



growcom
together we grow



Submission to the
**Natural Resource Management
Ministerial Council**
on
**Australia's Biodiversity
Conservation Strategy 2010-2020**

June 2009

1. Introduction

As the peak body representing the Queensland horticulture industry, Growcom welcomes this opportunity to provide feedback into the consultation draft of *Australia's Biodiversity Conservation Strategy 2010 – 2020*.

Our submission will look at the Queensland horticulture industry's link to biodiversity conservation, our industry's ability to assist the Natural Resource Management Ministerial Council (NRMCC) in meeting its biodiversity conservation objectives and key issues moving forward.

2. About Growcom

Growcom is the peak representative body for the Queensland production horticulture industry, providing a range of advocacy, research and industry development services to the sector. We are the only organisation in Australia to deliver services across the entire horticulture industry to businesses and organisations of all commodities, sizes and regions, as well as to associated industries in the supply chain. We are constantly in contact with growers and other horticultural business operators. As a result, we are well aware of the outlook, expectations and practical needs of our industry.

3. Queensland horticulture industry

Queensland is Australia's premier state for fruit and vegetable production, growing one-third of the nation's produce. Horticulture is Queensland's second largest primary industry, worth almost \$2 billion per annum and employing around 25,000 people. Queensland's 2,800 farms produce more than 120 types of fruit and vegetables and are located from Stanthorpe in the south to the Atherton Tablelands in the far north. The state is responsible for the majority of Australia's banana, pineapple, mandarin, avocado, beetroot and mango production. There are 16 defined horticultural regions with a total area under fruit and vegetable production of approximately 100,000 hectares.

The Queensland horticulture industry is:

- A major contributor to regional economies and the mainstay of many regional communities;
- The largest high quality supplier of fresh fruit and vegetables to Australian consumers;
- A diverse industry utilising a range of production methods in different locations and climates;
- A resource base for significant value adding throughout the food, transport, wholesale and retail industries;
- The most labour intensive of all agricultural industries, with labour representing as much as 50% of the overall operating costs;
- An industry with significant links to the tourism industry, providing income for thousands of backpackers and "grey nomads" each year;
- A high value and efficient user of water resources;
- A primary and secondary source of income for many families in regional Queensland e.g. through seasonal work in packing sheds; and
- The site for a number of emerging agricultural industries including olives, Asian exotic tropical fruits, culinary herbs, bush foods, functional foods and nutraceuticals.

4. Growcom's Natural Resource Management Policy Statement

The issues

Access to the natural resources of soil, water and air are critical for a viable fruit and vegetable industry. Natural resource management is an important issue for growers with much of Queensland's fruit and vegetable industry located close to sensitive environments such as the Great Barrier Reef, Ramsar wetlands and the Murray-Darling basin.

The community, industry and government recognise the importance of maintaining a healthy environment. Across Australia there is a high level of concern about major environmental issues such as salinity, water quality and the loss of natural ecosystems. Issues such as resource security in water and vegetation are the subjects of hot debate.

Fruit and vegetable growers in Queensland aim to be responsible custodians of natural resources, however, highly complex regulatory, policy and planning systems make natural resource management a major challenge for growers.

Our position

Growcom supports the sustainable development of the horticulture industry in Queensland. This requires horticultural enterprises to be profitable, socially viable and environmentally responsible. Growcom and its members aim to work in partnership with government, research organisations, regional natural resource and catchment management bodies, the community and other stakeholders to address natural resource management issues.

Growcom believes an overarching framework is needed to encourage and coordinate sustainable natural resource management at local, regional, state and national levels.

We also believe that Government's continued commitment to natural resource management is essential for maintaining the role of protecting and enhancing Australia's unique biodiversity, the future productive capacity of agricultural industries and viability of rural and regional communities. Growcom is fully supportive of enhancing direct industry engagement in natural resource management programmes through industry organisations to improve outcomes.

Through a cooperative and holistic approach, we aim to deliver workable and balanced outcomes for the industry that also benefit the broader community.

Our commitment

Growcom is committed to maintaining and establishing partnerships with Government and other stakeholders to support the sustainable development of the horticulture industry.

The industry has a long history in natural resource management and has made a commitment to the *Farmcare Code of Practice for Sustainable Fruit and Vegetable Production in Queensland*¹, which outlines good environmental management practices such as:

- Efficient and careful use of natural resources, particularly water, soils and vegetation.
- Minimising environmental impacts caused by horticultural land use, particularly run-off of sediments, fertilisers and pesticides into waterways.
- Minimising waste and pollution from horticultural land use.
- Careful use of pesticides.
- Minimising impacts on biodiversity. Growcom maintains an environment program designed to assist its members to continually improve their environmental performance and achieve ecological sustainability. We believe a 'triple bottom line' approach would be an appropriate measure of the industry's performance.

Growcom is also committed to developing and subsequently implementing our Farm Management System (FMS) program within horticulture enterprises throughout the state. The FMS is in modular format with each module focusing on the potential risk areas and opportunities for improvement. Each module will generate an action plan with target dates for the grower to work towards in order to minimise their risks.

Our expectations

Growcom seeks recognition and commitment from government and the community that the industry requires support to achieve its goals in natural resource management. In particular, the industry requires:

- The opportunity to apply voluntary, workable, industry-led initiatives wherever possible to address natural resource management issues.
- Planning and management of natural resources to be based on sound science.
- If necessary, negotiated transition phases of an appropriate, planned, and agreed timeframe that allow industry members time to adapt or restructure to legislative or policy changes, implement changes to practices or develop solutions to issues.
- Financial and other support for industry based programs such as stewardship and ecosystem services, when the public benefits of natural resource management outweigh private benefits, and when the community's expectations of natural resource management or biodiversity conservation restrict growers' farm management beyond current recommended practices.
- A range of financial and market-based incentives be explored and used as much as possible to encourage the adoption of improved natural resource management practices.
- Institutional, economic and other barriers to the adoption of sustainable management practices be identified and addressed.

¹ The Farmcare Code has been endorsed by the Queensland Government as an approved Code of Practice under Section 219 of the *Environmental Protection Act 1994*. It constitutes an industry standard giving guidance to growers in meeting their 'General Environmental Duty' under the Act. This Code was originally developed in 1998 and was reviewed and updated in 2007 by Growcom.

Our agenda items

Issues to be considered within this policy area include:

- A long term plan for natural resource management and on-farm delivery programs.
- Water quality.
- Farm management systems.
- Developing an overarching framework for regional and catchment planning and management.
- Natural resource access, allocation and trading (eg water, ecosystem services).
- Vegetation management and tree clearing.
- Greenhouse and climate change.
- Biodiversity and wildlife management.
- Pest and weed management and chemical use.
- Competing land use e.g. urban development in rural areas and peri-urban agriculture.
- Local government and regional planning activities and initiatives.
- Market based instruments for natural resources management issues.
- Commitment to work with regional natural resource management arrangements to align farm scale activities to surrounding sub-catchments.
- One Plan.
- Funding stream for NRM initiatives that work in tandem with regional arrangements.

5. Queensland horticulture industry links to biodiversity conservation

The future productive capacity of the horticulture industry is reliant on access to the natural resources of healthy soil, water and air. Overall, landholders are ultimately the ones who decide how to manage and use the majority of the natural resources located within a region (within bounds set by regulation). As an industry activities need to have a triple bottom line outcome, good for people, good for the economic base and good for the environment.

Natural resource management (NRM) is an important issue for growers. Much of Queensland's fruit and vegetable industry is located close to sensitive environments such as the Great Barrier Reef, World Heritage areas, Ramsar wetlands and the Murray-Darling basin. Growcom supports sustainable development of the horticulture industry and aims to work in partnership with government, research organisations, regional natural resource and catchment management bodies, the community and other stakeholders to address NRM and biodiversity conservation issues.

The main threats to our biodiversity, as outlined in the draft strategy, also impact on the viability of the horticulture industry:

- *Climate change (resulting in conditions such as prolonged drought)* - Climate change is a priority issue for the horticulture industry as it has a direct effect on the ability of growers to produce food. Horticultural products are particularly susceptible to changing climatic conditions, particularly changes in temperature and the availability of sufficient irrigation water. This susceptibility is higher than many other sectors of the agricultural industry and the wider economy.

- *Invasive species* – Biosecurity incursions and endemics, as well as invasive vegetation and animal pests are major threats to food production.
- *Loss, fragmentation and degradation of habitat* – Intensive horticultural production units are relatively small in scale compared to broadscale agriculture. Research undertaken in South East Queensland demonstrates that ecological objectives need to be planned on a sub-catchment basis rather than on individual properties. Better planning is also required as the intensification of rural residential or peri-urban land ownership is having negative impacts on biodiversity, water quality and food production.
- *Unsustainable use of natural resources* – Access to the natural resources of healthy soil, water and air are critical to a viable fruit and vegetable industry. Unsustainable use or the degrading of these resources will impact on both the quantity and quality of locally grown fruit and vegetables.
- *Changes to the aquatic environment and water flows* – Reliable access to adequate and quality irrigation water is the critical issue for horticulture enterprises. Without this, they will cease to exist. Salinity and water quality are also key issues.
- *Inappropriate fire regimes* – The recent experience in Victoria demonstrated the devastating impact that inadequate planning and risk management can inflict on the environment and all forms of life. The impact on the local agriculture sector will be felt for many years with the loss of stock, plantations and critical infrastructure.

6. Priorities for change

Growcom is supportive of the vision and the six priorities for change outlined in the draft strategy.

The horticulture industry's involvement in this strategy will assist the NRMCC in achieving their biodiversity conservation objectives. Through funding streams and support of industry organisations such as Growcom, horticulture growers can be provided with the knowledge and tools to achieve the desired results.

We would like to provide additional feedback on our industry's current activities and ability to assist the Council in achieving their biodiversity conservation objectives:

6.1 Industry Farm Management Systems (FMS)

Growcom has developed an industry FMS program to give our producers the tools they require to manage risks on-farm and improve their businesses. By focusing on the management of risks, our FMS program will help producers to be better prepared for future challenges and allow them to clearly demonstrate to the wider community and government that they are managing their land in a responsible manner with a process of continuous improvement clearly embedded in their management systems.

Current modules include water use efficiency, water quality, soil and nutrient management. There is huge potential in this system to incorporate biodiversity

conservation objectives that are influenced by individual farm management practices. For example, the addition of a biodiversity module will encourage landholders to consider biodiversity issues in their management decisions. This will encourage the adoption of practices that preserve biodiversity on managed lands, including:

- Minimising the loss, fragmentation and degradation of sensitive habitats.
- Encouraging the sustainable use of natural resources.
- Minimising downstream impacts via altered flow regimes and runoff.
- Management of invasive pests.

6.2 Climate change project

Growcom has developed significant capacity on the issues of climate change and emissions trading. A dedicated climate change officer is assisting with the development of climate change policies and adaptive strategies for the horticulture industry. Growcom is also participating in several research projects investigating the potential impacts of climate change on farm businesses, and also on available options for both adaptation and mitigation.

There is overlap between biodiversity and climate change issues, and enormous scope for some management practices to have benefits for both on-farm emissions reductions and biodiversity conservation. For example, the establishment of forestry plantations to offset emissions will have additional benefits in maintaining on-farm biodiversity. Similarly, the development of habitat corridors or stepping stones through forestry plantations will improve landscape connectivity which is likely to become more important in facilitating species range shifts resulting from changing climatic conditions.

6.3 Invasive species, particularly pest birds and flying foxes

The cost of weeds to Australian agriculture, as outlined in the Strategy document, was estimated in 2004 as exceeding \$4 billion per annum. As well as weeds the intensive fruit, nut and vegetable industry also face a huge threat from the consumption and destruction of crops by pest birds and flying foxes. The impact of drought and other environmental factors on bird and flying fox habitats and native food sources has led to plagues in fruit growing areas at proportions never witnessed previously. The cost to the economy for one crop in one Queensland region from flying foxes was estimated by the Department of Employment, Economic Development and Innovation to be \$11.9 million for the period November/December 2008.

This cost is extremely concerning. In a time when growing populations are demanding greater surety of supply of healthy food products such losses are unsustainable. Growers are seeking effective and workable non lethal methods for protecting their livelihoods and managing these populations in a sustainable way.

In 2007 a report by the Bureau of Rural Sciences identified over 60 bird species as being known to cause damage to a wide range of horticultural crops. For fruit they include table and wine grapes; apples, pears and other pome fruit; stone fruit and cherries; mandarins and other citrus; blueberries, strawberries and other soft fruits, bananas, pineapples, papaya, lychees, carambolas and other tropical fruits. Damage is also reported to walnuts, hazelnuts, almonds, chestnuts, macadamias and pistachios. Vegetable crops such as sweet potatoes, peas, beans and lettuce have all recorded high levels of locally significant damage.

Industry recognises that further R&D is required on pest bird and flying fox behaviours and movements in an effort to achieve their goal of sustainable management balanced with conservation of biodiversity. In undertaking such work and gaining greater insights and understanding of the dynamics of these populations and their links with the landscape better conservation management can be achieved. However current funding programs are not geared to incorporate such work. Industry is looking to the implementation of the Australian Biodiversity Conservation Strategy to provide the umbrella policy direction and funding streams that can progress this issue forward.

6.4 Reef rescue

Both in the strategy document and at the presentations made by the Australian Government team in forums around Australia the Reef Rescue program was praised as a successful model for achieving environmental outcomes. The protection of one of the world's natural wonders by a focused program aimed at changing management practices to reduce nutrient, pesticide and sediment run-off from agricultural land has involved Growcom from the beginning. With an experienced extension team based in the main horticultural regions of Queensland Growcom has quickly engaged growers in the program and already achieved in the first six months of operation a total of 10% of growers in the reef catchments going through the FMS water quality module. This is the first step that growers undertake in preparation for their applications going to the regional NRM groups for funding support.

With this experience and expertise Growcom has the capacity to replicate such success of working with government, regional NRM groups, scientists and growers into future biodiversity conservation programs.

6.5 Revegetation by Design

Native vegetation can play an important role in managing insect pests provided the right things are planted in the right places.

This is the major outcome from research into native vegetation on Lockyer Valley farms conducted by Nancy Schellhorn and her research team at CSIRO Entomology. The project is funded by Ausveg and Horticulture Australia and is known as the Revegetation by Design project.

The project started with some base line monitoring using specially designed traps (known as Malaise traps) set up on various farms in the Lockyer and Mulgowie Valleys. The monitoring was focused on identifying insects moving onto crops from areas of remnant vegetation around the fields or along roadways and watercourses.

Some 66 species were collected and identified and then categorized into pests and beneficials. Some pest species such as jassids were found to live on the exotic grasses found in the region which led to the question of whether a pest management program that replaces exotic grasses with deep rooted native vegetation could be one solution to reducing pests on farms.

Obviously there was a need to determine which native species were most effective and this research question has been part of the latest aspect of the project. Potential species were investigated and categorized into risk categories of High, Moderate and Low

depending on results of research into records regarding hosts plants. A general rule emerged that there was a need to avoid using native plant species from the same plant family as crops in any revegetation project.

Moreover it has been found that even small and isolated fragments of remnant vegetation could play an important role in pest control and pollination.

Next stages of the project are to further refine the list of eligible native plants for consideration by looking at what other benefits they could provide. These include the provision of nectar sources that are attractive to beneficial insects, drought tolerance and being fire retardant. Funding for a major extension program is then required.

Such a research project has a win/win outcome for production and the environment and could be seen as a model for gaining a greater understanding on how the commercial horticultural sector can contribute to conserving biodiversity.

7. Key issues moving forward

Growcom would like to stress the importance of government providing a clear commitment, with associated funding streams and delivery mechanisms, to support the strategy and achievement of desired results by 2020.

There is an obvious need for increased Research and Development into the sustainable management of natural resources in agricultural landscapes. Governments must also support the development of management tools that incorporate biodiversity conservation objectives into land management decisions.

There are many areas where the priorities identified in the Biodiversity Conservation Strategy intersect with the interests of the horticulture industry, and where Growcom has the capacity to assist in delivering key results. For example:

Priority 1: Building ecosystem resilience. Growcom can assist landowners to build ecosystem resilience and maintain ecosystem services on their managed lands. Enhanced Farm Management Systems can encourage the sustainable management of natural resources through minimising disturbance, improving connectivity, controlling invasive pests and increasing off-reserve biodiversity.

Priority 2: Mainstreaming biodiversity. Growcom's existing information networks in the agricultural industry can assist rural communities to understand the importance of biodiversity and how their actions can have both positive and negative effects. Growcom can improve the level of engagement of landowners in biodiversity conservation, and can provide tools that allow biodiversity to be considered alongside economic and social factors when making management decisions.

Priority 3: Knowledge for all. Managed lands will become increasingly important for the conservation of biodiversity. Growcom can assist to identify knowledge gaps, research needs and optimal management actions by facilitating communication between scientists and landowners.

Priority 4: Getting results. We support the view that incentive programmes will be necessary to encourage industry to invest in biodiversity conservation initiatives.

Furthermore, it is important to encourage strategic partnerships including government agencies, communities, industry bodies, NGOs and individual businesses. These kinds of programmes are most likely to lead to successful outcomes for biodiversity conservation outside of established reserves. We believe that Growcom can play an important role in establishing these partnerships, and we have demonstrated this ability in numerous other industry programmes with the most recent example being the Reef Alliance. Growcom also sees that good planning policies and consistent legislation among all levels of government is vital to reduce confusion and encourage participation.

Priority 6: *Measuring success*. Long-term monitoring and evaluation is essential to measure the success of any biodiversity conservation programme. Effective off-reserve conservation programmes will require monitoring sites to be established on managed lands together with standardised protocols. A robust monitoring, evaluation and reporting framework is essential to ensure that data can be integrated across regions and through time. To maximise the amount and quality of recorded data on managed lands, measuring and reporting tools should be incorporated into general farm management tools, such as Growcom's FMS.

8. Conclusion

The future productive capacity of the horticulture industry is reliant on access to the natural resources of healthy soil, water and air in the goal of producing an ecosystem service – food for mankind's continued health and vitality. In the production of this precious resource the industry has a triple bottom line approach to management of the resources on which it is based.

As a result, Growcom believes that it is important for the horticulture industry to be involved in the Australia's Biodiversity Conservation Strategy 2010-2020. Through funding streams and support of industry organisations such as Growcom, horticulture growers will assist the NRMCC in achieving their biodiversity conservation objectives. This will have long term benefits for not only the horticulture industry and the economy, but for protecting Australia's biodiversity for generations to come.