



organicnews

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ORGANIC SPELT TRIAL UPDATE

An ancient wheat known as spelt (*Triticum aestivum* var. *spelta*) is under the spotlight following claims that it has superior nutritional attributes to other cereals such as wheat. This has sparked renewed interest in this grain, particularly in the health food sector.

Spelt is one of the oldest of cultivated grains, dating from between 5,000 and 9,000 years ago. It is thought to have originated in Egypt or Mesopotamia and then made its way to Europe about 1800 to 1200 B.C.

In Australia markets currently exist for approximately 10,000 tonnes of organic spelt grain per year, with an estimated on-farm value of \$10 million (de-hulled) and retail value of \$19 million. The greatest demand is for organically produced spelt but poor yields and market irregularities are frustrating industry expansion.

A collaborative research project is underway to investigate the agronomic and quality attributes of spelt and its potential as a high value grain for organic production. The project, funded by the Rural Industry Research and Development Corporation's (RIRDC) Organic Produce Program, involves researchers at NSW DPI's Yanco Agricultural Institute and the EH Graham Centre for Agricultural Innovation (NSW DPI and Charles Sturt University, Wagga Wagga). It also involves the DPI Victoria, organic farmers and the Biological Farmers of Australia Co-op Ltd (BFA).

The project's main objective is to select superior lines that are well adapted to organic production

systems, and which have acceptable nutritional and processing quality.

In 2006, 80 spelt genotypes were seed increased at NSW DPI's Organic Research Site at Yanco. The top 20 lines were further evaluated in 2007 in trials at Yanco and Rutherglen Victoria and on an organic farm at Cootamundra. The response of spelt to limiting levels of phosphorus was also evaluated in a glasshouse trial at Wagga Wagga Agricultural Institute.

Quality evaluations are currently underway to determine the milling characteristics and livestock feed value of the lines. They are also being screened for reaction to leaf diseases at the University of Sydney, Plant Breeding Institute at Cobbity.

AGRONOMIC RESULTS 2007-2008

The highest yielding spelt genotype (Line 19) yielded a mean aggregate (Yanco & Rutherglen) weight of 2.73 t/ha compared to wheat (3.77 t/ha) and barley (4.42 t/ha). Yanco out-yielded Rutherglen (by a factor of 1.67) most likely reflecting supplementary irrigation (Yanco: 519.6 mm - rainfall 90.8 mm + irrigation 390.8 mm).

Days to anthesis among spelt genotypes ranged from 133 days to 153 days, compared to 138 days for wheat and barley. Higher spelt yields were achieved by sowing in May to mid-June. Increasing sowing rates had little or no impact on final spelt yields.



Higher biomass production of spelt compared to common wheat was observed under reduced

phosphorus levels in the glasshouse trial.

Table 1. Yield, quality and agronomic features of spelt selections evaluated in 2007.

Spelt ID	Combined yield data (Yanco, Rutherglen) t/ha	Days to anthesis	Head type	Hulled or Free-threshing	Aluminium tolerance score	Milling Test Weight kg/hl	Screenings %	1000 Grain Weight gms
2	1.73	145	awned	Hulled	T, T	75.33	11.04	38.5
3	0.96	149	awned	Hulled	T, I	79.43	8.32	31.1
4	0.97	149	awnless	Hulled	I, I	79.1	8.87	31.5
7	1.94	143	awned	Hulled	S, S	77.93	1.79	37.5
9a	1.84	145	awned	Hulled	T, S	75.79	1.83	35.1
10 ab	2.43	135	awned	Hulled	I, S	75.17	1.41	35.8
14	0.91	149	awned	Hulled	T, *	79.17	15.24	36.6
16	1.73	139	awned	Hulled	S, S	80.4	5.48	32.1
18	1.59	135	awned	Hulled	S, S	81.27	5.38	32.3
19	2.73	140	awned	Free	S, S	77.43	1.63	32.3
22	0.85	151	awned	Hulled	I, T	78.83	8.96	31.0
23	0.68	153	awned	Hulled	T, I	78.7	14.48	30.5
29	1.87	145	awned	Hulled	I, T	76.43	10.83	42.3
39	0.72	147	awned	Hulled	I, T	77.63	5.95	37.5
40	2.40	135	awned	Hulled	S, VS	75.1	2.2	53.7
41	2.61	140	awnless	Hulled	S, S	80.03	9.41	30.4
43	2.50	133	awnless	Hulled	S, S	73.8	1.85	36.0
Barley	4.42	138				64.7	1.48	42.2
Kamut®	1.34	138				78	0.84	79.2
Triticale	3.05	133				68.77	0.75	49.9
Wheat	3.77	138				75.1	2.52	38.4
Yield Grand Mean								
2.02806								
LSD (5%)								
0.33217								

* Missing value

The 20 spelt genotypes evaluated in 2007 exhibited a wide response range in grain yield, maturity, growth habit and grain form (Table 1).

An even, quick maturing crop is desirable to minimise the risk of crop damage and to facilitate harvest. Spelt lines at both Rutherglen and Yanco matured evenly and with minimal damage to mature heads following heavy rainfall, compared to barley and wheat. There was a trend indicating later maturing genotypes yielded less (Lines 22 and 23). This result was also noted in phosphorus trials. Spelt lines grown under irrigation (Yanco) were more likely to lodge. However, most farmers did not see this as a problem, since harvesters are able to 'pick up' and retrieve the grain.

At Cootamundra, a milder finish with periodic late spring/summer rainfall enabled later maturing lines to finish well, despite a dry mid season. These lines outperformed wheat, barley and triticale under these conditions. They also displayed excellent re-growth following mowing, suggesting

good grazing potential (provided soil moisture conditions are favourable).

Increased tillering appeared to be correlated with lower yield in spelt lines (except for Lines 40 and 41) suggesting that the common practice of grazing spelt lines during the growing season should be carefully weighed up against the potential for grain yield loss. Line 40 could potentially prove to be a suitable candidate for a grain and graze option. Lines 2, 7, 16, 18, 19, 29, 40, 41 and 54 will undergo further agronomic evaluations in 2008.

A range of aluminium tolerances were scored indicating some spelt lines may be useful on acidic soils. Preliminary quality data suggests most spelt lines had higher test weights and lower grain size relative to wheat, however the significantly greater % screenings could ultimately result in lower milling yields for most spelt lines.

DISEASE RESPONSE RESULTS

In 2006, field observations of spelt screening trials seemed to support anecdotal reports of spelt having good resistance to some common cereal diseases. To further test this hypothesis a collection of 21 spelt wheat genotypes were tested in greenhouse multi-pathotype tests (stripe rust)

and observed for field response to stripe rust and stem rust at The University of Sydney, Plant Breeding Institute Cobbitty, 2007.

Disease response categories in relation to greenhouse and field observations for stripe and stem rust are summarised in Table 2.

Table 2. Spelt stripe and stem rust response scores & observations in glasshouse (GH) and field evaluations, 2007.

Spelt ID	Field stripe rust (Yanco)	Field stripe rust (Rutherglen)	Field stripe rust (Camden)	GH Stripe rust	Field Stem rust
2			R	S	MR
3			R	S	MR
4			R	S	R
7	Yes	Yes	MR-MS	S	MR
9a	Yes	Yes	MR, VS	S	S
10 ab	Yes	Yes	MR	S	S
14		Yes	R-MR	S	MR
16			MR	R	R-MR
18			R-MR	R	R-MR
19			MR-MS	S	MR
22			R-MR	S	MR
23	Yes	Yes	MR	I	MS
29			R-MR	S	MR
39			R-MR	I	MS
40			R-MR	S	MS
41			R-MR	R	MS
43	Yes	Yes	VS	S	MS
Barley					
Kamut					
Triticale	Yes				
Wheat	Yes				

For stripe rust, seedling resistance observed in the glasshouse remained resistant in the field. Intermediate resistant lines (Lines 23 & 39) remained resistant in the field. Susceptible lines grown in the field showed a range of responses from resistant to susceptible. It was concluded that spelt genotypes 33 and 43 pose an unacceptable stripe rust risk, whilst 9a and 10ab should not be recommended for their stem rust liability. Further field and glasshouse evaluations for disease response and an analysis of the genetic basis of resistance are being undertaken in 2008/09.

CONCLUSION

With two years of the three-year project now completed, researchers are narrowing down the original collection of spelt cultivars to around 20 with the most suitable features for organic production and processing. Outcomes of the

project will provide production requirements and techniques for this crop, leading to a more sustainable organic grain industry that is better able to expand to its full market potential.

ACKNOWLEDGMENTS

The project team would like to acknowledge funding provided for this research by the Rural Industries Research and Development Corporation Organic Program, the NSW and Victorian Department of Primary Industries and the EH Graham Centre. Co-operation and support from organic producers and the organic industry is also appreciated.

For more information contact:

Robyn Neeson on (02) 6951 2735 or Email: robyn.neeson@dpi.nsw.gov.au

**AN OPEN LETTER TO ORGANIC INDUSTRY STAKEHOLDERS TO INTRODUCE THE
NSW ORGANIC MINISTERIAL ADVISORY COUNCIL (OMAC)**

Dear Industry Member

I am writing to advise of an important initiative regarding the significant growth of the organic industry and the opportunities it offers in our state of New South Wales.

Consistent with NSW Government Policy to increase effective use of resources and improve communication and consultation with Industry the NSW Organic Ministerial Advisory Council has been established. As Chairman of the Council I write not only to introduce myself and Council members but to also establish a line of communication for your industry to seek information, research and advice in the field of organic production and development.

The role of the Council under the Terms of Reference is to provide the government with a high level of advice across all sectors of related industries in relation to government policy, legislation, regulation and services. Also, the Council aims to assist industry to identify targets for development of organic production and processing and enhanced export opportunities of organic products in NSW

With this in mind and as one of the government's key goals to work with industry I attach the names and contact numbers of the Council members. Each member holds special expertise in areas of production, processing and retail sectors. Please do not hesitate to contact any member of Council with any suggestions, enquiries or concerns with the development of the organic sector in your industry.

As you would no doubt be aware, the New South Wales organic farming industry has huge potential to fill domestic and export markets which are expanding by about 16% each year, farming approximately 10.5million hectares Australia wide. Please consider the benefits of not only the Organic Ministerial Advisory Council but the role the Council could play in facilitating the growth of the organic sector in your field of expertise.

The Council looks forward to facilitating and assisting you in developing the NSW organic industry and working with your industry to ensure continued sustainability of our natural resources, strong environmental standards and world-class management practices.

Attached for your information are contact details for Council members.

Yours Sincerely

***Mr. Terrence M. Healey
Barrister-at-Law & Chairman
Organic Ministerial Advisory Council
New South Wales.***

NSW ORGANIC MINISTERIAL ADVISORY COUNCIL MEMBERS 2008

The Organic Ministerial Advisory Council (OMAC) had their inaugural meeting in November 2006. The council consists of members from the production, processing and retail sectors of the organic industry. The Council members are:

Chair: Mr Terrence Healey
16 Church Street
NEWCASTLE NSW 2300
Email: terlough@bigpond.com

Cr Jan Barham
Byron Shire Council
Email: cr.jan.barham@bigpond.com

Mr David Booth
'Buronga'
COOTAMUNDRA NSW 2590
Email: info@burongaorganics.com.au

Mr Geoff Brown
Buckwheat Enterprises
Goobang Junction
PARKES NSW 2870
Email: bio-oz@bigpond.net.au

Ms Jan Denham
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Cr Ingrid Strewé
Waverley City Council
Bondi Road and Paul Street,
BONDI JUNCTION 2022
Email: ingrids@waverley.nsw.gov.au

NSW DPI Staff:

Ms Robyn Neeson
(OMAC Executive Officer)
Organic Farming Liaison Officer
NSW DPI
PMB
Yanco Agricultural Institute
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Email: robyn.neeson@dpi.nsw.gov.au

Mr Scott Seaman
Manager Organics & Food Industry Development
NSW DPI
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NSW DPI'S NEW ORGANIC FARMING COURSE

So - What's all this about organic farming? What do I need to do? How do I become involved?

These are the common questions asked by those that are seeing a market opportunity in organic agriculture or by those who are simply curious as to what's organics and want to be involved.

Why a person becomes interested in organics is quite varied, it could be a heart string or a re-evaluation of enterprise choice. But there is no denying the rapid growth in the organic industry and these questions are being asked by more and more people.

NSW DPI has developed in conjunction with numerous industry participants, a one day workshop to assist new entrants into agriculture and those that are interested to find out more about Organics.

This one day workshop is designed to introduce participants to some of the ideas behind organic agriculture, looking generally at management options and enterprise choice. It also looks at assisting participants to make educated choices based on their natural resources, practical and marketing issues.

The key outcome for participants is to have a greater understanding of what is involved if they decide to go down the organic path.

There are a number of considerations discussed during the workshop, such as soil health and plant nutrition, dealing with pest and disease in plants and animals, weed management strategies, enterprise management, and having a marketing strategy.

And importantly, understanding what's required in conversion planning, the process that moves the farming business through the certified organic status.

For those want to gain organic certification, it can be a challenge, this workshop will help make the transition to organics as smooth as possible. It is also designed to help farmers already involved in agriculture, who are looking to further diversify into organics.

It is planned to have a number of workshops across the state, but this will be on an as needed basis. The cost of the course is \$280 incl GST. Interested? You will need to register – 1800 025 520



Workshop information contact:

Scott Seaman, (02) 6330 1200; Email: scott.seaman@dpi.nsw.gov.au

Registration through ProFarm:

Tocal College, CB Alexander Campus
Phone: 1800 025 520
Email: profarm@tocal.com

MUSTARD KICK STARTS ORGANIC VINEYARD AT NSW DPI CENTRE FOR ORGANIC FARMING

A mustard crop is laying the foundation for the first organic vineyard trial at the Centre for Organic Farming in Bathurst.

"The mustard cover crop will be used as green manure and because it produces natural pest suppressants, mainly glucosinolates, mustard also helps reduce weeds, diseases, insects and nematodes in the vineyard," Ms O'Malley said.

"As a green manure with a high plant biomass, the mustard will be slashed prior to seed-set to increase soil organic matter and reduce subsoil compaction.

"Mustard's deep taproot system helps reduce soil crusting and improves moisture infiltration."

According to Ms O'Malley, these soil improvements will contribute to future disease management and vineyard health.



Above: NSW Department of Primary Industries organic horticulturist, Karen O'Malley, said mustard was being used to manage weeds and fumigate the soil before planting Tempranillo and Sauvignon Blanc vines.

"Research shows that mustard green manure crops can suppress root-knot nematodes and diseases such as verticillium, aphanomyces and sclerotinia," she said.

"Mustards can be used as catch crops to retain nitrogen already in the soil but growers need to be aware that their residues break down more rapidly than most grasses and the nitrogen may be freed more rapidly.

"Timing of mulching is important for the release of nitrogen into the soil."

Sown this April, the mustard green manure crop will be grown for about 100 days until early flowering and mulched before setting seed to prevent competition with the new vines and volunteer mustard plants.

"And we hope to see an abundance of bees, ladybirds and other beneficial insects attracted to the mustard."

The mustard crop is just one part of the weed management strategy for the organic vineyard.

Mulching around the young vines, inter-row sowing of beneficial plants, slashing and an organic herbicide made from pine oil are all in the plan.

(From the May 2008 edition of [Agriculture Today](#))

For more information contact:

Karen O'Malley, (02) 6330 1212; Email: karen.omalley@dpi.nsw.gov.au

AUSTRALIAN ORGANIC & BIO-DYNAMIC STANDARD AVAILABLE FOR PUBLIC COMMENT SOON

Following a request from Australia's organic industry peak body, the Organic Federation of Australia, Standards Australia, Australia's peak standards body, has agreed to proceed with the development of a new Australian Standard for organic produce.

The concept of an organic standard is not new one for Australia. Since 1992 Australia has had in place a legally enforceable set of National Standards for exported organic products. The National Standard for Organic & Bio-dynamic Produce details the minimum requirements for production, processing and labelling of Australia's exported organic produce. The National Standard and the associated Export Control Orders are administered by the AQIS Organic and Bio-dynamic Program.

However, whilst the current National Standard has legal standing for Australian organic products destined for export markets and despite anecdotal evidence suggesting it has become the standard for the domestic market, AQIS does not have legal jurisdiction over non-compliance matters within the domestic market nor does it cover organic products imported into Australia.

This has had implications in the marketplace with limited options for ensuring the integrity of organic products. Misrepresentation of produce as organic / biodynamic within the domestic market has been a concern for a number of years.

The Trade Practices Act 1974 or State and Territory food laws provide "truth in labeling" requirements however the lack of enforcement action by the Federal or State agencies in addressing [apparent] non-compliance matters concerning organic / biodynamic produce have resulted in a number of unsuccessful requests by the Organic Industry to government authorities that consideration be given to the development of an appropriate legislative framework for organic products sold domestically.

The NSW Organic Ministerial Advisory Council (OMAC) has identified the development of a legislated domestic organic standard as a main priority.

OMAC Chairman, Terrence Healey, believes that discussion of the issues surrounding legislation of domestic standards is fundamental to the role of the Council. "The Council has been mandated to

advise the Minister on determining the best way forward for the organic industry in NSW. This includes providing advice on mechanisms which can improve the integrity and security of organic food entering the marketplace and increasing consumer confidence in these products." Mr. Healey believes a clearly defined domestic standard will help consumers gain an unambiguous understanding of what 'organic' really means and that the organic industry must lead the way in educating consumers to its benefits. "As society achieves greater sophistication, the choice of food requires that we / organic / biodynamic trustees encompass the idealism of a better lifestyle, higher standards of food intake, questioning the origins of each article put in front of us to consume".

The Australian Standard for Organic & Biodynamic Produce

A Technical Committee comprising a broad cross-section of industry has been convened to help develop the Australian Standard for Organic & Biodynamic Produce. The existing National Organic & Bio-dynamic (export) Standard is being considered as a basis for the development of the Australian Standard.

The aim of the new Australian Standard for Organic & Biodynamic Produce is to:

- Specify requirements for primary production, transport and storage, preparation and packaging of organic & biodynamic produce (not limited to food);
- Provide guidance on the certification process
- Determine the potential to participate in international standardisation work
- The Standard will also aim to establish definitions for specific terminology used in the industry to remove ambiguity.

While Standards Australia will develop the new Australian Standard it will not be involved in the certification of growers or retailers claiming to meet the Standard, nor can the Standard mandate certification. This is a key concern of Industry, and in parallel to Standards development, the Standards Australia technical committee is investigating potential regulatory frameworks which could achieve these objectives.

The Draft Standard is expected to be available for public comment in late July 2008, and, following a 9 week community consultation period and comprehensive review process, released in December 2008.

For further information contact: Robyn Neeson, NSW DPI Organic Farming Liaison Officer, Yanco, on (02) 6951 2735; Email: robyn.neeson@dpi.nsw.gov.au

NEWS, PUBLICATIONS, COMMENTARIES & EVENTS

NEW ORGANIC PUBLICATIONS FROM RIRDC & NSW DPI

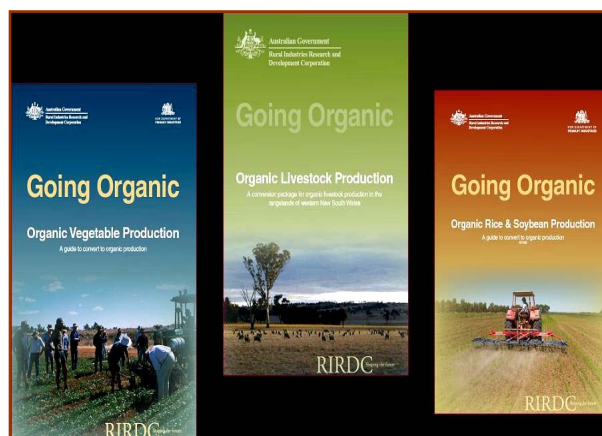
Three new books published by The Rural Industries Research and Development Corporation (RIRDC) provide producers with valuable information on how they can make the transition to organic production a smooth one.

The books written by NSW DPI's Organic Farming Liaison Officer Robyn Neeson focus on a number of products considered to have potential for organic production:

- vegetables,
- rice and soybeans, and
- rangeland livestock production

The books include sections on: organic principles, conversion and certification, regulatory and quality assurance considerations, organic production methodologies, economics of production, market potential, marketing strategies and processing requirements. Each book is supplemented with a comprehensive list of contacts, references and inputs permitted in organic production standards.

The books can be purchased from RIRDC by phoning 02 6271 4100



TOTAL ORGANIC PUBLICATIONS – NEW EDITIONS

Two new books on organic farming have been released by NSW Department of Primary Industries.

Both books have colour photographs throughout and contain case studies outlining the experiences and practices of a variety of organic and biodynamic farmers throughout Australia. *Organic Farming-an introduction* (\$36) is 158 pages of information essential to anyone taking an interest in the organic industry: this book explains the concept of farming organically and how it differs

from conventional farming. It also has practical information on topics such as soil fertility, composting, the benefits of earthworms and how to encourage them and details about organic certification. The second book *Organic Farming-crops, fruits and vegetables* (\$34) is 97 pages and gives information to help you select a crop to grow organically and practical information about what to consider when you grow any organic crop, in addition to 25 case study enterprises. The books may be ordered from NSW DPI at Tocal, phone 1800 025520.

ORGANIC EXPO 2008

Oceania's Premier Certified Organic and Environmental Products & Services (eco-ganics) Expo is on again at Sydney's Convention & Exhibition Centre at Darling Harbour.

The Expo features all you want to know about 'organic living'. The consumer & trade show has the full support of the Australian organic industry and embraces healthier, sustainable and practical living options, covering:-

- Food, Wine & Beverages
- House, Garden & Building
- Fashion & Manchester
- Personal Care, Health & Beauty
- Mother & Baby

The 200+ exhibitors are required to meet 'Good Environmental Practice' entrance criteria ensuring all exhibitors are genuine.

For visitors the Expo is a unique opportunity to taste, learn, buy and talk to exhibitors about their products and where you can get them. Australia's favourite chefs, celebrities and key industry speakers will be on-site to share their knowledge and passions during live and interactive demonstrations and presentations.

Come and visit NSW DPI organic staff at Expo site number 204.

Dates and venue for Organic Expo 2008:

Friday 25th July 2008 - 10.00am – 6.00pm (Trade Only)

Saturday 26th July 2008 - 10.00am – 6.00pm

Sunday 27th July 2008 - 10.00am – 5.00pm

Hall 1, Sydney Convention & Exhibition Centre, Darling Harbour, Sydney

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