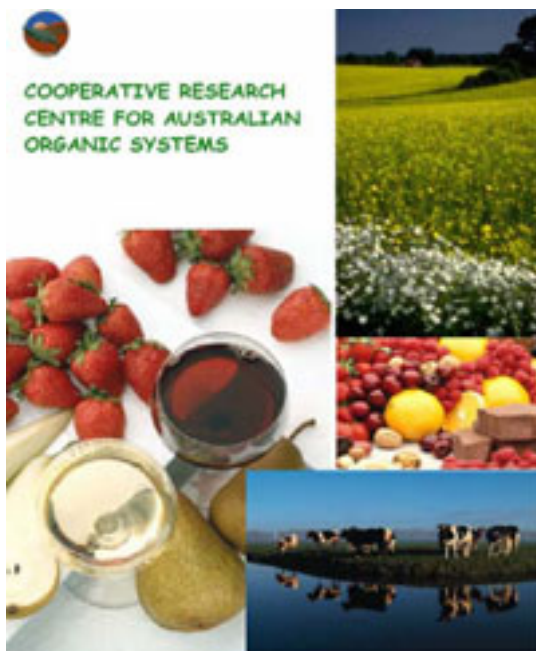
1. Preliminary business case by end March 2004.
2. Full business case by July 2, 2004.

A selected number of applicants will be interviewed in the winter of 2004 and the application outcomes will be

announced in December. New CRCs will commence in July 2005.

Current State of Play

The AODG held a workshop in Sydney in November 2003 to review its progress in the 2002 CRC application round and define its strategy to establish a national research centre.



In the 2002 CRC round the application was unsuccessful, despite wide support from a large number of small businesses distributed nationally throughout regional Australia. Feedback on the application encouraged further development and submission in 2004.

Direct investment by major food industry players was a weakness of the 2002 application and a key priority for the AODG team to address to present a competitive preliminary business case by March 2004.

Since the November workshop the AODG, through the NSW Department of Agriculture, have appointed a CRC bid manager and activated a business engagement

process to promote participation in a CRC in Organic Food and Farming Systems.

Members of the AODG are committed to the development of a competitive CRC application to underpin the future and sustainable development of Australia's organic industry ❁.

Further Information

Further information on the CRC application development or participation is available through the bid manager, Leanne Fitzpatrick, Birubi Innovation Pty Ltd., (03) 9686 8866.

Broadacre Weed Control: Non-Herbicidal Strategies

Steve Sutherland, NSW Agriculture & CRC Australian Weed Management

(Editors Note: this is the first in a series of articles by Steve to be presented over the next few issues of Organic News. Future issues will identify weed control opportunities right through a pasture and crop sequence).

INTRODUCTION

The first thing that needs to be done in a weed control program is to clearly define:

- Which plants will be a weed problem in the crop?
- How many of these plants can be tolerated per square metre?

- What is known about the plants and what management options are there?
- How many seasons of prior management in the pasture are required before the crop is sown?

Allied to the question is: ‘when is a plant a weed?’ Annual ryegrass is a perfect example of a species that can be very desirable as a pasture component but a serious weed of crop. The question is: ‘at what point in a crop/ley pasture cycle does the ryegrass become a weed?’

Weed control system, goal and forward plan

Weed control needs to be a systematic process. One management option is unlikely to achieve sufficient control, so a series of interdependent treatments need to be used. Each producer needs set a goal (what density of weeds and by when). It is then necessary to plan out a program that suits the paddock and other enterprises on the farm, using as many techniques as possible in the sequence.

Action on ‘weeds’ can be taken every year in a crop-pasture sequence.

You will need to consider:

- Pasture phase options
- Fallow period options
- Sowing time options
- In-crop options
- Harvest time options
- Farm hygiene

But most importantly you need to:

- Know the weed!

Austrade identifies organic opportunities in the UK

Austrade has identified opportunities for exporters of organic produce to the United Kingdom (UK). Opportunity areas in the organic food sector include:

- grocery products such as pasta, breakfast cereal, biscuits, snacks, condiments, sauces and confectionery – both branded and private label
- fresh temperate fruit including premium apple varieties, cherries, nectarines, berries and citrus
- fresh exotic fruits and tropical fruits
- food ingredients for supply to the UK food manufacturing sector
- premium beef, lamb and possibly game meats (although these are affected by quotas)

There are also limited opportunities in the organic food service industry (such as restaurants and mass catering) where price is the principal factor.

For more information contact Austrade on 13 28 78.

Information extracted from the Austrade website:

http://www.austrade.gov.au/corporate/layout/0,,0_S1-1_home-2_-3_-4_-5_-6_-7_,00.html

KNOW THE WEED!

The key to managing weeds is to know their characteristics. As you will see from the following examples, plants do have chinks in their armour which can be used to obtain control.

The objective with all weeds is to persist with control for enough seasons to reduce the soil seed bank to an acceptable level. Perennial weeds have the ability to persist without making seed every year and this needs to be managed as well as their seedbank.

Much of the information on weeds shown below was sourced from *Noxious Weeds of Australia*.

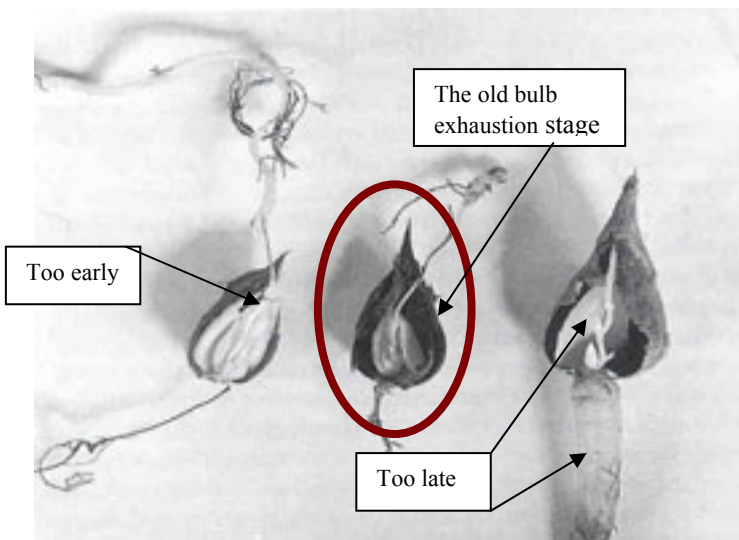
Perennial Weeds:

Soursob

Soursob is a weed of fertile soils and like other perennial species, it is difficult to control using cultivation methods unless their susceptible times are understood.

In the case of soursob, the susceptible time is ‘the old bulb exhaustion stage’ This is when the stored food in the old bulbs has been used up, new bulbs are just discernible and the tuber has just begun to form. While this occurs between May and July depending on the season and the district, the only way to be really sure is to dig plants and look. The appearance of the above ground parts of the plants is not an indication. Since seed is not usually produced in the Australian environment, spread of the weed is almost entirely by the movement of bulbs. Mistimed cultivation will simply spread the weed.

Know the weed: SOURSOB



Above: Soursob is a difficult weed to manage. Correct identification and then control at the correct stage of bulbing – the ‘old bulb exhaustion stage’ - is essential.

Sorrel

Sorrel is common perennial weed which reproduces by seed and via underground rhizomes. The ‘old man’ sorrel plants can be controlled by cultivation over summer when the soil is usually dry. The objective here is to bring the rhizomes to the surface where they will dry out. Care must be taken to avoid dragging rhizomes onto clean areas. When the seedlings emerge, pre-sowing cultivation can control these.

Competition from the crop would be important to suppress any late germinations and or survivors. Sorrel tends to be a weed of acid, infertile soils so in the medium-longer term,

liming and building fertility will suppress it. In the short term, until more competitive plants build in numbers, the sorrel will respond to the lime and raised fertility.

Onion weed

This weed tends to invade lighter textured, low fertility, alkaline soils.

Unlike soursob, it does not have underground corms or creeping roots and the best time to cultivate can be judged on the above ground growth.

Ploughing with the objective of completely burying the tops can control this weed. Partly buried tops are able to re-establish themselves.

Seedlings need to be managed. Since multiple emergence can be expected, control is best achieved via competition from a species like lucerne. While cultivation would work, the multiple passes required would damage the soil structure.

Silverleaf nightshade

This weed is happy on most soil types. It is extremely hard, if not impossible to control without herbicides. This is because it has a very deep root system which extends below normal cultivation depth. Keeping the weed out of clean areas is by far the best method of control.

Since sheep will eat the berries and spread the seed, it is essential to keep sheep out when ever berries are present.

The roots will be dragged around on machines, especially those with tynes. If an infested area is to be sown, use all disc equipment. Where the weed is in patches, work the clean areas separately. Deep ripping over summer may reduce the stand density.

Annual Weeds:

Saffron thistles

There is a tendency for saffron thistle to be a problem on infertile soils, and in the medium term, increasing the fertility of the soil can help to manage them. Saffron thistles can be controlled partly by deep ploughing. Seedlings have great difficulty emerging from greater than 5 cm so if a good plough is available, burial to 8-10 cm will be quite effective and seedlings coming up can then be cultivated out.

Saffron thistle plants growing in pastures can be killed if they are mowed or slashed just before flowering. While this method can be highly effective in dry-ish springs, rain after cutting can revive the

plants. Persistence with cutting over a few years will control saffron thistles.

Paterson's curse

Selective grazing by cattle and horses greatly favours this weed. While sheep will eat the weed, stocking rates need to be kept up in order to reduce the stand. Sheep and horses suffer cumulative liver damage from eating 'curse'.

Burning in late summer, providing there is enough fuel, can kill a lot of seed. A fire will also stimulate seeds to germinate, providing a control opportunity before seeding.

Light autumn cultivations or 'tickles' can be used to stimulate curse seeds before sowing. A forage and or green



Above: The Patersons Curse Crown Weevil (*Mogulones larvatus*) is one of the biological control agents now available to help manage 'curse'.

manure crop could then be sown with a view to ploughing the weeds prior to seed set in spring.

If the infestation is heavy (ie there will be a large seedbank) this process

should be repeated for a couple of seasons.

Bio-control agents are becoming better established every year. In the future, they can be expected to significantly help in curse control.

Annual ryegrass

Annual ryegrass is an enigma in that it is both a fantastic pasture species and one of the worst weeds of cropping in Australia. While ryegrass does not have a persistent seedbank when compared to (say) Patterson's curse, it will take 2 years to run down a large seedbank. The most effective way of reducing seedbanks is to prevent further seed production. This can be done with a combination of grazing and cutting.

Cutting the ryegrass between ear emergence and early (soft) seed formation will reduce seed formation. (This is also the most nutritious stage for hay and silage) Earlier cutting times result in excessive re-growth. Later cutting times result in mature seed being produced (Bowcher, 2000)

Uniform grazing until 2-3 weeds prior to cutting can be used to synchronise ear emergence in the ryegrass.

Sheep will graze annual ryegrass after ear emergence and through seed formation. (Unlike barley grass and vulpia which sheep will ignore after the boot starts to swell). Such grazing will reduce the proportion of ryegrass but

Publications & Events

NSW Agriculture publications

DPI-472 *Soil sense: Using compost in macadamia orchards*

Organic Olive Management Guide

Organic Horticulturist Karen O'Malley has compiled a manual for the Organic Olive Production industry. Topics cover organic & sustainable grove management, including business management, market research, quality assurance, pest control, biodiversity, fertilising, irrigation, pruning and training and more. Cost is \$45. Contact the Australian Olive Association Secretariat. PO Box 309, Pendle Hill, NSW 2145. Phone: (02) 9863 8735; Fax: (02) 9636 4971

Coming soon on the Web at

<http://www.agric.nsw.gov.au/>

- 'Organic pumpkin production'
- 'Organic asparagus production'
- 'Organic processing tomato production'

Other publications of interest

Magkos, F, Arvaniti, F & Zampelas, A 2003, 'Organic food: nutritious food or food for thought? A review of the evidence', *International Journal of Food Sciences & Nutrition*, 54(5):357-371, 2003.

Qld DPI CD: 'The Good, the Bug & the Ugly. Citrus Pests and their Natural Enemies' Copies available from: Citrus IPM CD Maroochy Research Station PO Box 5083, SCMC Nambour 4560, cost \$45 incl. GST

Events calendar

Coming in March: Mid North Coast Regional Development Board Organic Seminars. Contact: Lyndell Stone Phone: 02 6583 5647.

Organic industry development meetings

Taree 9 Feb 1.30-3.30 pm
Urunga 10 Feb 1.30 -3.30 pm
Nabiac 16 Feb 1.30 - 3.30 pm
(to be confirmed)Macksville or Kempsey 18 Feb 6.30 to 8.30 pm

First World Conference on Organic Seed Challenges and Opportunities for Organic Agriculture and the Seed Industry Partner Organizations:

5 - 7 July 2004
FAO Headquarters
Rome, Italy
Email: seedconference@ifoam.org

care is needed that this does not favour other weeds, notably vulpia!

in the crop. Therefore, programs aimed at minimising annual grasses in the year before cropping will also

Sea barley grass (*Hordeum marinum*) is an indicator of elevated salt levels in the soil.

Knowledge of plants as indicator species is valuable and may be used by experienced people over time. However, as the lime/sorrel story exemplifies, it is not a black and white situation.

As an example, in low soil nitrogen situations, providing adequate phosphorus and trace elements are available, legumes are highly competitive. Once nitrogen levels rise, non-legumes tend to be more competitive.

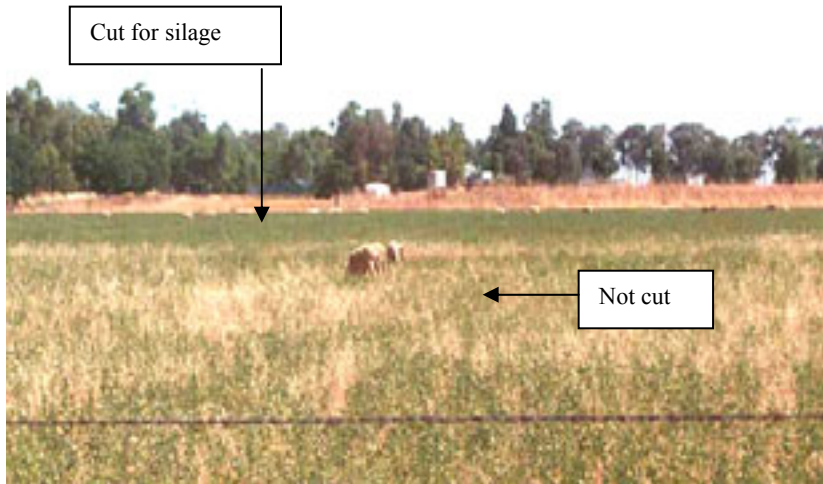
FEEDING OF STOCK AND WEEDS Hay, silage and grain.

Weeds are frequently spread around the farm in fodder, especially hay and grain. Silage is of less concern in this regard and would be preferred if fodder conservation is to be linked to crop paddock preparation. If hay or grain is to be fed out, do it on areas where extra weed species will have less impact.

Silage or hay?

Silage has the disadvantage of containing a lot of water compared to hay and some specialised gear is needed to handle it either in bales or from the pit. In weed control however, silage is much better than hay, partly because the material is cut before a lot of seed has matured and partly because the ensiling process kills seed. It has been estimated that only a small percentage (2-5 %) of weed seed survives the ensiling process. In contrast, feeding out hay is a well-known method of spreading seed.

Since silage is made at much higher moisture content than hay, its possible to ensile some materials which would take too long to condition for hay ❁.



Above: Cutting for silage can be an effective way to reduce the weed seed bank.

Vulpia

Vulpia is a species with limited virtues. It has been clearly shown to suppress other species via allelopathy. Sheep will avoid it if there is alternative fodder available and so it tends to build up under sheep.

During the pasture phase Bowcher (2000) showed that forage harvesting vulpia between ear emergence and hard seed formation will reduce the weed density.

Due to vulpia's large seedbank this has to be carried out over consecutive seasons. Like ryegrass, vulpia's seedbank is not very persistent, so providing seed production is stopped for 2-3 years, its numbers will drop dramatically.

WEEDS AND CROP DISEASES

Apart from the impact grasses have as weeds, they also harbour cereal root diseases. The worst of these is take-all.

The level of disease is mostly dictated by the seasonal conditions. However, there is a rough relationship between grass density in the pasture (or green manure crop) and the level of disease

reduce the disease.

In cropping programs that have no disease management in place, 25% annual yield loss could be expected. Yield losses up to 80% have been recorded. To minimise the impact of root disease on the cereal crop, the last year before cropping needs to be almost free of grass, whether the paddock is carrying a pasture or forage/green manure crop.

Soil nutritional status

Certain plants are known to be adapted to particular soil conditions and can be used as indicators of problems. For example, sorrel creeps into areas which are becoming acidic. It is known that if the pH is raised, other species will gradually overcome the sorrel. However, the sorrel will respond in the short term to lime applications so patience is needed.

Saffron thistles tend to creep into paddocks that are run down nutritionally. Once again, a simple fertiliser application will not be enough because the weeds will respond in the short term.

References:

Bowcher, A. 2000, Impact of cutting time on the density of *Vulpia* spp and *Lolium* spp. personal communication.

Parsons, W.T. and Cuthbertson, E.G. 2001, 'Noxious Weeds of Australia.' CSIRO Publishing.

Next Month: The March issue of Organic News will look at a systematic approach to non-chemical weed control during the pasture and pre-cropping phases.

Sweet Organic Strawberries at Bathurst

Karen O'Malley, NSW Agriculture Bathurst

Last year Organic Horticulturist Karen O'Malley and Technical Assistant Tony Hellyar established a small-scale organic strawberry trial at NSW Agriculturist's Bathurst Centre for Organic Farming. With limited funds, a site was developed for future study of the successful growing of this in-demand crop.

Organic strawberries can be marketed fresh and as a value-added product in jams, yogurts, and so on. To maintain reasonable prices for organic produce, it is important for organic growers to find products that can be value-added to cope with seasonal market gluts. Also, product not suitable for the fresh market is often quite suitable for processing.

To increase the site's soil fertility, a green manure crop of oats and vetch was grown and incorporated with lime and Dynamic Lifter® before planting out the strawberry plants. Insect pests and plant diseases have not been a problem. One method of managing soil borne plant diseases in



Above: Karen O'Malley with organic strawberry mother plants at NSW Agriculture's Bathurst Centre for Organic Farming.

organic strawberry systems is the use of brassica crops in crop rotations. Areas to be planted out next season have a brassica green manure crop established for later incorporation. The site is mulched with a commercial recycled fabric and irrigation is supplied via drippers. Weeds are controlled with cultivation and manual removal.

This year's strawberry plants will be

used for runner production rather than berries - although staff at Bathurst deemed the berries that were collected as much more flavoursome than the ones at the supermarket. The aim is to produce enough young plants for a bigger trial next year. We are also looking for sponsors for our trial ❁.

Contact Karen O'Malley on (02) 63301212 or Email: karen.o'malley@agric.nsw.gov.au

Organic Rice: Rice CRC explores productivity solutions

Tobias Koenig & Robyn Neeson, NSW Agriculture Yanco.

A project being conducted by NSW Agriculture and funded through the Rice CRC is currently investigating production constraints in organic rice.

Organic rice production is primarily based on a pasture (clover, ryegrass) and livestock / rice rotation. This rotation tends to have a long pasture phase - usually 3-4 years pasture followed by 1-year rice. This is in contrast to conventional systems where a rice on rice rotation is common. The lengthened pasture and livestock phase in the organic system

European Database for Organic Farming Research

The [Danish Centre of Organic Farming Research DARCOF](http://www.orgprints.org) is maintaining a database with literature and project information on organic farming research. A partner in this project is Forschungsinstitut fuer biologischen Landbau (FiBL) Research Institute of Organic Agriculture, supplying information from the German language region, supported under the German Federal Organic Farming Scheme. The database has open access and may be viewed at www.orgprints.org. ❁ Source: <http://www.organic-europe.net/>

plays a pivotal role in weed control as well as rice crop nutrition.

However, crop statistics have revealed that organic production has a greater risk of failure and lower yields than conventional rice. A workshop coordinated by NSW Agriculture, RIRDC and SunRice in 2002 was told that under current production regimes the yields of organic rice are 50-75% lower than conventional rice. The workshop concluded that research was required to investigate the key areas of management that differentiate organic and conventional systems: crop establishment & nutrition, and weed management.

The Rice CRC organic project

The preliminary phase of the Rice CRC project involved conducting interviews with organic rice farmers to identify specific problem areas. The farmers interviewed believed three key areas were limiting their production:

- the suitability of recommended rice cultivars for organic production,
- weed management, and
- rice system nutrition.

Suitability of current rice cultivars

The organic producers questioned the suitability of 'modern' rice cultivars for organic production. They believe that older cultivars such as 'Pelde' may be better suited to organic production because it had better seedling vigour, less nutritional requirements, better weed competitiveness and reasonable cold-tolerance compared to some of the currently recommended cultivars. They felt that district cultivar trials would help to determine the quality and yield potential of 'new' and 'old' cultivars under an organic management regime.



Above: Pleased with results so far this season is Wamoon organic rice producer Bill Barnhill.
Pic: Grant Webster, Rice CRC

Weed management

Producers identified weed control, particularly barnyard grass, as their most significant problem. Since chemical controls are not an option, research into alternative non-chemical methods of control was needed.

Rice system nutrition

The producers admitted that they often neglected pasture nutrition. They acknowledged that the long pasture phase required a greater emphasis on sustaining pasture nutrition to maintain clover vigour and to maximise returns from organic livestock.

Phosphorus availability seemed to be the main issue. Organic producers must rely on organic fertilisers that contain less available forms of phosphorus. In order to provide adequate nitrogen fixation in clover pastures, and thus carry-over nitrogen for the subsequent rice crop, a better understanding of the cycling of phosphorus from organic fertilisers was required.

Producers posed the questions: Were there other options to the long

pasture phase? Was it possible to shorten the pasture phase or perhaps remove it completely (perhaps replacing with green manuring) and still achieve adequate weed suppression and crop nutrition? Would this be at the expense of a profitable livestock enterprise?

Trials in 2003-2004

Trials established during the 2003-2004 rice season are hoping to answer some of these questions.

The trials are located on Bill Barnhill's organic rice farm at Wamoon in the Murrumbidgee Irrigation Area of NSW. The entire farm is certified 'In-Conversion', with this year's rice area to be fully certified 'Organic', the top level of organic certification, by harvest time.

Bill's organic rice has been planted using two distinctly different techniques. One crop is sod sown into a good clover pasture stand. This is the technique most commonly used by organic rice producers. The other crop is combine sown into a cultivated seedbed. The trial site is on the cultivated paddock.

The trials consists of two major components:

- Nutrition in combination with four rice cultivars, and
- weed management.

Nutrition

The nutrition / cultivar component of the trial consists of eight different fertiliser treatments and a control (Table 1) in four rice cultivars - Pelde, Calrose, YR M54 and Quest, replicated three times.

Establishment and weed counts were taken in all plots before permanent water was applied.

Weed management

Trial 1

Post-emergent harrowing is a method often used to suppress weeds in organic cereal production. A trial was established to investigate the potential of this technique for controlling weeds, particularly barnyard grass, in rice.

Following standard ground preparation, the rice crop was combine sown into the cultivated seed bed at a rate of 150kg/Ha. Organic rice producers sow at a higher rate than conventional producers in order to minimise the opportunity for weed invasion.

Using Hatzenbichler® harrows, post-emergent harrowing was carried out at a number of crop growth stages:

- when the rice was just emerging, and
- at the 3rd leaf stage, harrowed once and/or twice.

Counts were taken before and after harrowing to determine the effect of the harrowing on the rice and weed populations and on final rice crop establishment (Table 2). Sampling will be undertaken again following



Above: Rice CRC Director Dr. Laurie Lewin (right) discusses progress in the organic rice trials with (L-R) Bill Barnhill, Tobias Koenig and Robyn Neeson. Pic: Grant Webster, Rice CRC.

Table 1 Organic rice trial fertiliser treatments	
Fertiliser Program	Products and application rates
BioAg	Aged broiler compost 1.4 tonnes/Ha Lime 800 kg/Ha BioAg Phos 240 kg/Ha Zinc sulphate 4 kg/Ha BioAg Soil and Seed 4.5 l/Ha
Compost	Aged broiler compost 2.0 tonnes/Ha
Alroc	Alroc Extraphos 400 kg/Ha Superfine micro lime as liquid lime 40 kg/Ha
Guano	Guano Gold 200 kg/Ha
Fertico 1	Fertico RPR 100 kg/Ha Fertico FOF 200 kg/Ha
Fertico 2	Fertico RPR 200 kg/Ha Fertico Blood and Bone 200 kg/Ha (applied before permanent water)
Fertico 3	Fertico RPR 100 kg/Ha Fertico FOF 100 kg/Ha Fertico Blood and Bone 200 kg/Ha
Fertico 4	Fertico RPR 200 kg/Ha
Control	

Panicle Initiation (PI).

Trial 2

Organic growers had provided anecdotal evidence that the application of liquid lime and molasses after sowing could prevent the germination of certain weeds. There is also the claim by some growers that a homeopathic remedy made out of barnyard grass seeds would decrease germination of barnyard grass over time. So part of the trial looks at validating these claims.

Two different rates of liquid lime with molasses and the homeopathic barnyard grass remedy have been applied to one cultivar with three replicates. Establishment and weed counts have been taken.

Preliminary observations

Whilst it is still too early to draw conclusions from any of these trials some preliminary observations can be made.

- The Hatzenbichler® harrows can provide an effective control for barnyard grass provided timing of application and soil conditions are optimal.
- Rice requires adequate recovery time following harrowing before permanent water is applied.
- Poor establishment in the older cultivars 'Calrose' and 'Pelde' was most likely due to poor seed quality (older seed). Growers should conduct germination tests (particularly with older varieties) prior to planting to ensure that germination % is acceptable.
- The new rice cultivar 'Quest' exhibits good early vigour.

Table 2 Effect of harrowing with Hatzenbichler® harrows on rice and barnyard grass populations					
Plants/m ² before harrowing		Plants/m ² after harrowing		Plant reduction /m ² (%)	
Rice	Barnyard Grass	Rice	Barnyard Grass	Rice	Barnyard Grass
332	336	324	6	2.4	98
280	54	271	8	3.2	85
271	91	263	10	2.9	89
237	112	228	8	3.8	93
224	169	216	12	3.6	93

- Achieving good crop establishment is critical for effective control of the aquatic rice weed 'Dirty Dora'.

Further results of these trials will be published in later editions of *Organic News* ❁.

Regional Development Board Targets Organic Industry Development

Lyndell Stone, Emerging Industries Program Manager, Mid North Coast Regional Development Board

The Mid North Coast (MNC) Regional Development Board located in the Hunter River region of NSW has commenced a new program to enhance the profitability and growth of the organic, herb and aquaculture sectors.

The program is designed to assist industry development and viability in

the region by addressing the need for better coordination and networking.

Program activities will address obstacles that impede business profitability. Industry is being encouraged to set the programs direction in response to specific regional grower and processor needs.

Regional challenges are being identified through a series of small group discussions in January and February. Organic producers and processors are invited to join these meetings and share their experiences running organic businesses in the region.

The Board is also planning an organics seminar in March focussed on the production and marketing of certified organic produce. This seminar will provide market-based information on a range of commodity products that grow well in the region. This program is delivered with funding assistance from the Department of State & Regional Development and the Federal Department of Transport and Regional Services.

If you would like to make contact with MNC producers through the group discussions and seminars and share information on market channels please contact Lyndell Stone to find out the closest meeting location on 02 6583 5647 or fip@betterbusiness.nsw.gov.au ❁.

Note: Articles are to be received by the 2nd Tuesday of each month. Electronic copy preferable, Word format, Times New Roman, 10 point, no column formatting is necessary.

Do you have any *Organic News*?

Do you have any research results, field day reports or other information that may be of relevance to organic agriculture? If so, let us hear about it! Send your contributions to:

Robyn Neeson
 Editor, *Organic News*
 NSW Agriculture
 PMB Yanco Agricultural Institute
 YANCO NSW 2703
 or Email: robyn.neeson@agric.nsw.gov.au