

A year of organic research and development

Australia has seen a year of busy activity in organic R&D, with several projects completed and new books and research reports published. Most have been from the Rural Industries Research Development Corporation (RIRDC), emphasising industry development and growth through supporting conversion.

The issue of phosphorus limitations was given a grilling at the national workshop on phosphorus. The reports are currently in review and will be compiled and published in a special issue of the Australian Journal of Experimental Agriculture next year. Phosphorus research on a range of organic farming systems in Australia such as dairying and vegetable production has also featured in various scientific journals and conferences [1-4]. A summary of the state of play with phosphorus will be presented once the workshop report and other publications are available.

One paper not focusing on phosphorus was the report by Cookson et al. [5]. It included information on comparative systems trials in a semi-arid region of Western Australia, finding that soil microbial communities differed depending on resources and habitat (e.g. soil type and temperature) and all communities responded to increased soil moisture by increasing C and N cycling. No deficiencies were reported for the biodynamic or organic systems.

Journal of Organic Systems (www.organic-systems.org) continues to publish a small number of journal articles

and the editors are keen to see more papers submitted from all people working in organics in the Asia-Pacific region.

A project aimed at quantifying the size and extent of the organic market in Australia is underway with generous financial support from Biological Farmers Australia and the Victorian DPI, and keen participation from certifiers across Australia. The strong support and interest by the certifiers has ensured the survey is targeted at the most relevant people and businesses that are currently organically certified or on the way to being certified. A report on the survey will be published in early 2008 and it's hoped it will become a regular activity in the R&D cycle for the organic sector, with ongoing support from the certifiers, State government agencies, organic industry representatives and other interested stakeholders.

Supporting industry development and growth by supporting conversion

The transition to organic agriculture can be daunting, with significant changes to cropping and animal husbandry practices. Identifying cost-effective suppliers and developing market outlets during the in-conversion phase also poses economic uncertainty. The main funding body for organic R&D in Australia, RIRDC's Organic Produce Program, has channeled funding into various projects, supporting those entering the organic industry. One relevant



With a slow growth rate during the first couple of months, echinacea is susceptible to weed competition. However, by planting the crop out as seedlings, we can ensure a head start against rapidly emerging weeds. After a couple of months, echinacea grows quickly and develops a thick canopy, shading out any later-emerging weeds.

report is Ashley, R., Bishop, A. and Dennis, J. 2007: Intensive Organic Vegetable Production Integrated Development. RIRDC, Barton (www.rirdc.gov.au/reports/ORG/04-121sum.html). This report presents the outcomes from a Tasmanian project designed to evaluate organic vegetable production protocols on a commercial scale, determine the overall cost effectiveness of intensive organic vegetable production and provide information and training for existing and prospective organic vegetable growers. The recommendations from the project were to:

- Conduct regional projects on improved

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mechanical weed management, including systems research into weed interactions with crops and the potential for defined and acceptable weed thresholds

- Conduct regional projects on maintaining and building soil health and nutrition under high production pressures, which could help in determining the most efficient level of farming intensity
- Establish an organic learning and demonstration centre to address the identified skills shortage in the organic industry, integrating education, training and R&D and providing the basis of long-term comparisons of organic and conventional management systems
- Conduct specific regional economic studies of the costs of organic production, including farm-gate prices and full gross margin analysis.

Given the recommendation regarding the importance of weed control research, my report on weed control in organic herb and vegetable production [6] is timely. I plan to present some key findings from that report in future issues of ACOM. The recommendation for the organic learning and demonstration centre is an excellent idea and, to some extent, parallels the proposed Organic Hub recommended in RIRDC's current Organic Industry R&D Plan 2006-2011 [7].

International organic R&D

MANY OF US are accustomed to seeing Australia at the top of the ranks in the global organic scene, with the largest total area under organic production in the world [8]. However much of this area is based on large regions of very low-intensity animal production. Perhaps better indicators of the organic sector's development would be the percentage of organically farmed land – compared with national totals – or the number of certified organic businesses in a country.

The first measure (percentage organic land) is more relevant to European countries with strong consumer demand, effective certification systems and supply chains and moderate levels of institutional support. Hence, the ten countries with the highest share of organic land in 2007 were Liechtenstein (28%), Austria (14%), Switzerland (11%), Italy (8%), Estonia (7%), Finland (6.5%), Portugal (6%), East Timor (6%), Sweden (6%) and Czech Republic (5.5%) [8].

On the other hand, organic farm numbers are an important measure of organic adoption of developing countries where land holdings are unlikely to be large. The ten countries with the most organic farms for the same period were Mexico (~82,000 farms),

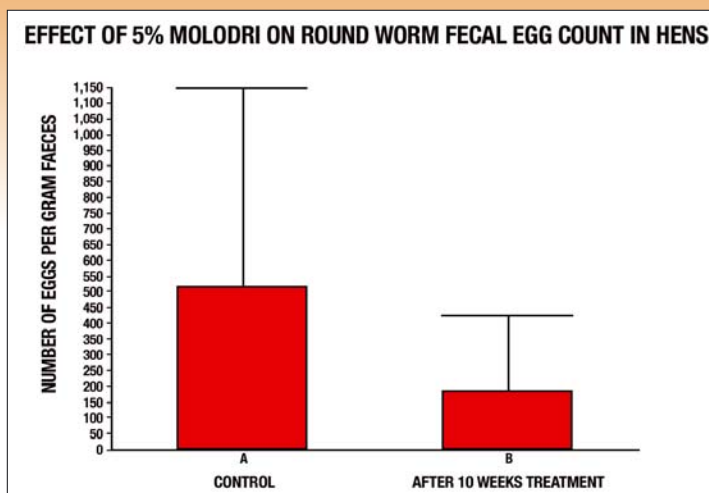


The Planck organic retail market in Nanjing, China

Italy (~44,000), Uganda (~40,000), Sri Lanka (~35,000), Philippines (~35,000), Tanzania (~35,000), Peru (~34,000), Austria (~20,000), East Timor (~18,000) and Germany (~17,000) [8]. The European countries included in this second list highlight the very strong interest for organic production and consumption in those countries.

The other important trend on the global scene is the emergence of China as a key player [9]. In the 2005-2006 financial year the increase in organically certified land in China increased the global area by 12 per cent. The likelihood of 'explosive growth' in China's organic food production and export capacity creates serious implications for food exporting nations such as Australia.

ATTENTION POULTRY & EGG PRODUCERS! Molodri reduces worm load in free-range poultry

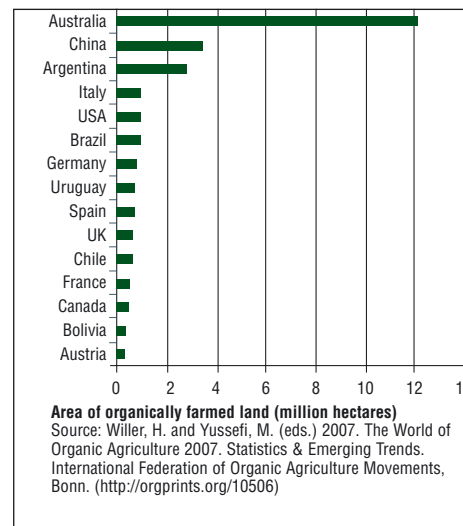
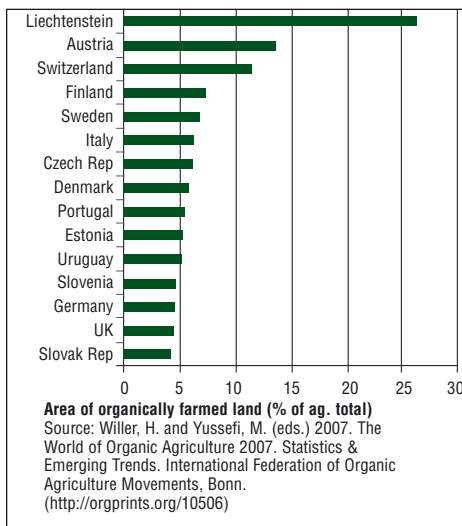
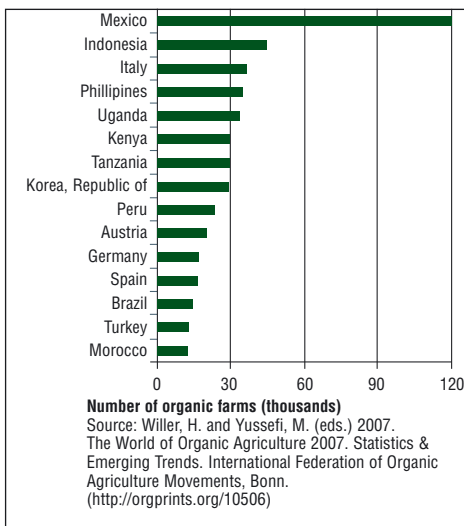


The above figure shows a statistically significant ($P < 0.05$) reduction (by approx 63%) in the ascaridia load of the Molodri treated birds. In the absence of Molodri, parasite levels failed to decline. Further, we also were able to demonstrate a significant reduction in coccidia infestation. Why not try supplementing your feed with Molodri and reap the productivity benefits?

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