



Senator the Hon. Judith Troeth

**Parliamentary Secretary to the Minister for
Agriculture, Fisheries and Forestry**

OUTLOOK 2004

Introductory comments on portfolio directions in R&D

**National Convention Centre, 31 Constitution Avenue
Canberra, ACT**

9.15 am, Wednesday, 3 March 2003

Thank you Daryl for your introduction and for chairing this morning's session — a session in which I take a special interest every year.

Good morning, ladies and gentlemen, and welcome to the 'New and Emerging Industries' session hosted by the Rural Industries Research and Development Corporation. It is a pleasure to have the opportunity to provide some introductory comments on current portfolio directions in R&D.

PORTFOLIO DIRECTIONS OF R&D

Innovation has always been at the heart of the way Australians have adapted and succeeded - particularly in the primary production sector.

Innovation remains central to our prosperity and encouraging the development of dynamic and competitive industries that deliver a range of benefits to our primary industries and the wider Australian community is the centrepiece of the Government's R&D policy.

In the context of international markets, Australia is, in many respects, a relatively small player. Rural industries often operate in an environment where fickle international trends can dictate the terms of trade.

In response – and also as a way of managing this - rural operators have risen to the challenge, increasing their business productivity to ensure they remain internationally competitive.

But improving productivity is only part of the solution because they now face increased pressures to maintain the sustainability of our natural resource base.

The best way rural industries can meet these challenges is to invest in R&D, and they've been doing that through the Rural Research and Development Corporations for more than a decade.

In as little as 8 years, R&D investment has grown by \$190 million to more than \$450 million (454) in the last financial year - with the Government providing matching – dollar-for-dollar – funding to industry for R&D.

This significant investment reflects the Australian Government's strong commitment to the rural sector and demonstrates the successful partnership between the Commonwealth Government and this country's industry. It is also important to have R&D outcomes that are functional - to help new industries emerge using innovative technology.

R&D also enables primary producers to maintain their competitive edge, boost efficiencies and identify new business opportunities.

Innovation is also one of the key drivers of economic growth and creates flow on benefits for rural economies, such as wealth creation, new and improved services and local employment opportunities.

Developing new industries also adds important diversity to regional Australia because it reduces a region's dependence on a narrow selection of bulk commodities and associated markets.

It is important to point out that with the creation of new opportunity, comes a level of associated risk.

Unlike mainstream industries - where there is readily available information and well-tried technologies - relevant information is not always easily

accessible to those with a vision to start a new venture and the risk of failure is higher.

This is where R&D can make its greatest impact – by providing resources and information that enables primary producers to make informed decisions when developing a new commodity or product.

R&D is vital in the success of new industries. The Australian Government is strongly committed to further developing new industries and delivering new opportunities to regional Australia.

As part of this commitment, the Government has delivered wide ranging and comprehensive programs which includes the *New Industries Development Program (NIDP)* — which is funded under the Australian Government's \$3 billion innovation initiative *Backing Australia's Ability*.

NIDP has been a great success in supporting the creation, development and implementation of new industry initiatives by building upon available R&D to further drive ideas and concepts.

A key to the success of this program is industries using the R&D model to respond to continually changing market demands.

PERIGORD TRUFFLES – THE ROLE OF R&D IN ASSISTING THE DEVELOPMENT OF NEW INDUSTRIES

An excellent example of how adopting user-driven R&D projects can produce a viable new industry or add value to an existing one is the Perigord Truffles of Tasmania venture.

Perigord Truffles of Tasmania Pty Ltd is the brainchild of Tasmanian entrepreneurs Duncan Garvey and Peter Coope.

With funding from RIRDC, they have successfully grown truffles in a cooperative partnership with 28 farmers in Tasmania. It is a venture that has succeeded in developing a new and exciting Australian industry, based on strong research and enthusiasm.

The French black truffle has been produced traditionally in regions of France, Italy and Spain for more than a thousand years.

It is a much sought-after delicacy in France- fetching up to \$4000 a kilogram.

Twelve years of R&D have been invested in developing this commercial venture in Tasmania.

Last year, Perigord produced 20 kilograms of truffles, which sold for between \$3000-4000 a kilogram.

Perigord will export its truffles in late winter and early spring when they are not available in the northern hemisphere. The company's enterprise and innovation enabled it to win the first \$50,000 RIRDC Business Plan Competition in 2000 ahead of 23 other rural industry projects.

This is only one example of the vibrant new industries that researchers, working with Australian farmers, are developing. I can assure you there are many more examples like this.

Remember, cotton was a new and emerging industry in Australia just 40 years ago.

Less than 20 years ago, farmers – in traditional wool growing areas - queried the idea of vast expanses of yellow - when a few farmers experimented with canola.

Now, the truffle industry may not grow to be as big as cotton or canola, but it still illustrates my point that new and emerging industries can have some major impacts – even at a local level. Even more spectacular is the successful development of the Southern Bluefin Tuna aquaculture industry.

Tuna farming only began in 1991-92, but last financial year (2002-03) its gross value of production in South Australia was \$255 million.

The Fisheries RDC has supported the industry's development by funding R&D to develop feed, improve environmental water quality around farms, improve product quality, and boost the rates of fish health and survival for Southern Bluefin Tuna aquaculture.

It is results like these that demonstrate the benefits and practical outcomes of R&D investment.

Dr Simon Hearn, who follows me, will discuss the RIRDC's views on establishing research priorities for smaller industries. RIRDC is Australia's most wide-ranging agricultural research and development corporation. One of its main roles is to fund R&D to help develop new and emerging industries.

After that, you will hear about two other interesting new and emerging industries, which RIRDC has helped by funding R&D to support their development. I, for one, am interested in hearing how R&D is helping to

further develop the wildflower and native plant industries, and advance the production of organic agriculture.

Innovation is a team effort. We need skilled and motivated people to take on the challenges of creating and developing new ideas. We need a strong economy that is able to support investment in innovation - from ideas through to the commercialisation of products.

I hope what you hear in this session will encourage you to consider how innovation can create new and exiting opportunities for rural and regional Australia.

Thank you.

OUTLOOK 2004

SPEAKERS PAPERS

Speaker

Simon Hearn

Managing Director

Rural Industries Research and Development Corporation

Title

Establishing research priorities for new
and smaller rural industries

Session

New and emerging industries

9.15am Wednesday 3 March

National Convention Centre, Canberra

ESTABLISHING RESEARCH PRIORITIES FOR NEW AND SMALLER RURAL INDUSTRIES

Dr Simon Hearn
 Managing Director
 Rural Industries Research and Development Corporation

Introduction

This paper discusses some of the factors driving the development of new rural industries in Australia and examines the role of R&D in their development, particularly concentrating on how priorities are set and implemented. It then provides some detail on RIRDC's new industry programs and discusses the issues of research adoption and communication.

The search for new industries has been a constant feature of Australian agriculture. The motivations for this are well known:

- Farmers may seek to do better by diversifying their operation thus spreading their income over several farm enterprises, markets, buyers and selling times in order to minimise the effects of price or yield falls in any one enterprise (Williams and Schroder 2001).
- Farmers may be motivated by the need to replace existing enterprises with new ones that provide better returns. This is currently a pressing issue for some rural areas where traditional enterprises can no longer support viable communities.
- The need to develop farming systems that have long term sustainability has also motivated the search for alternative crops and animals that are more suited to the Australian environment.

The last ten years has seen an explosion of interest in new rural products, both by farmers in traditional enterprises and new entrants to agriculture.

Given that more than 40 per cent of farm income comes from diversification through "off-farm" income there is a substantial body of farmers using this as a tool.

But there is also a large number of new entrants, particularly through city and town fringe rural developments occurring in the other direction. Here people with city or town based incomes are looking at rural investment to make a return from acreages on the edges of urban centres. These people often bring new capital, a difference in approach and (at times) openness to novelty that can be lacking in traditional farming operations.

New investment in rural Australia, particularly the development of better high value uses for irrigated crops is crucial to increasing wealth in regional Australia and at the same time ensuring better environmental outcomes. For instance, the higher the value per megalitre of water that we can extract from crops the better our inland river systems will be looked after.

Success Factors

Translating an idea and some initial research into a product and a growing industry is not easy and amongst the successes there have been many failures or instances where the initial promise has not been met. An important first step is to have a good business plan and for this reason RIRDC conducted a program of supporting excellence in business planning itself.

Some of the specific factors that contribute to success and should be covered in a business plan were discussed in RIRDC's publication, *The New Rural Industries* (Hyde 1998). However there is no guaranteed formula for what is ultimately the challenge of developing a successful business enterprise. Key success factors include:

An industry champion

This is someone with the drive, energy and vision to turn an idea into reality. Such people will have the ability to spot and act on an opportunity. They will be competitive, willing to take risks, and will have the stamina and skills to see a venture through its various stages.

Market focus

This is a crucial factor. It is absolutely essential to thoroughly investigate the market for a product before committing to the development of an industry based on it. New industries have failed because they started with someone who had a passion for a particular crop or animal, invested in a production system and then found that the market was not there or did not live up to expectations. Moving away from a supply driven approach is even more important these days when the key to success often means competing on value rather than price. This means knowing precisely what the market wants in terms of product quality, timing of supplies, safety etc and then supplying to these requirements.

When either an entrepreneur or a public sector researcher comes to us RIRDC looks for a business plan that shows their project is commercially viable or that they have value chain partners. Indeed our financial support helped develop the DOOR ("do our own research") methodology, developed at the University of Queensland Gatton, now quite widely used in new industries (See Fletcher, Twyford-Jones and Blessing 1998). This encourages developers of new crops to research the value chain before they go too far down the production road. Because market information for new products may be hard to get, DOOR involves producers, marketers and other interested parties pooling their resources to investigate the market rather than relying on "experts."

Financial Management

Access to adequate financial resources is also a key success factor. Developers of new rural industries need, as does any entrepreneur, a passion for what they are doing, but they must temper this with a careful assessment of their financial goals and limits. New enterprises will have a significant demand for operational funds over an extended period before they become profitable. These will need to be sourced from capital resources or from the cash flow provided by other enterprises.

Other Success Factors

Other success factors include getting the right location and technologies, the style of operation and the role of government.

Research Priorities for New Rural Industries

Because new industries are often hampered by a lack of information, well targeted research can make a vital contribution to success. One of RIRDC's three core businesses is to foster the development of new rural industries both prospective and emerging. RIRDC's mission is to make and manage research and development investments on behalf of government and industry for the benefit of the rural sector.

The reference to investment is important. RIRDC funds others to do the research, but it is not just a granting body. We want to make sure that the R&D we support carries through to results on the ground and this influences the way we set priorities for the research we support.

It is fundamental to our priority setting process that we work in partnership with our industry stakeholders. We establish our longer term research priorities through industry five year R&D plans which are developed through workshops and other consultative processes with producers and other industry representatives. Decisions on short term priorities and projects to be funded are made by industry advisory committees.

In addition we put strong emphasis on having commercial partners involved in projects right from the start. This provides another source of cash or in kind input into the project and sets a pathway for the ultimate commercial uptake of the outcomes. The issue of commercialisation is discussed later in the paper.

RIRDC now puts considerable emphasis on structuring R&D priorities around the whole supply chain. Typically the R&D objectives for an industry program will include the following elements:

- understanding markets;
- developing and improving products;
- improving production systems;
- improving post harvest systems; and
- facilitating industry development and training.

The purpose of this approach is to recognise the need for initial market research by first establishing what consumers want in terms of quality and other product characteristics and then to make sure that research on the other elements delivers these requirements.

Generally new industries develop through various stages and our research priorities need to recognise this. There is the innovative idea or concept when there are a low number of independent enterprises with little linkage. At that stage RIRDC has funded numerous feasibility studies to ascertain the likelihood of these fledging enterprises to build to profitable, viable industries (eg rabbit, hare, snail and goanna).

Many industries might then move through phases of enthusiastic support, some growth, informal linkages and the drivers start to emerge. Often there comes the time when linkages become more formalised with a group of producers forming an

association (some of which will cover all sectors – production, processing and marketing). RIRDC often assists in facilitating initial meetings.

As industries develop research priorities move on from initial assessments to projects that help develop particular aspects of the supply chain eg:

- more detailed assessment of particular markets;
- investigating new product uses;
- breeding better genetic material;
- improving yields or quality (eg active ingredients in medicinal herbs);
- researching production systems including fertilisation and irrigation requirements for crops and nutrition of animals;
- improving processing (eg distillation of essential oils); and
- extending product storage life.

To help newly formed industry associations to reach as many stakeholders as possible RIRDC also provides co-funding for the production of industry newsletters that publish industry news and R&D inputs, outputs and outcomes.

RIRDC's new industry programs receive the bulk of their funding from the Corporation's core Government funding, although they are encouraged to contribute some funds as well. But eventually successful industries reach the stage where they are no longer regarded as new or emerging and can be categorised as established. At this point they are considered capable of providing at least half of their R&D funds either through a voluntary or statutory levy arrangement. In some cases they may also move to another R&D Corporation eg lychees recently moved to Horticulture Australia Ltd.

There is no hard and fast formula for determining when an industry has become established, but RIRDC has developed a set of criteria that help with the decision. The first group assess the size of the industry and cover gross value of production, market size and number of producers. The second group test the industry's financial commitment to R&D ie the existence and size of an R&D levy or voluntary contributions. The next group relate to the maturity of the industry structure – does it have a strategic plan and a representative industry association? Finally there are criteria relating to the nature of the research base, the level of value adding in the industry's products and the existence of mature marketing arrangements and quality management systems.

The following sections provide some detail about the new products and industries that RIRDC deals with. The scope is very broad, but deliberately so, because RIRDC is the main source of funds for researching products that are still only prospective.

New Plant Industries

RIRDC's sub-programs for New Plant Products, Asian Foods, Essential Oils, Wildflowers and Native Plants and Tea Tree Oil are all aimed at creating opportunities for R&D of new crops in Australian farming systems.

In total we are committing around \$4 million of R&D funds each year for these activities. This is typically substantially leveraged by either inputs from industry and/or through collaborating institutions. So it would be reasonable to say that this system probably leads to an expenditure of some \$8-10 million per annum on novel crops. Of course there are also other people and organisations that privately research novel crops who do not come into this equation.

Over recent years we have supported the technical development of the olive, Asian vegetable, coffee, tea, alternate oil seeds, essential oils, jojoba, wildflowers, new pulses like adzuki and kintoki, native foods or bush tucker, tropical fruit industries which in aggregate are now generating several hundred million dollars per annum at the farm gate. As mentioned earlier our support is right along the value chain.

We have now moved further in this regard with major projects on the 'category development' of new fruit tropical fruit industries from rambutans and longans to pitaya and durian. All of these can be produced well in Australia but broadening their appeal to Australian consumers is now of importance.

In the pipeline are a whole host of new products from novel flower cultivars produced from Australian natives to completely novel fruits such as Tazziberries and the Red Bay Berry, truffles, new oil seed crops for more saline soils or alternative nutritionally safe sugar substitutes. As well we are working on diverse aspects of functional foods and extractives from plants with nutraceutical value to ways of utilising wastes from olive processing as a means of making it economically disposable.

The key to the development of many new crops will be post harvest product management, the enhancement of extractive technology for niche chemical products and the maximisation of active compounds in plants grown for medical extracts.

This is an exciting field for research with potential economic and environmental benefits for regional Australia.

New Animal Industries

These industries are covered by RIRDC's New Animal Products and Rare Natural Animal Fibres sub-programs. These programs consider the needs of over 40 prospective and fledgling livestock industries.

The scope covers the semi-tropical zones including crocodiles and buffaloes, the semi-arid zones for emus and camels, while species such as kangaroo, ostrich, milking sheep and dairy goats are raised in various environments.

Many of species are native including possum, wallaby and native geese. Some are feral such as camel and wildboar, while some are now raised in captive/farm environments such as rabbit and emu.

Some species are exported live including buffalo, camel, ostrich and dairy goats.

There is potential for sustainable economic use of native birds and reptiles, particularly for export markets. However there is legislative prohibition preventing commercial exports.

Processing includes use of abattoirs for meat from farmed livestock. Other animals are harvested with initial processing in the field (eg kangaroo and wildboar).

Besides meat, some co-products are value-added in Australia with the anti-inflammatory properties of emu-oil, for example, attracting considerable interest in recent times. Much of the goat and sheep milk processing occurs at factories; many of which primarily process cow's milk. However, some is successfully processed commercially on farm in a vertical integrated production/processing and marketing arrangement.

Skins of some species are the most valuable commodity produced and many of these are partially treated in Australia before exporting for leather production.

Many products are mainly exported (eg meat from ostrich and emus; all livestock skins). For others there are increasing export demands (eg camel and buffalo meat, goat cheeses).

On the other hand, many others rely on domestic markets (eg duck, sheepmilk, rabbit and hare). Most meat is only for human consumption although 70% of the kangaroo meat is sold for pets and the remainder for human consumption in Australia and other countries.

The total value of all these industries in 1999/2000 was around \$180m, although it is difficult to obtain accurate figures as no government official surveys are undertaken, there are no national associations for many of the industries and some national associations have as members only a small proportion of producers or suppliers.

There have been successes and failures in some enterprises raising the livestock species included in the New Animal Products sub-program. In the early stages of some industries stock costs are exorbitant, as supply is limited. The value of stock in these stages far surpasses the value of the commodities and some investors have suffered poor dividends. In some instances animals have been raised in the wrong climatic environment but this situation eventuates because Australia is a large island where investors are scattered and want to establish production enterprises relatively close to population centres.

The circumstances are further exacerbated when stock have to experience lengthy transport to far-away processing works. Fortunately many enterprises have been through the high costs initiation phase and recent research on financial indicators show a favourable internal rate of return and benefit/cost ratios for some industries.

Processing is hindered for many of these industries because of the economy of scale and distances from the points of production. Allied to this often are poor work practices in handling and processing. New products need to be continually developed to provide the customer with a range of commodities to compete with existing products from traditional animal industries and to satisfy consumers who relate to

niche and new experiences in nutrition. Products must have a reputation for safety and to facilitate good health.

The present New Animal Products Program has about 30 projects. It includes R&D in meat, milk and skins and cover kangaroo, ostrich, emu, crocodile, milking sheep, dairy goats, rabbit, earthworm, gamebirds, camel, and silkworm.

The Program has been funded over the last eight years by RIRDC (35%), Industry (22%) and Research Agencies (43%). The RIRDC contribution is mainly from Commonwealth core funding. A statutory levy from buffalo producers provided a revenue of \$20,000 (including Commonwealth matching) in 2000/2001. For kangaroo a voluntary industry contribution of \$15,000 was provided in 2000/2001. In addition a new statutory levy on meat for human consumption that was introduced in January 2001 gave a revenue of \$21,500 in 2000/2001.

Research Adoption and Communication

Improving the level and effectiveness of commercialisation of research has been the subject of attention and analysis in Australia over many years.

Various reports have emphasised constraints such as a lack of capital availability, a truncated and atomistic industry structure, problems of scale, and inappropriate research culture and rewards systems as well as lack of interactions between researchers and industry users. These challenges are magnified for new rural industries which frequently lack the necessary communications and industry infrastructure facilities.

On the other hand adoption of research in new industries can be achieved by non commercial pathways in some circumstances. The use of publications, field days, demonstration projects and workshops can be effective for new industries, given their smaller size and stage of development.

Nevertheless commercialisation must be achieved more emphatically by small industries as a means of securing maximum returns on the funds invested. This includes the need to address intellectual property issues.

The importance of intellectual property management with new industries includes enabling the enterprise or industry to establish a leading edge in the market place improving financial performance, satisfying concerns of stake holders and impressing potential investors.

Conclusion

There is strong interest in new rural industries that contribute to diversification, improving returns and/or more sustainable farming. There is no single formula for success but key factors include doing thorough market research before committing to investment in a new enterprise and having an industry champion with drive energy and vision. Good business planning and financial management are also crucial.

New industries can suffer from fragmentation, limited or no organisation, poor communication, lack of information and limited resources for R&D. RIRDC's research strategies can help address some of these constraints and build on the success factors. Research priorities are set in partnership with industry representatives and

focus on the whole supply chain to ensure that a production enterprise delivers what consumers want. This means addressing product development, production systems, post-harvest needs such as handling and processing and industry communication.

Research priorities also need to integrate pathways to adoption to ensure that the return on the R&D investment is realised. Publications, field days etc are one way of achieving this. But RIRDC now puts priority emphasis on industry partnerships and commercialising the intellectual property its research investment creates.

References

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OUTLOOK 2004

SPEAKERS PAPERS

Speaker

Andrew Monk

Chief Executive Officer
Biological Farmers of Australia Cooperative Limited

Title

The future of organics in a changing marketplace

Session

New and emerging industries

9:15am Wednesday 3 March
National Convention Centre, Canberra

The Future of Organics in a Changing Marketplace

Dr Andrew Monk

Biological Farmers of Australia Co-op Ltd/ Australian Certified Organic Pty Ltd

Introduction

Organic as a “category” is a multi sector industry with international regulations, national, bi and multi governmental agreements. Organic is regulated in various countries and markets by both non government organisation guidelines (International Federation of Organic Agriculture Movements, IFOAM), as well as the government recognised processes of the Codex Alimentarius Commission, and in turn national regulations in selected countries.

The leading standards emerging around the world are in the US via USDA NOP (US Department of Agriculture National Organic Program) covering over 40% of the world market, and the EU (regulation EEC 2092/91 and amendments), representing some 30%. These standards, which are the regulations pertaining to what producers and marketers of organic products may and may not do in the production process, have a common backbone of prohibition of use of most synthetic agrichemicals, GMOs, food irradiation, and most food additives bar a very restricted “necessary” list.ⁱ

This multiple “package” of requirements for those who enter the organic market is the hallmark of the organic industry and arguably has led to both challenges to growing the industry, given the difficulties for some sectors in developing highly productive and growing supply bases, while at the same time has been its beacon of strength in a marketplace awash with ambit single issue claims on labels and marketing material.ⁱⁱ

The world market for organic products (food, drink and fibres) is valued somewhere between US\$22 to US\$30 Billion as at the start of 2004. Australia currently shares a tiny proportion of this global market (<0.05% of exports) while having an infantile domestic market demand (estimated between A\$200 and A\$250 Million in 2003).

In Australia this market has begun growing over the past three years in selected sectors and more importantly is tipped to grow, by some, at up to 30% into the foreseeable future. The question is, in this emerging and changing market, what trends do Australian agriculture and food industry players need to take heed of in interpreting whether to enter or engage with this market. In this paper I will outline some of these and allude to where I believe the future lies for producers and marketers of organic products.

I will not here go into details of the industry regulatory and market structures of different countries and regions as well as international trade arrangements. The annexes detail these in graphs and diagrams which I refer you to. They do however play a critical role in how the industry is evolving and more importantly are an essential “must read” for anyone considering entering the choppy international waters of organic exporting and organic marketing generally.

The nature of the organic industry

The organic industry is a niche industry in Australia and without external drivers such as food scares which have driven overseas markets, the industry has been “cold extracted” arguably more on its own merits rather than perhaps the demerits of other production systems. While this has frustrated some Australian advocates of the organic “movement”, in some senses this reality check for the industry in Australia has meant that it has evolved without the hype of a “one issue ticket” and this bodes well for a future based more on merit and abilities to sustainably supply than on mere hype.

Of course the events of overseas markets, the EU, most particularly Germany and UK, the US and Japan which are “leader” markets of relevance to Australian exporters, have been boosted by some of these scares.

The industry in Australia is some 15 years old in terms of formal standards and regulation, with the national standard administered by the Australian Quarantine Inspection Service, AQIS being introduced to industry in the early 1990s. The industry in the US and EU established earlier with movements through the 1960s culminating in standards being established in the 1970s. Government regulation however did not come into place until the early 1990s in the EU and indeed not until 2002 did the US establish the federally uniform USDA NOP which will have significant gravity pull on future standards setting across the world.

Australia is of course without domestic regulation. The AQIS regulated national standard, albeit oriented toward the export market, has by default become the organic standardⁱⁱⁱ used as a baseline in Australia, with the endorsement of the supermarket chains and the majority of industry. Certification results from auditing/inspecting which verifies that a given operation complies with the organic standard. Certification is the third party process of regulating legislated organic production and marketing rules across the world and is generally carried out by private/industry organisations on a bedrock of government legislation and international industry regulatory guidelines.

While it is often claimed otherwise, the Australian organic industry has been relatively uniform in regulation. There are a number of certification service providers in Australia, 7 indeed regulated under the AQIS system. The vast majority of product and producers however are certified by two main organisations: Australian Certified Organic (ACO) Pty Ltd, the subsidiary of BFA Co-op Ltd, and National Association for Sustainable Agriculture Australia (NASAA) Ltd. It is no co-incidence that these two service providers also carry accreditations with the other main international regulations, the

USDA and IFOAM which can be seen in the annexes, and this enables their clients to be relatively buffered by the diversity of requirements across the world for organic certification.

Future rationalisation within the service providers for certification is both inevitable and welcome from an industry development perspective. Smaller and less viable certifiers are a risk rather than a benefit to the development of the industry for the longer term. The growth in size of the industry has culminated today in professional certification processes which enable independent and transparent regulation, something which will place the industry in good stead for the longer term.

The industry varies in its manifestation in the market place across countries. In the UK, most likely to be the model which Australia emulates, there is a background of government regulation with one main “private label” logo dominant (being the UK Soil Association).^{iv} In the US there is a clear single government logo, while in Japan while there is a single government logo, a multitude of private labels are evident with it on labelling. In Europe there is generally one or two dominant label/s (again almost invariably private or industry rather than government) recognised for each EU member state even while the EU now has an organic EU logo (see annexes). Importantly also is the presence of private label supermarket brands – in Australia most evident so far by the entrance of Coles, again emulating the Tesco and Sainsbury models in the UK.

Statistics

Industry statistics have been difficult to establish due both to lack of public reporting from some sectors of industry and also past lack of total data collection. The Organic Food and Farming Report Australia 2003 (OFFRA 03)^v is a new style annual publication publishing known figures on the industry.^{vi} The 2004 edition will build upon this and will have back up from a national study currently being conducted by independent research supported by DAFF which the industry is duly grateful for. Obtaining exact domestic data will however remain a challenge as no official collection nor centralised system exists and with the multi-sector nature and both mainstream and local variants of supply and sale, it is unlikely that exact data will be easily obtained. Clear indications from the major supermarket chains however suggest strong and clear growth over the past 2 years particularly with no sign at this point of abating and indeed with the biggest challenge being to feed this market growth.

Suffice to say, export figures by volume are exact, as are numbers of certified operators (farmers, value adders, etc) and area of land under certification programs and being operated “organically”.^{vii} Australia indeed has the largest area of land certified in the world – indeed now more than the rest of the world combined. Of course once we take out the rangelands we are left with a more sobering figure of an estimated 0.5 million Ha of both horticultural areas as well as irrigated and flooding cropping land. Organic farmers make up 1-1.5% of farmers in Australia and are growing in both proportionate and absolute terms. Suffice to say the capacity of Australian production is growing to fill

the needs of this emerging industry and clearly Australia has some competitive advantages here.

What is of note is the low volume of export versus the opportunity for Australia. One only has to compare with New Zealand, where current estimates are that exports are close to A\$50 Million, and Australia's may be as low as A\$30 - 40 Million over the past year, albeit affected by drought. The OFFRA 03 predicted that in the coming 3 years Australia will overtake NZ and this will be led by beef, grains and oil seeds, and smaller sectors such as wine. The drought has continued to affect export over the past year, however the domestic market, based on all information available, has grown significantly once again through this period – from an estimated 15-30% depending on the sector.

A caveat to all this however is also to look at more maturing markets. The UK has seen a stabilising of the acceleration of this growth over the past two years. Also these figures highlight that there are two types of consumers – those who will increase the range of products where available and will pay a significant premium (clearly a more static subgroup) and those who will buy where a price is reasonable and the value is clearly defined.^{viii}

The two cultures

Within all these figures and statistics two issues get lost. One is the detail of particular companies or enterprises and their successes and failures. Secondly there are two cultures or segments, which I refer to as **mainstream** and **cottage**, which comprise this industry. Both have commercial application and implication. The latter though is often more specialised in local consumption of production, gourmet niches or self sufficiency in the extreme. This sector is growing with the rise of farmers' markets, gourmet foods and regional cuisine and tourism. I will be mostly ignoring this segment for the rest of this talk today, but I in no way view this segment as irrelevant, indeed it is a bedrock that the rest of the industry ignores at its peril.

The segment of most significant potential growth is the mainstream segment. This segment covers export, supermarkets and higher volume value adding. It may be found in baby foods produced for the UK market, private brand packaged carrots for the supermarkets, or dairy products trucked across Australia and the region.

Both these segments are complimentary, comply with the same basic Organic Standard, and indeed will symbiotically reinforce the organic message through time at both the local level as well as the mainstream level.

There is a view from some quarters that the mainstream industry of organics poses a threat by undermining the Organic Standard. This is a constant balancing act, but at the end of the day it is the bearers of the mainstream segment who have most interest in ensuring rigour and high standards are maintained, to protect their investment. Further, at the end of the day the strength of the Organic Standard lies in its black and white nature of regulation and most involved with this industry understand this fundamental fact.

Case examples

Statistics on the industry paint one story. It is far more effective however to look in detail to get the real story and for people to judge for themselves whether this industry harbours viable commercial options for food industry players.

The **Cottage Industry Segment** is best portrayed for me by an operation in the hinterland of the Byron Bay region. Some 100 acres are owned by a leader in organic agronomy David Forrest, whose produce bears his name. Macadamia and chocolate butter, Davidson plum jams, the unique Byron region Arabica coffee, sold into Sydney gourmet shops and to passers by. David's wife and one of his daughters happen to be food technologists as part of the team. Very commercially successful whilst being based upon some of the best examples of organic pest and weed management practices, fertility management and organic processing. David doubles his very busy time as a TAFE teacher in organic production techniques, being an invaluable source of information and technical know-how for the growth of this industry.

The **Mainstream Industry Segment** is best portrayed by examples across a number of sectors, as this may dispel some myths that organic is limited in its application. In grain there will be 10,000 tonnes of grain milled this year through the dedicated Kialla Greenmount mill on the Darling Downs. Meanwhile companies such as Weston Milling has 5 operations across 4 states certified to mill wheat with growing intensity for supermarkets as well as export. An ongoing and upward demand for this as well as for feedstock for dairy and chicken producers means there are significant opportunities for grain as well as oil seed producers.

Relying upon some of these broadacre inputs are dairy farmers, which since deregulation in the remaining states have been led to alternatives, organic being one of the more promising. The Organic Dairy farmers of Gippsland in Victoria look set to reap a long term investment by gearing up to supply food ingredients from milk powder through to cheese. Meanwhile the more established Paris Creek dairy south of Adelaide has, through a gravity field based on market success, been drawing new supplier farmers into their distribution network which now spreads out across Australia, while being winners in the Australian Grand Dairy Awards for 2004.

Beef. Many have heard of OBE, the channel country group in SW Queensland. Now meet their big brothers Nippon Meat Packers Aust. and Australian Country Choice which source from across Australia. Nippon is heading containers into Europe and the US and is clearly in for the long term. The graph on export of organic beef growth over the past three years owes much to them. Organic beef exports will be one of the success stories of the Australian industry, and we have only just begun. While the graph looks impressive for growth, the volume is still some 0.1% of total beef exports, albeit we are a considerable beef exporter. The key is to watch this space in the coming years with the drought now breaking and with key drivers such as BSE in markets from the US to EU. Most particularly the organic alternative for meat exporters is that restrictive quota

systems (which Australia spends inordinate amounts of effort on raising, often futilely) may achieve greater returns by selling higher value added products such as organic into those restricted markets.

Horticulture has some 75% of all organic farmers in the country and has powered through the drought season of the past three years. I think the success has best been summed up by certain successful growers being the ones with the new tractors and buying out their neighbours' properties, perhaps a sign of the times.

Challenges and Threats

I can't emphasise enough however that all is not rosy, and there remain significant challenges for some sectors and or operations. Some of these are related to standard issues for any emerging market – ie jerky and lumpy supply and demand, which is the bane of any farmer who desires consistent demand for product and by any value adder who desires consistent quality supply. This is being circumvented by supply chain alliances, no surprises there.

The threats are just as equal to the market promise: beef from Argentina and Brazil, grains from the US, horticultural products from the US, Africa, Chile. So some of these threats are no different to conventional industry threats however in an age of increasing concern in regard quarantine and biosecurity and the consequent BSE, FMD, NFS (next food scare) etc concerns, combined with consumers and buyers as well as governments taking steps to protect themselves against such scenarios, Australia has a classic competitive advantage that Michael Porter could write about. And we ignore this advantage at our peril as what it represents is only the tip of the ice berg in terms of food industry high level value adding.

At a technical level there are other challenges and I appeal here to both the R&D community as well as the private sector to engage with these challenges, as the application of the solutions will have broad application to the future sustainability of farming generally in Australia. Namely the increasing sophistication needed for biological or soft option pest and fungal management, greater understanding and the build up of tacit knowledge within the farming community of the mechanisms of bio fertilisers, as well as specific challenges such as making sufficient available phosphorus in high pH soils.^{ix} Within all of this is the challenge of delivering “holistic” scientific and technical outcomes, which does pose challenges in terms of private investment.

Australia to date has had a relatively poor level of investment in organic style R&D though we have made a start. There is a RIRDC organic program but it is now the organic industry which will have to drive the private industry raising of funds. The culture of this is only just now emerging.^x While there is an argument that organic is part of “greater public good” and therefore should receive direct government funding, there is an equal argument that if the industry is to become truly successful it must stand on its own merits. Clearly a balance in between will need to be struck.

Myths and resistance to the organic industry

Getting any emerging industry seriously flying ideally relies upon bureaucratic support, as has been the case for the organic industry in the US, EU and Japan. The industry is keenly aware of the reticence to recognise the potential if not the existing successes of the organic industry in some circles. I am less concerned about the commercial response, as the marketplace will and is sorting that out. Governments and bureaucracies, which form a critical part of any significant success for an emerging organic industry, are perhaps mixed in their response. There are legitimate concerns of the industry being anti scientific and that certain elements of the “movement” will detract from our ability to bring in new technologies such as GE biotechnology into agriculture and the food industry. I trust that I have portrayed the mainstream component of industry as pro agribusiness and indeed pro biotechnology in various forms. Its constituency across the world has expressed a clear view about not desiring GE versions of biotechnology in organic production.

Irrespective of the debates in these quarters, we have a collective interest in Australia of ensuring we build markets based not just on commodities but on highly value added agricultural products, in their various forms. Organic offers a perfect case of high value adding, consumer driven product. It is up to governments and bureaucrats to listen and act on the component of the organic industry which is practically oriented and reactive to these market needs, rather than being supportive and reactive to philosophically or politically (ie non commercially) driven elements from within the industry.

Biological Farming Inputs and Agribusiness

The other main (bogus) concern is that the nature of organic does not lend itself to agribusiness and therefore is a threat to the establishment. I noted above there are two cultures or components to the organic industry. The mainstream component is not only growing now at a considerable pace but represents a clear and present opportunity (not threat!) for the agribusiness sector to capitalise on. The Biological Farmers of Australia maintains a program of registration of biological input products which conform to the Organic Standard. This is one of its most successful and growing business units. The list of companies now on board include the likes of SME organisations such as Organic Crop Protectants which specialise in highly scientific and technical approaches to fungal, pest management, through to Dow Agro Sciences and NutriSmart. And in fertilisers the list includes Yates, as one may expect, as well as a variety of novel emerging enterprises such as Vermitech, transforming green wastes into highly effective fertilisers.

The growth of this “bio inputs” sector is critical to the type of organic agriculture that is evolving in Australia. Whereas in Europe (where the first organic standards evolved) they have concerns regarding nutrient excess, in most parts of Australia it is about ensuring enough nutrients are available. And whereas in Europe there is political desire to limit farm size and production, in Australia it is about economies of scale and increased productivity. The Australian mainstream organic industry is mirroring these Australian trends.

Hence the great opportunity in this area. I would direct you to the website of the BFA – www.bfa.com.au to see a list of these bio input companies. The BFA, with the name that it has, sees itself playing a critical role in progressing this sector not just for the benefit of the organic industry but also to play a commercially practical role in speeding the process of agriculture in Australia toward a more biological orientation.

There is no doubt that there is an element of the organic industry, or perhaps “movement” which would not have this happen. The emergence of the two clearly defined cultures in the industry, combined with the progression to professionalism and commercialism, within a stringent and steady Organic Standard, will see this resolved.

The Future

In terms of regulation, there is a need to resource the AQIS program and the Department of Agriculture, Fisheries and Forestry, DAFF, in terms of standards management and enhanced international market access, as this is currently suboptimal.^{xi} At a service provision level (certification), there will most possibly be a further rationalisation in the marketplace. Some certifiers are well below critical mass to enable effective national service provision, while others are currently struggling with the regulatory transition within the industry. This belies the small and fragile nature of the industry as well as its progress from voluntary and amateur to professional regulation.

The notion that the industry is fragmented is contestable. The industry is a liquorice all sorts and always will be. When you divide the industry into cottage and mainstream however it looks very different. Further, regulatory differences are the nature of international trade and Australia has greater uniformity than most areas in the world. The majority of the industry is uniformly administered under the dual standards of IFOAM and the AQIS national standard and hopefully future progress in this realm will strategically position Australia for the longer term. Industry welcomes a leadership role from government is assisting this rather than fuelling further dissent and diversity within the industry.

The market is a niche market and will remain so, however it is tipped to continue to grow above the rate of food industry growth. Where this stops no one knows. What is clear that it is a tip of the iceberg of consumer demand for traceable and clean and green food products with a “story”. With the evident languishing to date of many other eco label schemes in the market place perhaps the organic category will cover a greater share of the market place than even it ever dreamed of. But I will leave that to the market place to carve out, rather than speculate on the impossible. One thing is clear. The Australian organic industry is now both well positioned to capitalise on the projected growth here in Australia (both regional and mainstream markets) whilst finally tapping in (albeit belatedly) to the competitive advantage we do and will enjoy into specific well developed markets of the US, EU and Japan.

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Annexes

Table 1: Organic Industry Development in Australia

Year	1990	1995	2000	2004 (est)**
Number of Producers	491	862	1800	2200
Farming Area Certified	150 000 ha	335 000 ha	7.6 million ha*	11 million ha*
\$ value of retail (domestic)	\$28 million	\$80.5 million	\$200 million**	\$280 million**

(Source: Hassall and Associates 1995; BFA 2004).

* note most is additions from semi arid areas

** estimates

Table 2: UK market growth for organic foods

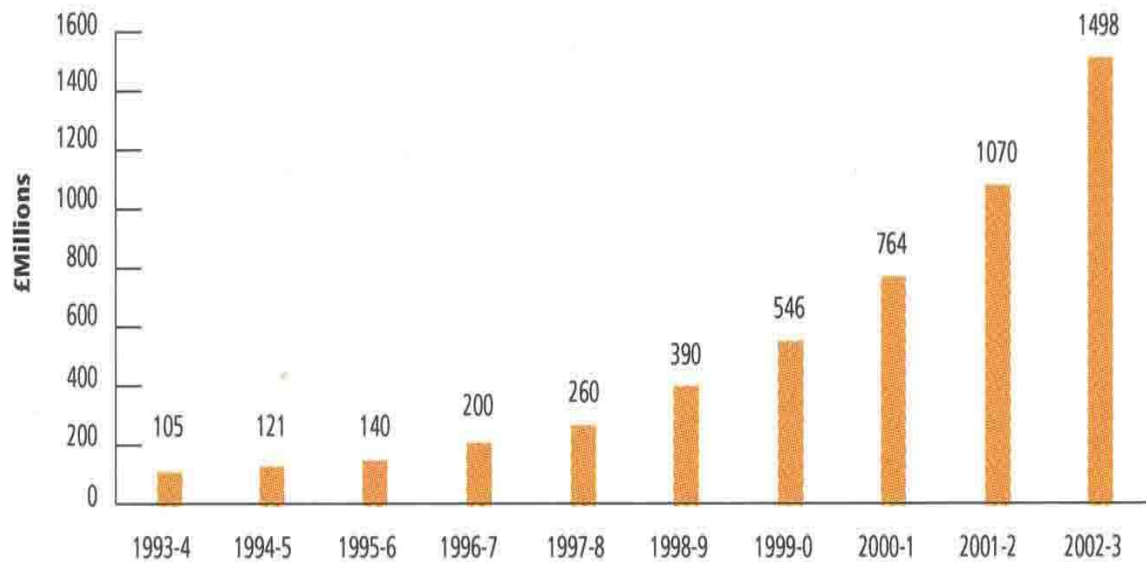


Table 3: Structure of Australian Organic Industry

 Australian National Organic Standard And Structure

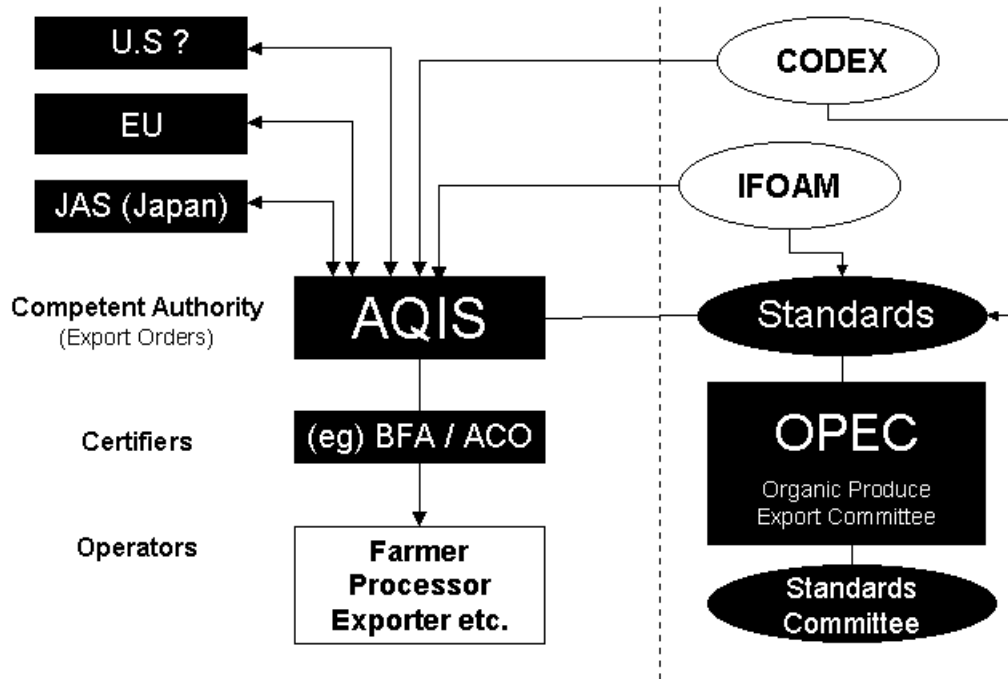


Table 4: Requirements for importation into U.S

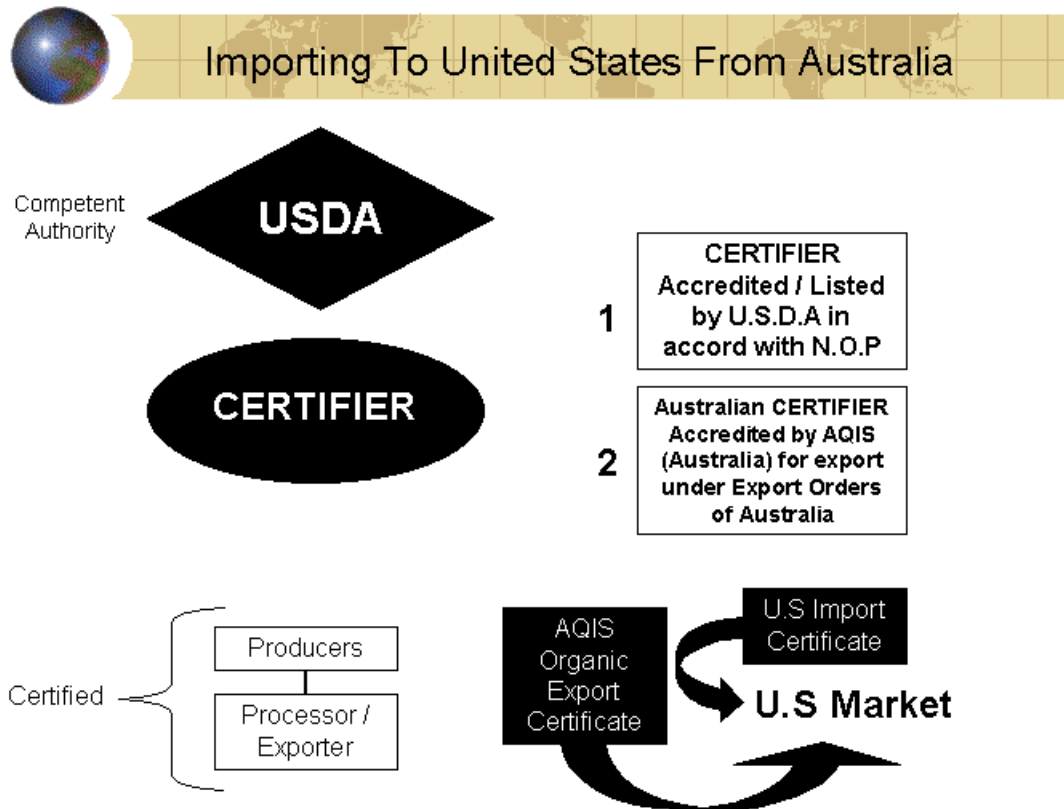


Table 5: % of operators regulated or linked by both the AQIS requirements as well as via the IFOAM and USDA programs

% of Australian operators linked under IFOAM and USDA programs 2003 (1)

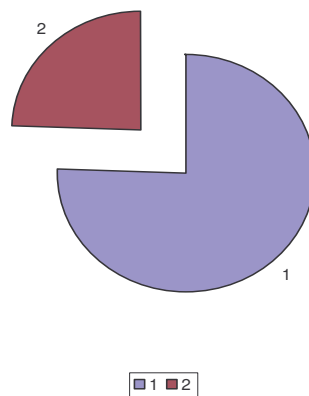
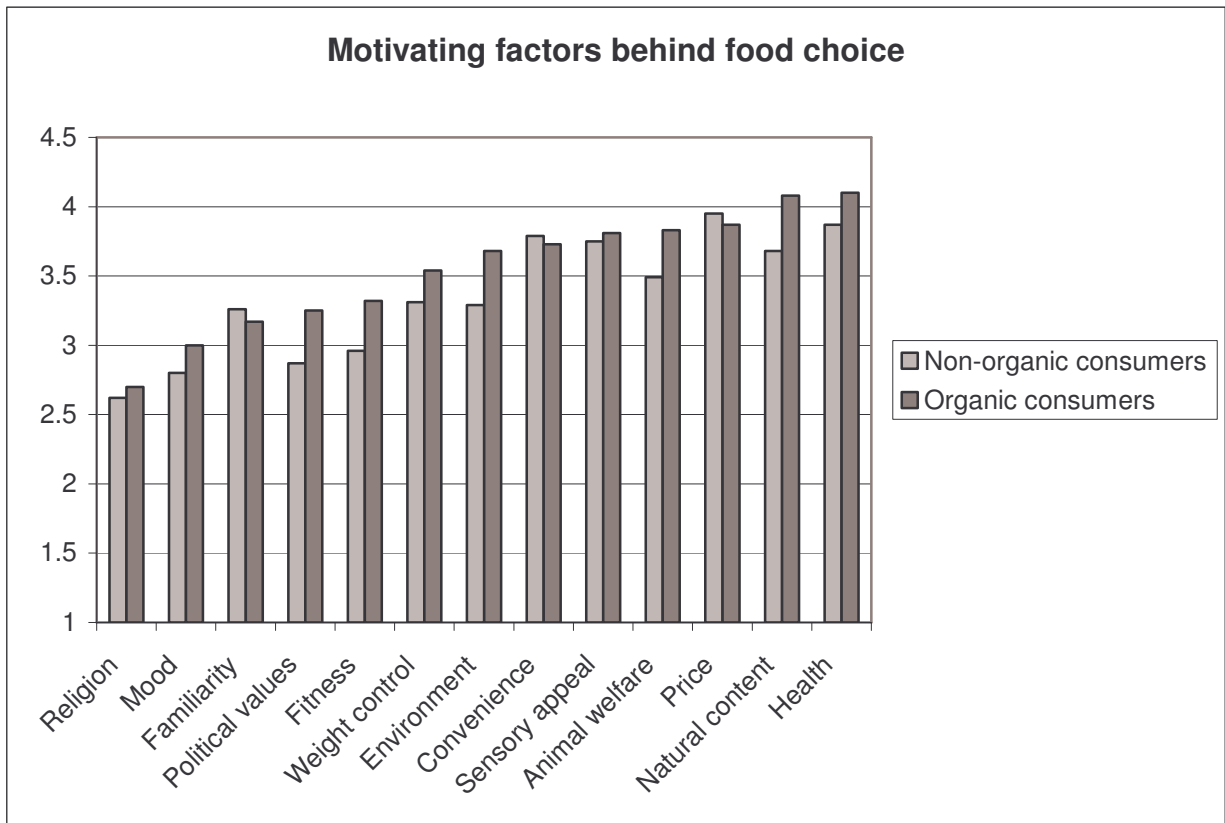


Table 6: Why Australian consumers purchase organic food



Source: Lockie, *et al*, 2002.

Table 7: Variety of branding and regulators in EU



UK



Germany



Other European



Footnotes

ⁱ Annex 3 and 4 of the Organic Standard (available free on www.bfa.com.au) lists the restricted number of food ingredients allowed in organic foods.

ⁱⁱ See graph in Annexes on consumer reasons for purchase of organic products.

ⁱⁱⁱ I will refer generically to all standards pertaining to organic regulation as the Organic Standard. It is presumed that there are slight differences amongst them worldwide, however they all are based on the same basic requirements. The major difference between regions and service providers is more related to the way in which the service providers – the certification services – are regulated by accreditation agencies (eg AQIS, IFOAM, USDA etc), and it is this difference, combined with the usual challenges of international trade, which become the sticking point in cross border recognition of equivalence of regulatory systems. For a copy of the Organic Standard either visit www.bfa.com.au or order a hard copy through the offices of the BFA.

^{iv} See examples of labels used in the EU – in Annexes.

^v The Organic Food and Farming Report is now the annual publication of the Biological Farmers of Australia and is sent to all members annually in September each year. It is available in electronic form on www.bfa.com.au. It contains a summary of the events of the year in the organic industry in Australia while publishing known and estimated data on number of operators, area of land certified and growth in the value of the market for both export and domestic (the latter can only be estimated at this point). The OFFRA 03 took a conservative stance regarding the domestic market claiming that past estimates and growth estimates may have been over exaggerated.

^{vi} Prior publications have been made by Hassall and Associates – see references.

^{vii} See Annexes – data on industry.

^{viii} See graph on UK market development.

^{ix} This has been reported and discussed over a number of editions of the Australian Organic Journal which is published by the Biological Farmers of Australia. Copies are available via subscription or membership see www.bfa.com.au

^x There is currently a bid process being undertaken for the next round of Co-operative Research Centre funding. The success of this is in the balance and will be directly correlated with the amount of private funding that can be garnered for this project. The RIRDC, Rural Industry Research and Development Corporation, has an organic subprogram which spends close to \$300,000 PA, which limits the amount of large scale research that can occur but which is catalyzing industry self funded research and future larger projects.

^{xi} To quote a publication assessing APEC country regulations and organic markets: “Governments acknowledge the need for sensitivity in organic regulation, in terms of the need to maintain market confidence and consumer support for the ‘integrity’ of the industry through effective and industry-endorsed processes of standards modification and regulation.” (Burch, Lyons, Monk 2002). The issue is that it is essential to ensure that the organic industry maintains management control of both standards setting procedures as well as regulation in a “co-regulatory” role with governments. This is still suboptimal in Australia and the closer alliance with the NGO international system of IFOAM would be highly advantageous for the Australian export market, as well as a more aggressive drive in regard to achieving recognition with other international players – most particularly the US – where Australia still does not have direct recognition.

OUTLOOK 2004

SPEAKERS PAPERS

Speaker

Geoff Sullivan

Queensland wildflower producer and Chair RIRDC
Wildflower Committee
Redlands Farming Flowers and Foliage

Title

Challenges of the Wildflower Industry

Session

New and emerging industries

9.15am Wednesday 3 March
National Convention Centre, Canberra

CHALLENGES OF THE WILDFLOWER INDUSTRY

By Geoff Sullivan, Redlands Farming Flowers and Foliage

Qld wildflower producer and Chair RIRDC Wildflower Committee.

GROWER HISTORY:

Third generation primary producer at Jandowae, northern Darling Downs, Queensland Property has traditionally produced cereal grains and beef cattle – breeding and fattening 1991 – decided to diversify because of reducing profitability in grain and cattle Thoroughly examined all livestock (e.g. ostriches, deer, crayfish) and tree crops (e.g. Olives, Nuts, range of wildflowers such as waxflower, proteas etc.)

Decided to enter wildflower industry and develop a relatively new product after intense market research – Eucalypt buds and flowers

Started with approx sixty species from WA and SA to adapt to Qld climate

Current plantation is 15 hectares – 5000 trees – reduced to 10 most marketable species

Virtually no information or assistance available to help develop the industry

Pioneers in this field – lot of on farm R & D

1993 – a group of growers formed the Ausbud cooperative. Aim of Co-op was to provide growers with agronomic advice and group marketing of their product

Co-op conducted ‘hands on’ market research into potential Asian markets.

Also ran promotional activities in domestic situation and internationally in conjunction with the Flower Export Council of Australia in Japan, USA and Europe

Current markets are mainly USA and Japan with increasing domestic demand.

e.g. Sydney Flower Markets increased wildflower floorspace

INDUSTRY HISTORY:

When entering the industry in 1991, it was found to be very fragmented.

Very difficult to source information especially in relation to growing wildflowers in the eastern states.

WA was the main supplier of wildflowers with big percentage being bush harvested

Growers were very protective of any information and were not encouraging major expansion

Industry was in early stages in the eastern states and most available information related to agronomy practiced in WA

While some grower groups emerged in the eastern states, WA had the only effective state organization

The National Association was mainly representative of traditional flower growers and there was little emphasis on wildflowers

The Flower Export Council of Australia was established and was made up of flower exporter agents and large growers exporting their own product.

The main function of FECA was to promote Australian wildflowers to an international market

As the wildflower industry was centered on waxflower, FECA encouraged growers to plant other potentially marketable species

This resulted in a greater move to plantation grown wildflowers which saw a marked increase in quality as opposed to bush harvested product

Very little structured research and development was occurring. Issues such as the need for better species, improved post harvest techniques and reliable quality saw RIRDC establish a wildflower R&D program in 1993

No mandatory industry levy system has been adopted. Impossible to obtain agreement between traditional flower growers and wildflower producers as to an acceptable levy system.

Industry relies on voluntary contributions to assist in R&D

ECONOMIC VALUE:

THE Karingal Report commissioned by RIRDC in 1993 showed the then farmgate value of the wildflower industry at \$23 million. Almost the entire crop was exported. Very small amount consumed on domestic market.

2003 estimates show farmgate value of wildflowers at approx \$60 million. Difficult to obtain exact figures as domestic consumption has increased significantly and is difficult to gauge

Increase in value for the ten year period is considered disappointing. Early growth trends anticipated values reaching in excess of \$100 million by 2000.

Factors affecting the shortfall include economic downturn in Asian markets (esp. Japan), prolonged drought conditions in some growing areas and failure to establish big scale plantations in eastern states.

INDUSTRY ADVANCES:

Early 1990's saw majority of product coming from WA. Since then, considerable growth has occurred in the eastern states with the majority of wildflowers being grown in plantation situations.

There has been a progressive trend toward the formation of peak bodies in most states.

This has coordinated the various grower groups into effective organizations.

Plans are in place to re-establish the Flower Industry Association of Australia as the national body

These advances have resulted in improved networking with regular conferences and seminars being held in most states to further the industry. Information sharing now occurs regularly.

An industry driven R&D program has been established with RIRDC funding research projects in all states. These projects are focusing on market requirements and problems identified by industry.

Queensland has recently established the Centre for Native Floriculture at UQ Gatton Campus. This centre will be responsible for the development and release to industry of local species identified as suitable for the cut flower market

The past decade has seen a greater range of suitable species developed and released for production as well as vastly improved production and post harvest handling techniques. Result of investment in the wildflower industry by organizations such as RIRDC, State Agricultural Departments, Universities and the private sector.

Intense promotion of Australian wildflowers has been a feature of the past decade.

Resulted in greater access to world markets. Japan was the main focus in the early stages of the industry. FECA (now known as AFEC – Australian Flower Export Council) has

been successful in opening market opportunities in other Asian countries as well as Europe and USA and Canada
Australian wildflowers are now recognized and sought after around the world for their unique characteristics.

FUTURE CHALLENGES:

Basically remain the same as for the past decade with the need for increased focus in the following areas:

1. Establish significant investment from all industry sectors. The level of investment needs to be lifted significantly to retain market competitiveness. All sectors including producers, retailers, wholesalers, exporters, transport and packaging have a responsibility to increase investment if the industry is to grow at a rate that maintains competitiveness in the world marketplace
2. Increase industry growth levels. This requires the establishment of large scale plantations which give the industry the capability to meet market requirements and eliminate the uncertainty of supply associated with small operations. WA currently supplies approx half of the wildflower export trade. Eastern state species tend to flower earlier and therefore give a longer window of opportunity to market. Larger plantations are needed in the eastern states.
3. Maintain an effective R&D program. Australian wildflowers are now grown in several countries and international competitiveness is increasing. Australia has an enormous range of exciting germplasm which can and should be developed. Hybrids have been developed (e.g. waxflower, kangaroo paw) and new species hybrids are being developed for release soon (e.g.leptospermum, flowering eucalypts). Centres such as the Qld model could be established in other states to focus R&D requirements.
4. Finalize the establishment of **effective** organizations. Geographical locations of the industry players across Australia require efficient and effective state and national organizations to lobby government and address issues such as quarantine requirements, freight rates and accessibility, trade issues and pest and disease control. Industry unity and cooperation across Australia is imperative if the industry is to grow and prosper in an increasingly competitive world market.