OFA Position Paper

Priorities for Research and Extension in Organic Agriculture in Australia

Prepared by:

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1 Background

In July 2005 the OFA was restructured, with one of its features being the incorporation of a Trust. This Trust is to give direction to research in organic agriculture in Australia.

As the purpose of this paper is to guide thoughts on research priorities in organic agriculture, the question must be answered what the aim is of research funding in organic agriculture. It is assumed here that one predominant aim of this research is to find the most efficient[2] way of having organic methods adopted by the largest numbers of producers.

In order to reach its conclusions, the paper sets out to first discuss and establish the principles of research in organic agriculture and then traverse through the whole chain (from farm-gate to table) to see where the bottle-necks are. We then review past and present priorities in organic research directions in Australia. This leads to OFA's position on the direction of research and subsequently research policies which it wants to pursue.

2 Principles of research priorities[3]

2.1 Conflicting interests?

In the past, before any measurable government involvement, much of the research in organic agriculture was initiated and undertaken by producers who, often by trial and error, established what did and did not work. The increase in government funding since that time has meant that a rethink of priorities for the whole of organic agriculture is in order.

[1] The author thanks Dr. Paul Kristiansen, John Liddicoat and Prof. Alfred Poulos for their contribution.
[2] 'Efficient' is defined as using least resources (such as financial resources and human effort) to reach the same results.

[3] Sections 2 and 3 are mainly taken from Wynen, E. and Vanzetti, D. (2000), 'Research in organic agriculture - Assessment and future directions'. In: David, C., Allard, G. and Henning, J. (Eds.)(2000) Organic Agriculture Faces its Development: The Future Issues. 12 emes Entretiens Jacques Cartier ISARA - Universite LAVAL – INRA (http://www.elspl.com.au/Abstracts/abstract-g4.htm).

It is clear that interests and objectives of different stakeholders may conflict and that some trade-offs are necessary when deciding on research priorities. Some of the divergent interests and motivations of different partners in organic agriculture, and the relationships between them, are illustrated in Figure 1.

Producers are likely to be concerned with enhancing farm productivity, producing more output with the same inputs (or the same output with less inputs), and with price of the product. Producers and other groups may have other objectives, such as improving environmental benefits (or reducing costs) and enhancing food safety. Along with (wholesale and retail) market traders, they may also be interested in increasing the size of the organic agriculture industry.

Consumers are concerned with food safety, nutrition, availability and price. Some may also be concerned with environmental impacts associated with the production, distribution and consumption of the products they purchase. They have few means of influencing the agricultural production process except by exercising consumer sovereignty and reflecting preferences in their purchases.

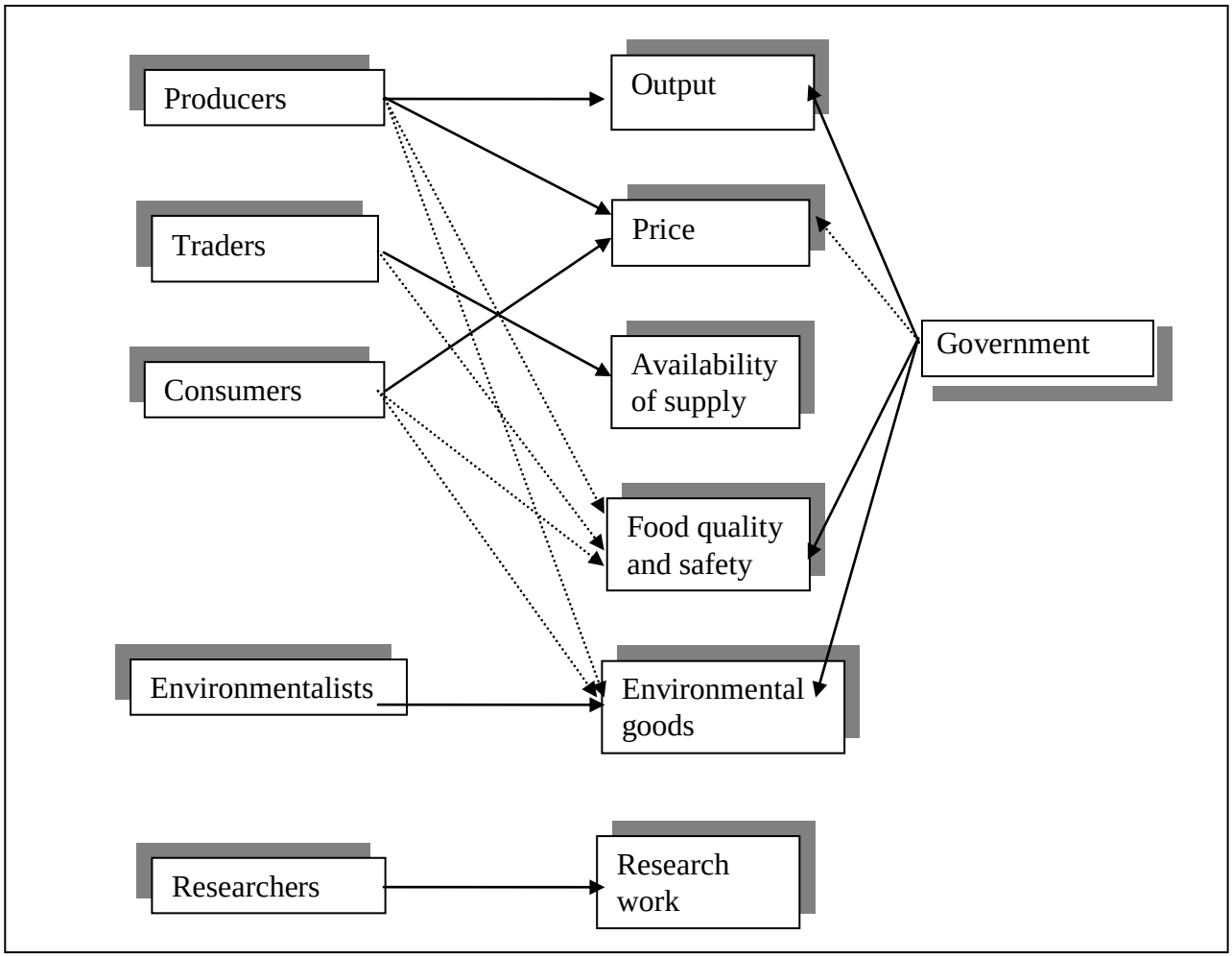

Figure 1. Diverse stakeholders' research interests.

Wholesale and retail traders, providing the marketing functions in between the producer and consumer, are interested in availability of supply of a consistent quality, and are generally motivated by commercial considerations.

Environmentalists emphasise the effect agricultural production has on the rest of the natural environment. They may also be consumers or producers.

Research is determined as often as not by the individual researcher's interests or inclination rather than an assessment of the overall costs and benefits of available funds. Individual researchers may enjoy working on their pet projects, may wish to employ particular techniques or work with a set of data with which they are familiar, even if their project is not the most productive.

The last player in the field is the government, which has as a broad function in safeguarding public interests, both in the area of benefits to and costs of research. Governments use research as the basis for policy decisions, and are – or should be -concerned about consumer safety, industry profitability, environmental issues and strategic research capability. On the cost-side, it needs to assure that tax-payed funding is spent most efficiently.

In the discussion about the benefits to different groups of research, the issue of long-term benefits is important. For example, productivity enhancement for the producer ultimately accrue to consumers rather than producers. Such developments, through improved plant breeding for example, provide temporary gains for domestic farms until other farmers catch up and adopt similar technology. New technologies that prove to be effective are quickly taken up by farmers within an industry. Competitive forces keep farm profits down to a minimum (see, as an example in organic production, Hamm and Michelsen (1996, p.211), who discuss the drop in farm-gate price in Germany when more organic wheat came into the EU market from Eastern Europe). With an efficiently operating marketing system, the productivity gains ultimately accrue to consumers and others at the end of the marketing chain, including foreign consumers. In other words, the effect of one policy (in this case research into technical aspects of production) may, in the long-run, well be different from the original goal (in this case lower consumer prices, instead of higher returns to farming).

In summary, the objectives for research priorities can be rather diverse between groups, and also within groups. The judgement on research priorities may therefore well be coloured by the point of view of the group that provides the judgement. When judging about priorities, one may also want to be aware of the hidden consequences of the choice of priorities.

2.2 Efficiency in priorities

When research funding is provided privately, the funding body can determine which stakeholder's position to favour. Governments are supposed to take the public point of view. But whether funding is by public or private sources, funding bodies invariably have a limited budget and numerous potential projects to fund. Within one's own favoured areas of interests, how should one decide what to fund and what not? One way of focussing the mind on efficient ways to allocate research money is to consider the relationship between the different types of research.

The pipeline model or concept is the traditional approach to analysing research benefits. This model sees a relationship from basic research through applied research and new technology to productivity (see Figure 2).

Money spent in basic research (for example, to find out how soil organisms, such as mycorrhiza, operate or are stimulated) leads to applied research (effect of presence of organism on crop yield) to new technology (crop management which stimulates the organism) and finally to increased productivity (higher crop yields). Traditionally, the four groups are seen as distinct with no feedback, but there may be considerable lags, risks and scope for unforeseen consequences in the

process. Despite its limitations[4], the simple pipeline model highlights some relevant issues. The benefits of basic research:

- take much longer to come to fruition than those of applied research as the latter is closer to implementation;
- if obtained now, are worth more than the same benefit not received until later. This favours investing in applied research, innovation and extension.

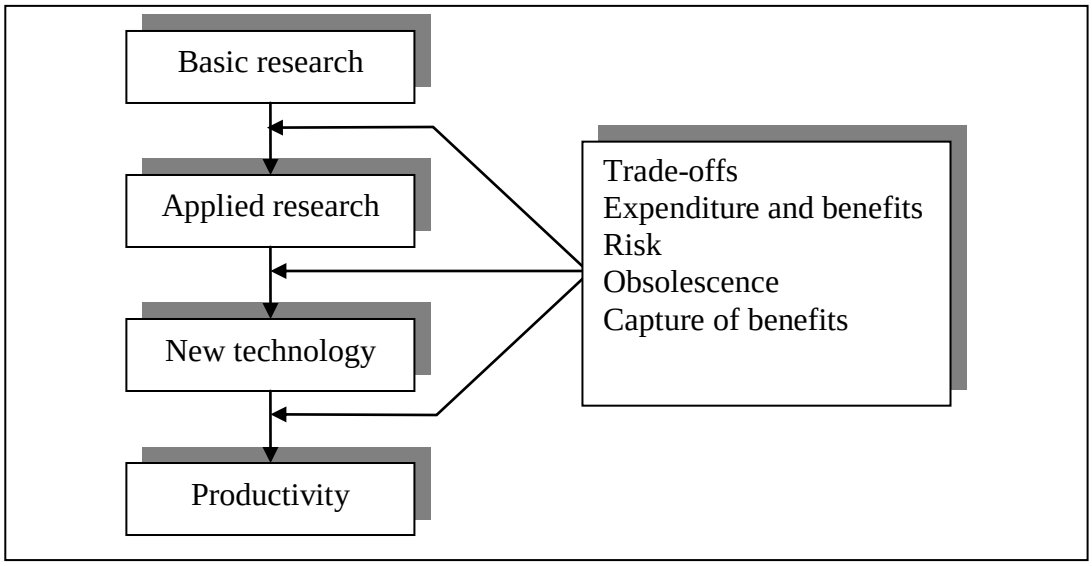

Figure 2. Pipeline model of research.

A related implication concerns the impact of one component in the pipeline on the next. To what extent, for example, does applied research contribute to a new technology? Funds should be invested where these relationships are closest. Research into mechanical weeding methods is one area where results can be immediately adapted and productivity gains obtained immediately. Plant breeding is much more subject to risk.

In summary, in the long run, basic research has the potential of high return in terms of productivity, once results from that research are translated into applied research and applied technology. However, investments in this area also have the longest lags in returns and risks of failure and obsolescence. In addition, basic principles can be the same wherever applied. Therefore, in countries where research funding is scarce relative to other countries, such as in Australia, the most efficient way to spend research funding may be in applied research or new technologies, or in gathering information. In a more extreme case, a country may be better off by not undertaking its own research and merely using the knowledge generated elsewhere (that is, not even applied research). However, for agriculture in general and organic management in particular, direct technology transfer from other countries may not always be applicable. Differences in soils, climate and ecology imply that research knowledge can be very specific and not readily transferred between locations. While the use of particular machinery may possibly be widely applied, the transfer of disease resistant varieties may not be so relevant, as different diseases may be specific to particular localities. Research funding bodies need to assess these possibilities in each case.

[4] While empirical evidence lends credibility to this model for agriculture at least, as Pannell (1999, p. 97) suggests, the model has been criticised as too simple and not reflecting the complex links between the components. For example, technology can enhance the productivity of basic research. The use of computers in research is an example of this.

3 Expanding the organic industry

In order to be able to reason ourselves towards answering the question of how best to get producers to adopt organic management practices, it is necessary to consider the whole scene of organic farming from production through to the final consumer of the product.

While organic production costs per unit of output are often higher than those of conventional products, it is inevitable that the cost-increase is passed on to the consumer as higher prices. Without doubt, consumption of organic products would be much higher if prices of organic and conventional products were similar. And producers would be more confident about moving to organic agriculture if they were assured of demand, even when many farmers were to change management method. The question is then how lower consumer prices can be achieved.

One sometimes hears the producer blamed for high consumer prices. It is often forgotten that the price paid to the producer is only a small part of the total price, which incorporates services such as transport, insurance, and distribution, that is, marketing. For example, Kleijn *et al*. (1990) compared organic and conventional prices of four products both at producer and consumer levels in The Netherlands (see Table 1).

Table 1: Producer and consumer prices for different products (ECU/kg)

	Organic			Conventional			Org. - Conv.	
	Production	Consumption	Diff.	Production	Consumption	Diff.	Diff.	%
Potatoes	0.31	0.56	0.26	0.10	0.25	0.15	0.10	69
Tomatoes	5.67	12.82	7.15	1.55	2.95	1.40	5.75	412
Wheat	0.41	1.55	1.14	0.18	0.61	0.42	0.72	170
Milk	0.43	1.25	0.82	0.34	0.69	0.34	0.48	140

Source: De Kleijn et al. (1990, p.136)

The consumer price incorporates not only the price paid to the producers, but also the marketing functions. In all cases, the difference between consumer and producer prices are considerably higher for organic products, implying that the marketing cost per kilogram of produce is considerably higher for organic produce. Although the data are old and figures will have changed, the general point holds. High costs between the farm gate and the consumer come about at least partly because of low quantities traded. An increase in consumption will very likely lead to lower prices as, for example, transport cost per unit of produce reduces. The resulting higher demand (if perceived by farmers to be a permanent feature) will then lead to more farmers converting to organic agriculture, and so on.

This realisation leads to the conclusion that the most cost-effective way to stimulate the uptake of organic agriculture could well be to devise ways to decrease consumer prices of organic products as compared with conventional products. This can be done in several ways (summarised in Table 2).

Table 2. Research areas to stimulate uptake of organic farming.

Objectives	Research areas
Improve organic prices relative to conventional	***Agronomic and economic research***
- Increase organic on-farm productivity	- Technical on-farm research
- Subsidise organic farming	- Effects on farm production, consumer prices and demand for product
- Increase environmental charges, payable mainly by conventional farming	- Quantify environmental costs and impacts of environmental charges on conventional prices
- Improve value of higher quality organic produce	- Market research and quality control
Improve supply	***Responsiveness of demand and supply to price changes***
- Quality control - Transport - Processing - Insurance - Distribution	Improve marketing infrastructure and market productivity, especially product segregation, handling and distribution. This is largely a function of throughput.
Encourage demand	***Promotion and demand analysis***
- Stimulate interest of consumers with - information campaigns - easy to understand labelling	- Effectiveness of promotion
- Government procurement	- Costs and benefits to local, regional and national governments
- Encourage corporate purchases	- Costs and benefits to corporate bodies
Policy advice	***Economic, social, environmental and political impacts***
Demonstrate need for change in policy	

3.1 Prices of organic versus conventional food

For consumers, the relative prices are important, especially for the basic products such as bread and milk. In other words, for consumers to choose organic produce, it is the price of organic **relative to** conventional produce that is important. Producer prices are influenced not only by how efficiently the farmer can work, assisted by technical research, but also by farm subsidies, which are converted (at least partly) into lower consumer prices. Producer subsidies are an option in some countries (such as the EU), but are deemed not worth while investigating in the context of Australia. However, this area is a good example about which to import knowledge from overseas, where studies are undertaken to consider whether such policies stimulate the uptake of organic management.

The price of conventional products, as with any product, is related to the production costs incurred by the producer. For agricultural products, apart from on-farm costs (paid by the farmer), there are usually also off-farm costs (not paid by the farmer). It has now been widely recognised that more environmental problems are likely to occur with conventional than with organic agriculture, such as leaching of nutrients and water quality and erosion affecting non-agricultural land. This implies that the price of the conventional product reflects the true cost of the product less than that of the organic product. 'Polluter-pays' is an area in which policy makers in Australia profess to be interested.

Quantification of environmental costs due to agricultural systems is, however, notoriously difficult. Efforts have been made, among others, by Pimentel *et al*. (1993), FAO (1996) and Redman (1996) (for a summary of their findings see Wynen (1997, pp.18-19)). But it is only when one can get a handle on the magnitude of these costs that more pressure can be put to bear on governments to ensure that all farmers pay the full costs of production. Full-cost-recovery of all production will bring the relative prices of organic and conventional farming closer together, thereby automatically encouraging consumption of organic products. As it is somewhat difficult, and therefore expensive, to accurately determine the pollution cost of each farm, it may be advisable at present to use a proxy for the pollution costs, such as quantity of polluting pesticide used. Some of the Scandinavian countries have been doing this for quite some time. For example, Denmark has levied a tax on pesticides since the mid-1980s. In 1996 it amounted to 14 per cent of the pesticide price, on average, and it was doubled in 1998 (Schou 1998). Data on the effect of such taxes on product prices and farmers' viability would help convince politicians to take action in this direction. In other words, investing in research to quantify environmental problems may be a cost-effective way of increasing the uptake of organic management methods by farmers.

The organic movement has always maintained that organic produce has a superior quality compared with conventional produce, yet this is difficult to prove (Niggli (1999) attributes this to limited research facilities and inappropriate methods). Historically, attention was focused on the nutrient content, but more recently consumers are concerned with detrimental environmental impacts in the production process (Niggli and Lockeretz 1996, Table 1; Mattson 1996; Meier-Ploeger and Vogtman 1996) as well as food safety in regard to pathogens and chemical residues (Brandt and Mølgaard 2006). The nutritional content of organic agriculture is a good example of research that can well be carried out in other countries, and knowledge about it imported into the debate about this topic in Australia.

3.2 Improve supply

Prices and environmental issues are not the only concern of consumers. Product characteristics, such as taste, appearance, nutrition, shelf life, brand, image and other factors make up the total package. Knowledge about the production process, such as the assurance that no child labour or the destruction of rain forests has been involved, is a further characteristic that some consumers are interested in purchasing. These various characteristics come in a bundle, be it an apple, a banana or a can of tuna. Sound marketing involves providing consumers with products containing the characteristics they want and avoiding the expense associated with unwanted characteristics. There is little point in producing a product with an extended shelf life if consumers intend to eat the product immediately. Identifying, and supplying, the particular characteristics that consumers in different markets want is important. Also a substantial part of research in this area can be carried out overseas without it loosing validity for Australian conditions.

Problems with the logistics of moving product from the farm to the consumer have been recognised in other countries, such as The Netherlands. In its Organic Action Plan for 2000 to 2004, 63 per cent of the total of €78 million was dedicated to 'Professionalisation of chain; optimum transparency and closing of chain'. Several methods, of focussing on products and processes, were developed.

3.3 Encourage demand

Promotion (advertising) may seem in some ways to be a waste of resources, but has an important role in expanding the organic market (see, for example, Hamm and Michelsen (1996, p.217) who discuss the situation in Denmark in 1993). In a country where many certification bodies operate, such as in Australia, promotion by one of them of organic products in general is likely to result in

increased sales of not only products of farmers belonging to that organisation, but of all organic farmers. It is therefore likely that promotion is under-funded in such a place.

In addition to under-funding of promotion in general, non-clarity in labelling doesn't make it easy for consumers to understand the organic market in Australia. Reasons for this is the diversity of organic labels in the Australian market, caused by products labelled by different certification organisations and the absence of domestic organic standards (which facilitates non-organic produce being sold as 'organic' – albeit non–certified).

The effect of a policy on buying organic products by governments and corporate bodies (such as airlines or hotel chains) could make a huge difference to the total demand, especially at levels at an early stage of the development of organic agriculture in a country (see, for example, Danish Directorate for Development (1999) for conditions in Denmark; Ecology and Farming 1999, p.6).

Many countries focus mainly on their domestic market when considering how to expand organic production. However, for countries in which conditions for the export market are dominant, such as large agricultural areas and few consumers, as in Australia, it is important to focus also on the requirements of the export market, such as certification, and product and market characteristics.

3.4 Policy advice

So far we have discussed the scope for expanding the organic market by focusing on consumer needs and preferences. No mention has been made yet of other - overarching - kinds of research which has the potential to convince governments to change policies, for example to make organic agriculture easier to pursue for producers, or to increase research funding. Topics for such research could include present policies, pointing out where they discriminate against organic farmers (such as the policies of some marketing boards, at least in the past) or make organic farming more difficult (by not allowing domestic standards and so making it easier for non-organic farmers to sell in the organic market), and potential gains from stimulating organic agriculture (environmental research, mentioned above, would fall under this heading). This kind of research can, of course, also contribute in no small way to improving conditions such that the adoption of organic farm management methods becomes more likely. An example of this work is that carried out by five European universities, funded by the European Commission since 1996 (European Network for Scientific Research Coordination in Organic Farming).

3.5 A summary of strategies

Points made in this section are summarised in Table 3, showing the different areas of research discussed above. The table also indicates whether research in those areas is so specific to Australia that it needs to be conducted in this country ('yes' or 'no'), or that the research could be done overseas and used in Australia.

Especially that kind of information that is specific for Australian conditions, such as applied research in all areas (agronomic, economic, marketing and policy) would need funding from within Australia. Knowledge about general issues, such as characteristics of organic products, is easier to import.

Table 3. Appropriateness of funding for organic agriculture in Australia.

Type	Australia	Overseas
Agronomic/economic/social research		
- Technical research	applied	basic
- Financial and economic research	applied	basic
- Environmental impacts	specifics	principles +examples
Marketing research		
- Nutritional quality of organic products/health	no	yes
- Other product characteristics (taste, shelf-life, etc.)	no	yes
- Supply chain	yes	some
- Export market information	yes	some
- Information provision to consumers	yes	methods
- Government procurement and corporate purchases	yes	methods
Policy development	yes	some

4 Past and present research priorities

4.1 Rural Industries Research and Development Corporation

Research funding for organic agriculture in Australia has been mainly funded by the Rural Industries Research and Development Corporation (RIRDC), which has been allocating funding to organic agriculture to the tune of approx. $275,000 per year since 1996. A committee, with members drawn from the organic industry, has the task of setting priorities (see Table), and of allocating the available funds.

Over time, the research priorities have changed somewhat, moving from communication and education and production (including soil management, pests and diseases and plant and animal nutrition) in the first 5-year plan, towards conversion processes and marketing in the second 5-year plan, at least in theory. Systems design, including management of soil, pest and diseases, and plants and animals stayed at 40 per cent through the two periods. As no funding amounts are shown for the projects in progress, it is difficult to evaluate whether this is indeed adhered to in practice.

Table 4. RIRDC priorities for organic research projects.

1996-2000	%	2001-2006	%
Communication and education	20	Communication and facilitation	15
Conversion processes	20	Conversion processes	25
Organic systems design	15	Organic Production Systems	40
Soil management	13		
Pests and diseases	12		
Plant and animal nutrition	10		
Market development	10	Regulation, validation and market access	10
		Supply chain management and intelligence	10

Source: 1996-2000: RIRDC (1998); 2001-2006: http://www.rirdc.gov.au/pub/organic.html.

Funding has been provided not only for particular projects, carried out by different organisations such as state departments of agriculture, universities, and private researchers and consultants, but also for events to try to set research priorities (see, for example, Dumaresq et al, 1996; and a workshop in late 2005, discussed below), and for conferences, such as the OFA annual conferences since 2000.
For some of RIRDC's publications, see http://www.rirdc.gov.au/reports/Index.htm#Organic.

4.2 Other Research and Development Organisations

Other research organisations can also allocate funding to organic projects. Around $50,000 was estimated to have been allocated for horticulture and dairy in 2000-2001 (Wynen 2003).

No estimate has been made of funding on topics of interest for organic agriculture by state departments, universities, or other public and private funding bodies, such as Land and Water Australia and the Murray Darling Basin Commission.

4.3 Cooperative Research Centre 2004

In July 2004, a combination of researchers and business applied for funding for research into organic agriculture in the Cooperative Research Centres Programme 2004 Selection Round. This is an extensive proposal for research into organic food and farming technologies. In June 2005, notification came that the proposal was not accepted. The essence of its programmes was summarised in a later paper developed for a RIRDC Roundtable to discuss options in the absence of a CRC (Birubi 2005, p.7), and is shown in Box 1.

Box 1. Research, development and extension programmes developed for the 2004 CRC Bid

Organic Farming Systems

a. Increase the number, area, efficiency and profitability of organic farms producing different foods in different zones around Australia.
b. Remove barriers to organic conversion and enhance organic system productivity.
c. Establish economic, environmental and social performance indicators/benchmarks for organic farming system performance.
d. Develop, demonstrate and validate integrated organic farm management systems

Organic Food Quality and Supply Technologies

a. Benchmark and substantiate the safety, quality, nutritional and functional attributes of organic foods.
b. Demonstrate, develop and validate organic food processing and supply chain inputs and technologies.
c. Review and revise organic standards to provide a scientific basis to organic processing and supply chain technologies.

Improving Soils for Organic Food Supply

a. Understand and optimise soil biological drivers for improved Australian organic crop, horticultural and pasture production and environmental performance.
b. Evaluate, develop, validate and commercialise farmer-friendly soil inputs and methodologies for safe, sustained and reliable organic food supply.

Delivering Organic Food to Market - objectives

a. Align CRC research from farm to market.
b. Improve international competitiveness through better value chain coordination and performance.
c. Enable commercialisation and market development for CRC research and commercial partner's products.

Building Capability

a. Educate and train students and industry practitioners in organic science and technology, and develop scientific and commercial capacity to utilise and further develop organic systems science.
b. Inform the community and conventional food chains on the benefits and value of organic food production and supply.

Projects in many areas were envisaged, including farming systems with a special emphasis on soils, environment, food quality and marketing. An extra dimension, common in many existing CRCs, was the thought of training of the future generation, by including a specific programme on education and communication.

5 Recent deliberations

After the untimely end of the CRC-bid for organic agriculture, the RIRDC organised a Roundtable in October 2005. RIRDC recognised that the CRC had brought together a lot of interests in research into organic farming, and wanted to explore ways in which these interests could best be used in the future, even without an official CRC.

Late October 2005, representatives from many Research and Development Corporations (representing grain, dairy, meat, and horticulture), Commonwealth and State Departments of Agriculture, universities, the Organic Federation of Australia (OFA), producers, traders and retailers gathered to brainstorm about the way ahead.

One of the topics was the importance of establishing a Centre of Excellence, to overcome the barriers of conversion to organic agriculture. One of two major options mentioned was a Focal Point, some sort of Clearing House for organic agriculture. This would gather all existing knowledge about organic agriculture, and dispatch knowledge to those who request it. This facility should be housed in an existing organisation. One option was it being hosted by one of the certifiers, another – more logical – one was the OFA as choice of host.

Another topic was a co-operative approach, that is, sharing research that is useful to both conventional and organic agriculture. Remarks about this possibility included that it needed to be under the umbrella of one organisation, such as RIRDC or OFA, flexible and sector-based. Topics would be needed which both management systems recognise as of importance, which may sometimes mean that titles of projects need to be adapted. Co-operation is especially likely with organisations orientated towards sustainability – environment.

6 OFA research policies

6.1 Information gathering and dispersal versus original research

Information gathering is generally considerably cheaper than doing original research. It is therefore always prudent to see what others have done in a particular area, before embarking on new research. However, it is particularly prudent, and possibly the only option, when resources are scarce, as is the case with research funding for organic agriculture in Australia.

By collecting all information on organic agriculture, and gathering it in one place, both physically and virtually, many people may be able to access it easier than when the information is dispersed over many institutions, either public (libraries, for example) or private (individuals computers, for example). This information could then be placed in a particular location, and on a website – the compost industry seems to have such a system, which should be investigated. When the organic movement becomes more flush with assets, a 'librarian' could be appointed to help people find required information.

Once the information has been collected, strategies need to be developed to make the availability of the information known, after which these strategies need to be put in place.

In summary:
- gather, catalogue, and make available information on organic agriculture;
- develop and put in place strategies to disperse the gathered information;
- appoint a person who can deal with enquiries.

6.2 Topics for research and extension

It is likely that not all of the resources are going to be allocated to information gathering and dispersal. For funding for research itself, it is then still important to agree upon priority areas. The specific research areas of all these topics (and any other empirical work) would be based on wide stakeholder consultation. For this to work, the following would be needed:

- a plan of action, a framework, a strategy ... PLAN, DO, REVIEW cycles
- workshops
- time frame would need to be considered.

As shown in Table 3, although some of the research on farm technical, economic, social and environmental matters can be carried out in other places than Australia, more specific research would need to be done locally. For the marketing issues, the picture is a bit different. Some of the research, such as health effects, nutritional quality and other characteristics can just as easily be carried out overseas as in Australia, as the results are relevant anywhere. However, when it comes to the market itself, and finding ways to make the supply chain work, local conditions are relevant, and therefore local action needs to be taken. The same is the case for policy development.

Increasing demand

Demand can be promoted by making it easier to understand how to identify organic products and by providing consumers information about organic agriculture.

The first, facilitating identification of organic produce by consumers, is related to two issues. The first is a clear domestic policy within Australia which allows only produce certified to official organic standards to be sold as organic - a policy which the organic industry has pursued since the late 1980s, and which is one of OFA's priorities at present. In addition, a simple labelling scheme would undoubtedly facilitate consumers' recognition of organic products.

In the area of the provision of information, consumers can be reached in many different ways. One strategy is the preparation of a booklet containing basic information on organic food, how it is grown, comparisons between certified, non-certified, and conventionally grown food, information on bio-dynamically grown food, the latest information on the possible health benefits and nutritional quality of organic food, and the impact of agricultural chemicals on the environment and wildlife. It could be distributed to retailers of organic food (and supermarkets which are selling an increasing amount of organic food), and to other institutions with interest in organic food, such as Qantas, influential chefs, and colleges which train students for the hospitality industry. Another way of reaching consumers is to encourage speakers on organic food.

Advertising campaigns is another way to reach consumers. As most consumers will not know the difference between products certified by different organisations, advertising campaigns by one certifier makes little sense for that organisation, as the benefits will go to all certifiers. For the OFA, which represents all aspects of organic agriculture, including certifiers and consumers, it makes considerably more sense to engage in an activity which benefits the whole industry.

OFA should contemplate to employ someone with marketing skills to co-ordinate consumer information activities, and to set up an advertising campaign on organic produce.

Supply chain issues

For a number of products, it is difficult to get the product from the farm gate to the consumer, domestically or on the export market. Bottlenecks in the supply chain will need to be investigated and dealt with. For example, it may be difficult for a livestock farmer to find an abattoir not too far from the farm which is licensed to deal with organic meat. It is also important to identify bottlenecks in domestic supply chain and export market and find solutions.

6.3 Support for co-operation with other funding bodies

As Australia has a number of CRC's of relevance for the technical part of farming, such as one for weeds, and other funding bodies such as for specific commodities, OFA want to spend some energy on establishing links with other funding bodies and developing policies with those bodies on principles of funding of research of relevance for organic agriculture specifically. However, CRCs are temporary organisations and links may be lost when the CRC ends. The OFA may also want to support applications to such funding bodies. Allied organisations may have common goals and activities, including consumer groups, environmental and land management agencies, innovative sustainable agriculture groups (e.g. Landcare), as well as private and government educational institutions.

One of the ways to convince other organisations that organic agriculture is worthy of their attention – and funding – is to make a case for why this is so. The OFA should have a paper on the importance of organic agriculture in a number of areas that Australia finds important in agriculture, and in which it has policies and regulations. Examples are soil quality, water quality, bio-diversity, and environmental management. This paper could then be used by OFA members to draw upon when talking in public about how organic agriculture contributes to the sound agricultural management debate. In fact, OFA may like to employ somebody who takes these issues to the funding bodies and to public fora for general education.

6.4 Policy development

As OFA is a lobbying organisation, OFA needs to develop policies about which it wants to lobby. These include:

- Identify policies of importance to the organic industry, such as:
  - Long-term sustainability of agriculture
  - Environment (off-farm effects)
  - Health:
    - Farmers and farmers' families
    - Consumers
- Identify gaps in information that could assist in making policy statements. For example, poor statistical information in Australia makes it impossible to decide on whether the domestic market or the export market are important to focus on.
- Identify specific projects that can fill the gaps.

7 References

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