



Know-how for Horticulture™



**Nursery & Garden Industry
Australia**

Final Report

HAL project: NY 06014

Completion date: 30 August 2007

Environmental & Technical Policy and Extension

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SUMMARY

The aim of the project was to provide the mechanism for effective management of environmental issues that were affecting the Nursery and Garden Industry and identification of potential issues that may affect the industry in the future.

It had been identified that the key issues of water, industry environmental management and invasive plants were linked and needed to be addressed in a holistic manner with industry being more proactive and engaged with appropriate bodies to ensure the industry's long-term sustainability.

The industry has embraced the establishment of a national role covering all environmental issues, with Industry Development Officers having a National responsibility as well as their State technical responsibilities. This has given the Industry a greater ability to be involved with a wide range of issues.

The establishment of the Environment Committee has provided independent direction to projects and activities as well as being a visible commitment from the NGIA Board to position the industry as the community's leader on relevant environmental issues in alignment with the Nursery and Garden Industry Strategic Plan for 2006-2008

The Industry has been successful in implementing the key objectives of the project as detailed in the report with the following outcomes having been achieved:

- Establishment of Environment Committee that has met on three occasions with minutes etc circulated to all stakeholders.
- Development of National roles for Industry Development Officers and their involvement with key activities affecting the industry.
- Development of National Industry Guidelines for Plant Labelling that will enable correct identification of plant species and consumer awareness of potentially harmful and invasive plants.
- Development of Industry Risk Matrix covering key environmental issues.
- Development of integrated software package for use by IDO's to conduct field audits via PDA's.
- Development of Industry reporting format to measure industry adoption of Environmental programs.
- Engagement with Federal Government on key issues of Invasive plant management, urban water supply, water restrictions and Biosecurity plans.
- Achievement of key objectives within budget and excess funding being returned to HAL.

INTRODUCTION

Recent years have seen the emergence of a number of key environmental issues with the potential to cause significant impacts on the long-term health and sustainability of the nursery and garden industry. Increasingly we have seen that issues such as water restrictions, the banning of plants as weeds, and stricter controls on chemical use have the potential to cause very real impacts to individual businesses and for this to then translate into an economic impact on the whole industry. At the same time, such environmental challenges can also translate into new opportunities and new business for an industry that is prepared and proactive in meeting them.

The last decade has seen major changes in the environmental context in which the industry operates. These include changes in the way environmental issues are regulated and managed by governments and water authorities, and changes in the way in environmental concerns and practices are valued and perceived by the wider community.

Increasingly, industries dependant on environmental resources, such as the nursery and garden industry, are being required to demonstrate that they are responsible 'environmental stewards' and show a real commitment to achieving on-going improvements in their environmental performance.

Effective management of environmental issues at the business level, and the need to provide strong and relevant environmental leadership at the industry level is recognised within the strategic plan as vital to the industry's long-term sustainability.

However, weeds, water, and chemical use are just some of the critical issues affecting the industry. To successfully meet this challenge we need an integrated approach to identify and manage environmental issues, rather than dealing with them separately and on an ad hoc basis.

With this recognition that environmental issues are interconnected, the industry needs to be more holistic in how we manage environmental issues and to be more proactive in order to lead the debate.

The aim of this project is to commence work towards the following key goals:

- Ensuring the adoption of industry environmental management systems and best practice management
- Raising the awareness of the environmental credentials of the industry with key decision makers and the community
- Develop and promote an industry strategy and/or Code of Practice for environmental sustainability
- Complete and implement an industry Risk Management Plan for key environmental issues
- Prepare, measure and report on an industry scorecard on environmental sustainability
- Motivate the industry, and our customers, to be environmentally sustainable

METHOD AND ACTIVITIES

The Project was managed by the National Environmental Policy Manager working with the Environment Committee that was established in August 2006.

The Committee's role was to ensure that appropriate policies are being developed and research undertaken which is of priority benefit for the industry.

The Committee has the following members :

- o David Mathews, Chairman and NGIA Board Member. Managing Director, Proteaflora Nursery, Victoria
- o John Bunker, Managing Director, Redlands Nursery Pty Ltd, Queensland
- o Peter Whitehead, Director, Rast Bros Nursery, New South Wales
- o Dr Margaret Clema, Director, Whistlepipe Gardens. Western Australia

The Committee formerly met on three occasions as well as an informal meeting during the National Conference. The meeting minutes are copied to all NGIA Board members, State Executive Officers, Industry Development Officers and Business Development Officers.

Copies of the minutes are included in the appendices (i)

Details of the activities and outcomes are included in the attached Environment & Technical Policy and Extension Annual Operating Plan for this project. *(appendix ii)*

The sub- projects within this AOP were also managed by the National Environmental Policy Manager, with the support of the Industry Development Officers.

The involvement of the Industry Development Officers, based at state level, was critical to the industry's success in environmental policy development and implementation. For this reason, this project is closely aligned to the industry's on-going Industry Development Officers project, NY06025.

Recent changes to the structure and function of the Nursery Industry Development Officers roles have been designed to facilitate their development of specialisations in key national policy areas and provided for a greater role for them in the development and delivery of national policy in relevant environmental and technical areas.

This approach not only allowed the industry to become more proactive and to benefit from better informed policy decisions, it also lead to a more effective and productive participation on behalf of the industry in key external forums and stakeholder meetings. Examples of these included the National Weeds Advisory Group, Plant Health Australia industry forums and categorisation groups, and the HAL Water Initiative Steering Group.

Part of this project funded the extra resources required by the State Associations to assist IDO's to allow them to focus in a specialised national policy area.

EVALUATION

Strategy	Activity	Outcome
1. Environmental policy development	<ul style="list-style-type: none"> • Environment Committee terms of reference and objectives to be developed. • Environment policy, strategy or Code of Practice • Report on key emerging issues • Outline of risk management plan for environment and technical issues • Report on environmental reporting options 	<ul style="list-style-type: none"> • Committee established and have met on three occasions to overview direction. Meeting minutes circulated to whole of industry to enable awareness of key issues. <i>(appendix i)</i> • Draft Environmental policy developed and under review by NGIA Board. <i>(appendix iii)</i> • Storm Consulting report reviewed and key priorities set based on current prevailing conditions. This report was completed in • Key priorities identified as water issues and plant labelling to cover correct nomenclature, protection of intellectual property, potentially harmful plant issues, and biosecurity risks • Environmental Risk matrix developed and will be utilised for setting priorities for future research. <i>(appendix iv)</i> • Biosecurity issues with regard to Industry Plan under Emergency Plant Pest Response Deed and obligations to PHA are being addressed in collaborative manner. • Review of reporting options settled on composite reports based on State activities as reflected in IDO reports. • Environmental report to be included in Environment Committee minutes.

Strategy	Activity	Outcome
<p>2. Integrated policy support</p>	<ul style="list-style-type: none"> Establish and coordinate Industry Development Officer national policy responsibility. 	<ul style="list-style-type: none"> IDO network allocated National roles and reporting format changed to monitor roles. <i>(appendix v)</i> Funding made available to States to facilitate extra time needed by IDO's to undertake National roles. States are using this funding for admin support and the use of consultants to undertake tasks otherwise done by the IDO. National role is supporting IDO roles by greater communication and consultation in conjunction with State CEOs Weekly contact with IDO's via phone links and regular information updates via email to cover all key issues within Environment sector. This has improved communication between NGIA and field staff. This has resulted in national perspectives being taken for State issues, and this will be built on in the future. IDO's were involved in identifying the key issues for presenting to IAC. Projects were discussed and ranked by all prior to submitting of 2007/08 plan. A summary report covering the IDO activities is attached. <i>(appendix vi)</i>

Strategy	Activity	Outcome
<p>3. Development and extension of environmental best practice for businesses</p>	<ul style="list-style-type: none"> • Delivery of Production EMS to businesses • Development of Biosecure HACCP guidelines and training • Development of AGCAS modules for Water, Weeds and Chemicals • Research into consumer attitudes to gardens, gardening and the environment 	<ul style="list-style-type: none"> • Industry EMS program EcoHort® delivered to industry in Dec '06 and is being utilised in State training programs. • In the first 6 months of being available 55 businesses committed to the EcoHort® program and have undergone initial audit with many others attending briefing sessions. • IDO training on how to promote program conducted during NIASA meeting. Program differs from NIASA scheme as each business has individual issues, which need to be assessed and prioritised for action. • Development of new software program for PDA's to facilitate field audits for NIASA, EcoHort® and Biosecure HACCP. This software replaces prior development which turned out to be inflexible in meeting industries requirements. Project funding for this development was supported by Queensland State funding. <i>(appendix vii)</i> • Guidelines and training package in final stage of development. This needs to integrate with requirements under Nursery Industry Risk Management Plan as developed for Plant health Australia. • Modules developed and part of AGCAS manual. Extra module developed to cover Waste. <i>(appendix viii)</i> • Specific Research project was not undertaken, as during the period environmental issues became very high profile in the media and with political parties. The key issues were: <ul style="list-style-type: none"> 1) Water security as the drought continued and restrictions on outdoor water use had a major impact on the gardening market. 2) Climate change and the position taken by both major political parties with regard to Kyoto protocol and impacts on Australian environment.

Strategy	Activity	Outcome
	<ul style="list-style-type: none"> Develop industry capacity and implement EPPRD and Biosecurity Plan adoption strategy 	<ul style="list-style-type: none"> Industry retail support package was developed as part of Communications strategy for World Environment Day. This was very well accepted by the retail sector. Review of the environmental benefits of urban horticulture was commenced and is being refined. It is important that the data presented by industry is scientifically credible and not seen as opportunistic. Training conducted with Industry Development Officer Network in the requirements of PlantPlan. Industry also involved with PHA in regional training sessions for stakeholders. Consultation held with State Associations on Industry EPPRD plan and biosecurity levy options. This is a very complex issue and as the industry is very diverse, we are unable to adopt existing industry models. NGIA is liaising with DAFF Levies group on how the industry requirements can be accommodated. This issue will carry forward into the 2007-2008 plans. The Nursery Industry Risk Management plan is undergoing a review so it can be adopted. <i>(appendix ix)</i>

Strategy	Activity	Outcome
<p>4.Undertake relevant research to support environmental best practice development</p>	<ul style="list-style-type: none"> • Progress national water wise labelling concepts • Undertake production wastewater management case studies • Review existing biosecurity / quarantine requirements for NGI businesses 	<ul style="list-style-type: none"> • Water Wise labelling project completed. Outcome is to support accreditation of existing schemes via Smart Approved Water Mark, as independent body. Refer Project NY05512 : Final Report submitted • Smart Approved Water Mark are due to launch Consumer program in October 2007 • The key recommendations from the working group on the development of water wise labelling guidelines were utilised in the development of National guidelines for Plant Labelling. <i>(appendix x)</i> • Waste water treatment report received from DPI Queensland. <i>(appendix xi)</i> Case studies and economic modelling program has been extended until early 2008 due to major water issues in SE Queensland. • Water scheduling trials and nursery retrofitting program underway at DPI-Redlands. Interim report will be provided identifying the critical issues regarding product compatibility that growers need to consider when upgrading their irrigation systems. • Submissions made to WA Agriculture re the change in requirements made to treatment requirements for Nursery Stock destined for Western Australia. Initial submissions resulted in recognition of NIASA program being removed from regulations. After two delays, regulations were implemented in July 2007. Industry is to evaluate impact on production sector and submit proposals to WA authorities • Liaison with State agencies on need for commonality with inter

	<ul style="list-style-type: none"> • Invasive Plants – implementation of Industry position paper - audit 	<p>state quarantine requirements. Submission will be made to AusBiosec to have the special requirements of the Nursery and Garden Industry considered.</p> <ul style="list-style-type: none"> • NGIA is engaged with Plant Health Australia on an audit of industry capabilities with regards to biosecurity. This survey is being completed with all member industries. • As a result of closer engagement with key stakeholders involved with the invasive plant issue,NGIA developed a proposal for the national rollout of the successful Grow Me Instead program. This project was successful in receiving funding under the Defeating the Weed Menace program managed by DAFF/DEH. As this funding was secured in June 2007, the key aspects of the project will be included in the next year's activities. <i>(appendix xii)</i> • NGIA presented a paper at the Queensland Weeds Conference on the development of the industries position paper along with the introduction of National Labelling Guidelines. <i>(appendix xiii)</i>
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IMPLICATIONS FOR INDUSTRY

The Nursery and Garden Industry has been seriously affected by environmental issues that have emerged over recent years. The approach of attempting to address each issue in isolation was both very demanding on industry personal and also resulted in a haphazard approach or even worse a stance of denial. As the industry is directly related in the production and distribution of plant material, all the environmental issues are closely interlinked. By adopting the structure and focus as supported by this project it has enabled the Nursery and Garden Industry to begin to address the key issues and ensure that the inter connections between issues are considered and addressed. The following are the key benefits to industry from the outcomes as detailed:

1. Environmental Committee established:

- Industry has designated Board member with focus on key environmental issues that affect the industry.
- Risk matrix developed which will provide guidelines to direct future expenditure so industry is proactive in addressing potential risks. Also provides guidance for members of industry on areas they need to address in there own businesses.
- Industry is gathering data that can be utilised in reporting on the environmental status of various sectors of the industry. This is extremely important to enable industry members to engage with various authorities on issues such as resource availability and industry impact statements.

2. Integrated Industry Support:

- Industry is utilising the skills of the Industry Development Officers in National roles. This offers greater development opportunities for the individuals and enables the Industry to have greater representation and engagement with decision makers.
- Increasing the number of industry support staff with a national focus will assist in the development of solutions to regional problems.
- External bodies will appreciate the engagement with the Nursery Industry as we are represented by specialists in areas with National responsibility. This will in time overcome the duplication of effort currently required to resolve issues.

3. Development and Extension of Environmental best practice for businesses:

- The availability of an industry specific environmental management system (EMS) means businesses can very easily be involved with key environmental measurement and

management. EcoHort® allows all nursery businesses to gain credit for the management improvements they are implementing.

- The development of an integrated software platform for use on the IDO's PDA's will enable improved in field auditing, better data analysis and in the future use of the data to identify training and research requirements. The common software for NIASA, EcoHort® and BiosecureHACCP positions the industry at the forefront of audit capabilities for business audits.
- The development of retail modules for key environmental issues will enable this sector of the industry to also undertake self-audits to ensure they are in compliance with appropriate legislation.
- The national focus on key environmental issues enable the industry to address these via the industry's PR and Communications plan as well as providing relevant data to members to assist them with submissions to various authorities.
- The industry capacity building that has been undertaken via Biosecurity training will be built on in future years to ensure that if a major issue arises the industry will be in a position of being able to work alongside government authorities in managing the situation.

4. Research to support environmental best practice management:

- The Industry Water Use Survey that was released in late 2006 provided the background for identifying further knowledge gaps that needed to be addressed to enable the industry to be recognised as a responsible water user.
- Research projects currently underway will be completed by late 2007 and results will be presented to Industry at the NGIA National conference in March 2008. These will include the development of an Economic model to assist producers with a decision tool to assist in making investments into system upgrades. The Irrigation scheduling trials and nursery refits will provide data to assist in irrigation management as well as identifying critical steps for implementation in the nursery.
- The waste water treatment project has identified shortfalls with current industry recommendations and provides timely recommendations on dosage rates.
- The closer relationship developed between industry and regional quarantine agencies means that discussions are occurring with agencies on legislative amendments. Industries positions are being considered and it is believed that with a continuation of these relationships that the accreditation programs developed by NGIA will be recognised as the required standards. Industry needs to prove their performance in this area and the measurement tools developed for the audit process will enable data analysis to achieve this.

- The engagement of NGI with key stakeholders in the development of solutions to invasive weeds will benefit industry through cooperative programs in the area of consumer education, plant recommendation and support for the industry. This will be a positive shift in attitude from the confrontational alternative.
- The research into the positive contribution from plants and urban green spaces will provide growers and retailers with credible data to promote the products of industry in an environmental sustainable manner.

FINANCIAL REVIEW

When this project was originally proposed, it was envisaged that a large part of the work would be undertaken by external consultants. As the project requirements were identified, a large proportion of the projects were undertaken using NGIA internal resources and via the National Environmental policy Manager (separately funded). This has meant that while the outcomes were in accordance with the project objectives the expenditure to achieve this has been less than originally anticipated. The financial summary for the project is as follows:

Project Strategy	Budget	Actual	Variance
1. Environmental policy development	\$40,000	\$8,000	\$32,000
2. Integrated policy support (IDO National roles)	\$100,000	\$100,000 (split as follows) Qld: \$20,000 NSW: \$20,000 Vic: \$20,000 WA: \$15,000 SA: \$15,000 Tas: \$10,000	
3. Development and extension of environmental best practice for businesses	\$90,000	EcoHort® Materials \$14,500 EMS Retail Module Development \$3,500 PDA Software Installation \$950 Biosecurity Training \$2,766 Total : \$ 21,716	\$68,284
4. Undertake relevant research to support environmental best practice development	\$60,000	Water Treatment \$9,500 Weeds \$250 Plant Labelling \$1,314 Quarantine-PEPILL \$3266 Total: \$ 14,330	\$45,670
Total	\$290,000	\$144,046	\$145,954

Unspent funds from this project will be returned to HAL for future projects.

Milestone	Funding Amount	Status
101 Contract Signed:	\$153,000	Received by NGIA from HAL
102 6 Month Progress	\$95,000	Received by NGIA from HAL
190 Final Report	\$42,000	Not Required with NGIA to return \$103,953 to HAL

Appendices

The following attachments relate to the outcomes of the project:

- i. Minutes of NGIA Environmental Committee meetings held 17 August 2006, 25 January 2007, 14 June 2007.
- ii. Copy of Project Annual Operating Plan
- iii. Copy of Industry Environmental Policy(draft)
- iv. Risk matrix Table for Nursery and garden Industry
- v. Summary of IDO responsibilities for National roles.
- vi. Summary of Environmental activities from IDO reports.
- vii. Training document for PDA software to conduct field audits.
- viii. Copies of Retail Modules for Environmental Audits
- ix. Paper on EPPRD and industry requirements.
- x. Copy of paper on Water treatment
- xi. Copy of National Plant Labelling Guidelines
- xii. Copy of proposal submitted to DAFF/DEH re Grow Me Instead and approved in June 2007
- xiii. Copy of paper presented to 9th Queensland Weed Symposium on Development of NGIA Invasive Plants Policy.