

NY95018

**Nursery Industry Development Officer at
national level**

Ian Atkinson

Nursery Industry Association of Australia

NY95018

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**HORTICULTURAL
RESEARCH &
DEVELOPMENT
CORPORATION**

**Partnership in
horticulture**

Final Report
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This report has been written by Ian Atkinson for the Nursery Industry Association of Australia as part of the reporting requirements of HRDC project NY95018. In addition we hope that the report is useful to industries and groups interested in the use of Industry Development Officers (IDOs) for industry development.

We must acknowledge the support of industry in both funds to run this project (from the national product levy) and the cooperation given to Ian by many groups and individuals within industry. In particular you will see from the report that the members of the national Nursery Industry Development Officer (NIDO) network have been instrumental in the success of this project.

Special thanks to the industry members of the National NIDO Management Committee during the first three years of this project:

- Russ Higginbotham
- David Cliffe
- Jolyon Burnett
- Ralph Groves.

~ Disclaimer ~

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Industry Summary

Aims

The original aims of the National NIDO project, approved in early 1995 were ;

1. To provide a professional and cost effective technology transfer service to the nursery industry in line with the 5 year R&D plans strategies.
2. To manage the technical aspects of the industries quality management scheme, NIASA, and increase the level of awareness about the benefits of QM to the industry.

Technology Transfer

In 1995 growers were asked to rate a range of information sources in terms of how often they used them and their level of satisfaction with the information. 62% used and commented favourably about conferences, workshops and trade days. 73% said they wanted a nationally coordinated information network including magazines or newsletters.

Previously researchers were given little direction about how to best assist industry when publishing the results of funded projects and there was a significant backlog of HRDC Final Reports whose results had not been publicised to the industry at large. "The Nursery Papers" (TNP) series was developed and over 30 have been published in the national magazine which is distributed nationally to over 8,000 people around Australia. They are also available at NIAA's website, www.niaa.org.au

At the beginning only 2 states had state based NIDO's and there were no formal or even informal linkages between NIDO's. There are now 5 state based (VC funded) NIDO's who meet at least annually and are in regular contact with the National NIDO and each other. This has been a key task allocated to the National NIDO by NIAA & HRDC.

Accreditation and Quality Management

Prior to 1995 there was no coordinated plan for the development and implementation of NIASA as a unified national scheme. A coordinated plan for the development and implementation of NIASA and therefor industry was developed in 1997 and is in use.

In 1995 there were only 75 businesses NIASA accredited nationally, none at all in SA,NT or Tasmania. Over 150 businesses were accredited as of June 1998. There are at least 2 accredited in every state and the NT. This has been a joint effort of the State Technical Officers, NIASA Committees and the National NIDO.

There has been a marked increase in awareness of the benefits of Quality Management schemes in general. In particular there is much less confusion about the respective roles of NIASA and ISO9002 with the common view being that they are complimentary systems.

Continuing role

In 1998 NIAA's R&D Committee and HRDC supported the continuation of the National NIDO position. Jolyon Burnett, CEO of NIAA, comments *"The national IDM also has the formal role of reporting back to the HRDC on its \$400,000 annual investment in the NIDO program. The coordination and efficient operation of the network requires a level of management only achievable nationally and Ian fulfils that role well."*

Introduction

The original aims of the National NIDO project, approved in early 1995, were:

1. To provide a professional and cost effective technology transfer service to the nursery industry in line with the 5 year R&D plan strategies.
2. To manage the technical aspects of the industry's quality management scheme, NIASA, and increase the level of awareness about the benefits of QM to the industry.

In 1996 the Nursery Industry Association of Australia (NIAA) developed a new plan, *The Australian Nursery Industries Research and Development Plan 1995-2001*, and the National NIDO project was slightly modified to bring it into alignment. The Australian Nursery Industry Research and Development Plan 1996-2001 defines six key activity areas for R&D as follows:

- Business management, practices and skills
- Communication and technology transfer
- Export development
- Environmental accountability
- Customer needs
- Production and handling

Importantly, these key areas are to be considered within a framework of improved profitability. The project was re-focussed to help implement many of the strategies identified in the plan below.

Communication and technology transfer

'Improved profitability, in part, depends upon access to appropriate information... With the rapidly expanding volume of information and new delivery methods, industry participants need simple access to relevant information.'

Priority 1

To increase the rate of adoption of appropriate technology and to provide incentives for implementing improved practices, for example by marketing the accreditation scheme and implementing a technical workshop program.

Relevant strategies:

- Quantify the benefits of accreditation for a sample of business types by 1998 and communicate these to industry
- Coordinate regional Nursery IDOs.

- Identify the key workshop topics for the industry and develop a timeframe and format for their delivery. Where appropriate these topics will be taken up by the National Training Officer and developed into competency based courses

Priority 2

To develop networks within industry to keep pace with technological change and communicate what is happening.

Relevant strategies:

- Encourage networks to cooperate and use all available resources
- Ensure research providers use and participate in networks and other communication channels at all stages of R&D.

Nursery management, practices and skills

'Improved profitability requires that nurseries employ the best management skills and practices available....industry participants will require a wider range of skills and tools in the areas of marketing, systematic management and materials handling, along with the ability to use them.'

Priority 1

Wide use of best practice through the implementation of quality management, accreditation, and development of best practice codes.

Relevant strategies:

- Continue to develop, implement and promote NIASA to industry
- Encourage businesses to adopt quality management through promoting awareness of its benefits.

Project outcomes

This report will look at what was achieved and how. Each section includes supporting statements from key industry representatives to emphasise the key outcomes. Beginning with **'Getting the Message Out'** which looks at the how and why of communication to industry as in many respects this is the key to the project. In the section on **'Quality Management'** you will see that there have been great improvements over the term of this project due to a combined effort by many people.

'Technology Transfer' is a specific area of the communication package and "The Nursery Papers" are undoubtedly the star of this section. Specifically designed to meet an identified information need within industry they have been well received and are a key component of our continuing efforts.

'R&D Management' is a joint responsibility of HRDC and NIAA. The National NIDO has played an important part in ensuring that the industry has been involved in a continuity of communication with HRDC and Research providers throughout Australia. I hope you find this report both informative and interesting.

Getting the Message Out

Communication theory

The diagram in Figure 1 was developed by Berlo (1960) to help explain the process of communication.

SOURCE ⇒	MESSAGE ⇒	CHANNEL ⇒	RECEIVER
<i>Comm. skills</i>	<i>Content</i>	<i>Seeing</i>	<i>Comm. skills</i>
<i>Attitudes</i>	<i>Treatment</i>	<i>Hearing</i>	<i>Attitudes</i>
<i>Knowledge</i>	<i>Code</i>	<i>Touching</i>	<i>Knowledge</i>
<i>Social system</i>	<i>Elements</i>	<i>Smelling</i>	<i>Social system</i>
<i>Culture</i>	<i>Structure</i>	<i>Tasting</i>	<i>Culture</i>

Figure 1 Berlo's model of the process of communication.

The source formulates the message and transmits it via a channel to the receiver. Berlo emphasises the need for the source to be in control of the process and know its pitfalls. For the process to be successful the source must understand the attributes of the receiver to select the correct message and channel .

The source - The Australian nursery industry pays a levy on all containers used for growing plants for resale and part of this levy is used to fund Research and Development for industry. The Australian Federal Government matches this money dollar for dollar so that in 1997-98 industry had access to nearly \$1m for R&D. Projects are submitted for consideration to, or alternatively commissioned by, the Nursery Industry Association of Australia's (NIAA) R&D Committee and the Horticultural Research and Development Corporation (HRDC).

So the sources of information are HRDC, NIAA and the R&D providers who are working on levy funded projects. The R&D providers include mainly government organisations such as the Institute for Horticultural Development in Victoria. Let's look at the characteristics of the people that work for these organisations.

Researchers often have good scientific writingskills but poor verbal skills, their attitudes tend to reflect their academic and institutional backgrounds, they commonly possess high levels of specialised knowledge, and their social system and culture tend to be inward looking, focussed on their place of work rather than their clients. This assessment is naturally very broad and there are always exceptions, but I'm sure everyone here has seen elements of these characteristics in researchers they have met.

The receiver - NIAA's R&D Committee and HRDC have been very clear in their new 5 year R&D Plan about who the message is to be targeted at i.e. "...the professional nursery industry...". The 1993-94 survey by the Australian Bureau of Statistics, funded by the pot levy and HRDC, identified 3,046 businesses involved in production and wholesaling of nursery greenstock.

Growers represent such a wide range of characteristics that the broad brush approach to describe them is fairly meaningless. Their communication skills range from brilliant to appalling, attitudes vary tremendously with age and background, they tend to be much more generalist in their knowledge and often know what works without necessarily knowing why.

In terms of developing appropriate messages and channels to "get the message across" this isn't much use. Fortunately we have access to the results of a study commissioned in 1995, by NIAA and HRDC, into the information needs and wants of growers. The results of project NY531 "Survey of nursery industry information needs" is available from HRDC and here are some of the relevant findings.

Growers were asked to rate a range of information sources in terms of how often they used them and their level of satisfaction with the information. Of those questioned 70% used personal networks and rated them as their most useful source of information. In addition 62% used and commented favourably about conferences, workshops and trade days. Most (73%) said they wanted a nationally coordinated information network including magazines or newsletters.

Regarding published information on levy funded projects there were two clear findings. Firstly there was a high demand for useful information from projects including financial implications. Secondly there was a consistent criticism of the scientific style of presentation of the information they had seen from projects.

The message - A good example of how NIAA and HRDC are crafting the message is to be found in "The Nursery Papers", consisting of a series of two and four A4 page leaflets published in "Australian Nursery Manager". The authors and editors guide for "The Nursery Papers" (TNPs) says "The publication is designed to stimulate interest and provide enough information for nursery operators to be able to take some action to improve their business" Atkinson (1996).

Remember, growers wanted to see useful information from projects. This then determines much of the content of TNPs. Researchers are forced, partly by the format, to concentrate on the most useful and practical outcomes of their work, and are discouraged from simply saying what was done. The treatment or style is "... more like a good magazine article and less like a (scientific) paper..". This is often the hardest point for researchers and their peer reviewers to come to terms with as they have often spent years developing their scientific writing habits.

The channel - The choice of medium is important if we are to achieve the best results with our target group. The most favoured mediums in the survey were, in order of preference: personal networks, workshops, and magazines.

The five year R&D Plan has as an outcome under the heading of *Communication and Technology Transfer* of "Strong, focussed and adequately resourced networks that encourage the seeking and sharing of knowledge aimed at improving business profitability and professionalism." So we will be making use of mediums such as IPPS conferences and workshops to get the message across.

One recent example of our use of networks and workshops is the successful series of *WaterWork* workshops conducted throughout Australia. These hands-on workshops required growers to use nearly all their senses, except taste unless delicious morning teas can be counted! This successful series is now moving into its third phase of training new presenters and developing distance education packages to allow even more growers to partake. *WaterWork* is also being used as the model for development of future workshops.

In the publications area NIAA has completely refurbished *Australian Nursery Magazine* including the recent name change to *Australian Nursery Manager*. Not only has it been the vehicle for publishing "The *Nursery Papers*" but the general content has been improved to better meet the information needs of growers and other sectors.

Never shy of new opportunities NIAA and HRDC have also embarked on the famous or infamous Internet. The two main aims of this project are to:

- Create a World Wide Web site for the provision of information to the Australian professional nursery industry
- Encourage and facilitate use of the Internet and World Wide Web as a major information resource within the Australian nursery industry.

We have again concentrated on the information needs of industry and resisted the temptation to use all the bells and whistles. Our World Wide Web site at www.niaa.org.au is deliberately a simple but effective site concentrating on quality content not flashy style.

Feedback - Like all models Berlo's has its drawbacks and its critics. Probably the most obvious omission is the lack of a feedback channel. So I suggest we redraw it because without feedback from users we can easily get lost.

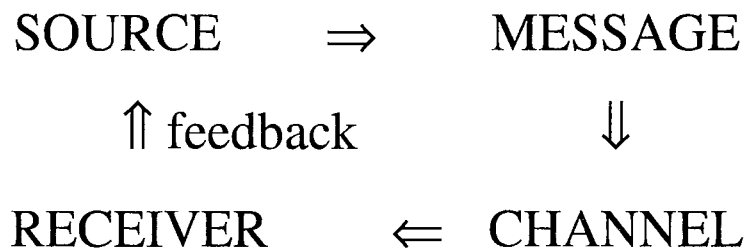


Figure 2 Modified model.

We need feedback from users both formally and informally to finetune our efforts. Formal feedback may be in the form of fax or phone surveys, so if you are asked to participate then please give it some thought and effort because you will be representing your peers. Informally, if you see something useful in a TNP or something wrong on the web site, please send me or NIAA a fax or an e-mail message so we know how our efforts are going.

Quality Management

Nursery Industry Accreditation Scheme, Australia (NIASA)3.1

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
NIASA was established by NIAA with the support of the State Nursery Industry Associations (NIAs) in 1993 but without formal links to NIAA itself.	The National Accreditation Committee is a formal sub-committee of the NIAA Executive and includes a representative of the NIAA Executive.	The National NIDO successfully applied for NIAA/HRDC funding for annual conferences of NIASA. Developed changes to scheme guidelines which were adopted by NAC and NIAA.	Annual conferences organised by the National NIDO are the key to the success of NIASA. They bring the states together to work as a team (not individuals) to suggest changes to improve the working of the scheme.
There was little communication between the State NIAs about the implementation of NIASA at the State level.	All states have active NIASA accreditation committees and often communicate with one another to resolve issues and explore opportunities.	This has come about from the joint efforts of committed people at the State level with assistance from the National NIDO. The benefits of active participation were promoted.	It has now become easier for the states to run NIASA because they have functional committees that meet regularly. Good communications with others and backup from the NIDOs.
NIASA Technical Officers (TOs) only had direction and assistance from their State NIAs and had no national mechanism for discussion or review. This was an impediment to uniform application of NIASA.	The Technical Officers Group (TOG) meets at least once a year for discussion and review. TOs also frequently discuss ideas with the National NIDO and their colleagues. Uniformity of application of the scheme has significantly improved.	This group was conceived and implemented by the National NIDO with the support of the NAC and NIAA. Continued success due to professionalism of State TOs. Training and 'moderation' exercises at annual conferences are essential.	The members of the TOG work together as a team to improve the scheme. Communication between the TOs is excellent with support from the National NIDO.
The National Accreditation Committee (NAC) was not functioning effectively because of a lack of membership continuity, distrust between State NIAs and a lack of opportunity to discuss important issues.	The NAC is functioning effectively as an overseeing body for NIASA, working closely with the National NIDO. The level of distrust and disagreement has been reduced substantially.	Joint efforts of a committed NAC and the National NIDO, working cooperatively towards common goals. Much of the distrust was a product of misinformation, lack of cooperation and lack of clear goals.	The most significant achievement from our annual conferences is that the NAC through membership stability works well as a national team. Distrust between states is really a thing of the past.

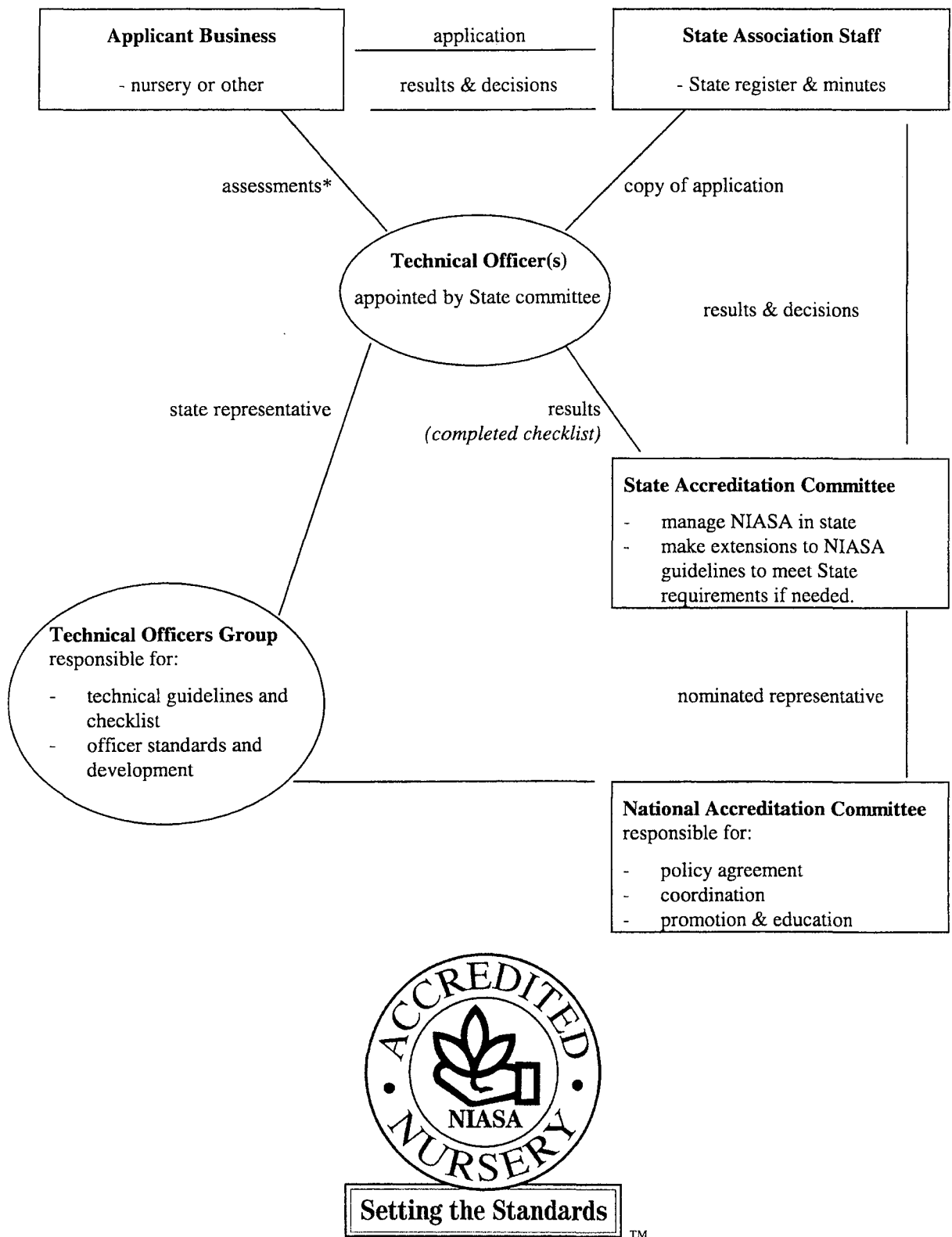
Before National NIDO	After National NIDO	How was this done?	Comments from industry*
There was no coordinated plan for the development and implementation of NIASA as a unified national scheme.	A coordinated plan for the development and implementation of NIASA and therefore industry is in use.	A joint effort of the Technical Officers Group, National Accreditation Committee and the National NIDO.	Just another example of how the annual conferences are so important to the development of the scheme.
A lack of promotion, promotion material, and there wasn't a unified NIASA logo.	Multiple forms of promotional material have been developed and are in active use. All feature the trade marked logo.	A joint effort of the Technical Officers Group, National Accreditation Committee and the National NIDO.	Promotion still needs attention and we need professional help to take this further.
Only 75 businesses were accredited nationally, and none at all in SA, NT or Tasmania.	Over 150 businesses were accredited as of June 1998. There are at least two accredited in every State and the NT.	A joint effort of the TOs, NIASA Committees and the National NIDO.	Shows that the scheme is working and has been accepted by industry. Significant for NIASA's future.

* *Industry comments from David Eaton (Falg Nurseries, South Australia) Chairman of National Accreditation Committee.*

Supporting documentation

1. "Schematic of NIASA Operations", 1 page summary of NIASA operations
2. "Accreditation for business success" *The Nursery Papers* issue No 1998#004
3. "What is NIASA Accreditation" brochure.

Schematic of NIASA Operations.



Accreditation for Business Success

The Nursery Papers, issue No 1998#004

The Nursery Papers

ESSENTIAL INFORMATION FOR AUSTRALIAN PROFESSIONAL NURSERY OPERATORS

AN INITIATIVE OF THE NATIONAL NIDO PROJECT. ISSN:1326-1495 ISSUE NO:1998#004

Accreditation for business success

NIASA accreditation - the professional approach!

NIASA (Nursery Industry Accreditation Scheme, Australia) is a national scheme for production nursery (growers) and growing media (potting mix) businesses which operate in accordance with a set of national 'best practice' guidelines. The *NIASA Best Practice Guidelines* have been developed over a period of years by respected industry representatives and researchers.

The aims of NIASA are;

- improve customer confidence at all levels of the distribution chain,
- improve the profitability of NIASA accredited businesses through the adoption of industry Best Practice,
- encourage the use of environmentally sound work practices,
- encourage the continuous improvement of NIASA accredited businesses and those working towards accreditation.

Who can join NIASA?

Any wholesale/production nursery or growing media/potting mix manufacturer in Australia can join NIASA if they implement the *NIASA Best Practice Guidelines*.

The results of applying industry Best Practice are often very obvious.

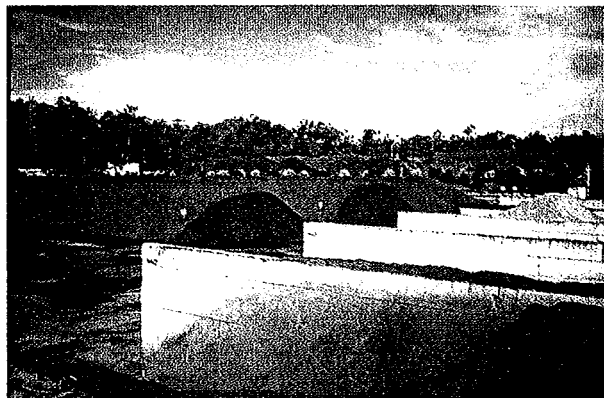


NIDO at National Level ~ HRDC Final Report

"Becoming NIASA accredited is not just for the big nurseries, it is for any nursery that wants to be professional."

VAL BOMBARDIERE - AVONDALE NURSERIES LTD. NSW.

Participants are not required to belong to a nursery industry association.



Accredited media manufacturers have an immediate marketing advantage for supply to NIASA production nurseries, who prefer accredited suppliers.

Why join NIASA?

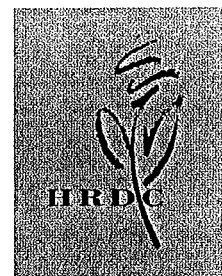
NIASA will help your business by improving customer confidence and improving your business's efficiency through best management practice.

"Accreditation has reduced my production costs and made the nursery easier to manage."

DARRYL SOUTH, DARWIN PLANT WHOLESALERS.

Many government departments and large landscape contractors now prefer to buy from NIASA nurseries. It is recognised and supported by many State/Territory Departments of Agriculture.

Customers have access to the *NIASA Best Practice Guidelines* and will know the standards required of your production system. They will also know your adherence to NIASA is objectively





"The recognition and prestige it brings is valuable to our growing business."

CRAIG HILL, SUMMERHILL NURSERIES VICTORIA.

assessed by a Technical Officer appointed and managed by your local NIASA committee.

The Technical Officer is available for information, interpretation and advice on industry Best Practice.

"Regular visits by the Technical Officer keeps me abreast of industry Best Practice and encourages worthwhile change."

WAYNE PARR - GOLDEN GROVE QLD.

The implementation of the Guidelines are a way of involving staff, as a team, in achieving Best Practice standards.

Joining NIASA also projects a positive public image due to the Guidelines requiring a demonstrated commitment to efficient and environmentally conscious water management, plant nutrition and pest management.

"Accreditation helps keep me on my toes with it's management system and gives me an edge."

EDDIE DEKKERS, FLORA PLANT, WA



Who is joining NIASA?

Current participants include growing media manufacturers, general production nurseries and specialists producing; seedlings, potted colour, fruit trees, tubestock, advanced trees, landscape lines, indoor foliage, and forestry trees.

There are currently as many businesses working towards NIASA as there are already accredited and most aim to achieve it within 1 to 3 years. Membership is totally voluntary.

Who administers NIASA?

The scheme members are responsible for the administration of NIASA.

"NIASA is industry self-regulation, not government legislation. It is responsible horticulture."

WAYNE BACCHI - WHOLESALE INDOOR FOLIAGE QLD.

State/Territory NIASA Committees consist of representatives from a wide range of businesses. They accredit applicants on the basis of the Technical Officers reports whilst ensuring complete confidentiality of the applicants by use of a numbering system. Sensitive information given to the Technical Officer is kept confidential.

The National Accreditation Committee administers the scheme nationally on behalf of the Nursery Industry Association of Australia (NIAA). They facilitate implementation of NIASA and coordinate promotion, marketing and technical improvements or updates to the *NIASA Best Practice Guidelines*.

How do I get involved?

- Step 1** Contact your state or territory nursery industry association and obtain a copy of the *NIASA Best Practice Guidelines*,
- Step 2** Use the guidelines to do a rough check of your operations to see if there are any obvious changes to be made,
- Step 3** Contact your Technical Officer through the association to discuss the results of your investigations,
- Step 4** Develop a plan for the implementation of the *NIASA Best Practice Guidelines* into your business (often 1 to 3 years),
- Step 5** Apply for NIASA accreditation.

What are the requirements of NIASA?

The *NIASA Best Practice Guidelines* spell out the technical and management requirements for participation in the scheme. Essentially they cover the following main areas;

A. An emphasis on the prevention of plant disease

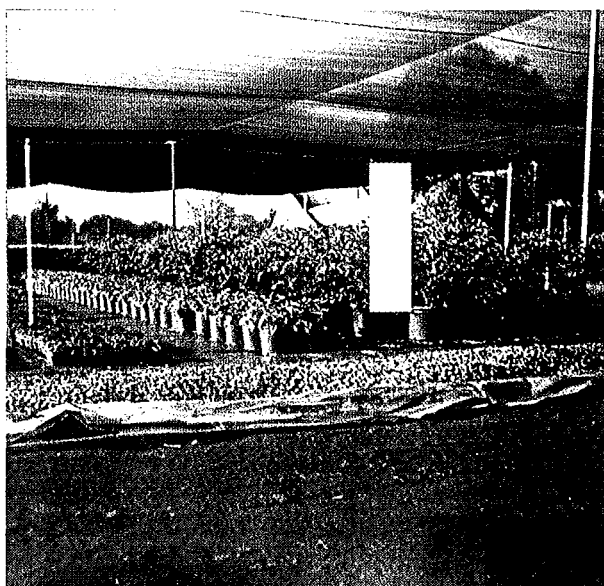
Rather than attempting to control diseases after they appear NIASA stresses crop hygiene in order to prevent the original infection. The diseases of most concern are those carried in water and soil/growing media which are often not detected until it is too late. So where soil and water are likely to contain disease organisms they must not, without treatment, come into contact with crop plants.

Treatment of water to kill disease organisms (disinfection) is required for all surface water supplies but usually not for town water or deep bores. Disinfection procedures must be effective and monitored regularly, chlorination is the most common treatment.

Growing media/potting mix must be either; of a type that is free of contamination (eg vermiculite), supplied by a NIASA accredited manufacturer, or tested and treated according to the *NIASA Best Practice Guidelines*. Media manufacturers must comply with strict disease testing and treatment regimes to qualify for NIASA accreditation.

Growing areas must be constructed in such a way as to minimise the risk of plants coming into contact with contaminated soils and drainage water. Good site drainage is essential to control normal runoff, prevent ponding and maintain effective hygiene. In ground production sites have their own specific guidelines including regular disease testing and traffic control.

- Just one way of meeting NIASA guidelines. This new site was sloped to ensure correct drainage then overlaid with 3 layers -
1. Black builder's plastic to prevent drainage water coming into contact with soil.
 2. Crushed rock to aid drainage and prevent ponding.
 3. Weed mat to ease cleaning and reduce maintenance.



Scouting for pests and diseases at Falg Nurseries in South Australia enables early treatment.

B. An emphasis on effective control of insects, diseases and weeds

It is necessary that the operator or an appropriate employee (eg pest scout) can correctly identify pest problems as they occur and implement appropriate control measures (preferably Integrated Pest Management). Where the use of pesticides is necessary the business must be able to apply them effectively and safely. The responsible person must hold an appropriate certificate from the National Farm Chemical Users Course. Pesticide storage and mixing facilities must be securely sited and adequate for the purpose. Weeds, especially broad leaf ones which can harbour major pests and diseases, must be controlled.

"Because a lot of the trees we grow will be in the ground for over 50 years we have to supply quality seedlings."

DAVID CLIFFE, NARROMINE TRANSPLANTS NSW.



C. An emphasis on overall product quality

Accredited businesses are required to produce goods which meet their customers expectations. Growing media must meet the clients specification and perform adequately. Plants must have adequate nutrition, be correctly acclimatised, and in an acceptable media.

D. An emphasis on staff skills

Staff must be competent in many areas such as effective nursery hygiene and where appropriate the safe and effective use of chemicals. Training courses and workshops are being offered to assist both accredited businesses and those working towards accreditation.

"Our nursery staff have become more professional as a result of NIASA."

ARTHUR MAAIT - ALPINE NURSERIES NSW.



The WaterWork workshop helps growers and staff understand and improve their water management.

E. An emphasis on informed management decisions

Sound decisions are made on correct information and NIASA accredited businesses must keep appropriate records.

"NIASA has helped me target priority areas for changes to nursery infrastructure. I especially appreciate the discipline it encourages."

PETER MINGE, NURIOOTPA NURSERIES SA.

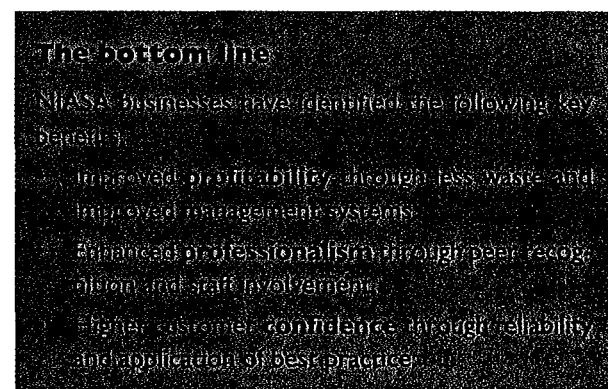
Accurate records of the following will aid decision making: irrigation water quality and treatment; growing media quality; plant protection chemical applications; water disinfection records.

Recording sheets for each of these aspects are available or you can use your own. Technical

Officers look at these records to identify trends, recommend appropriate actions and to ensure that the *NIASA Best Practice Guidelines* are being observed.

Can NIASA change?

Yes, because as technology changes the *NIASA Best Practice Guidelines* will require updating. The National Accreditation Committee takes advice on technical matters from the NIASA Technical Officers Group which is made up of Technical Officers from each state. The committee must be mindful of the need to ensure that changes will benefit existing NIASA businesses without becoming so complex as to discourage those seeking accreditation. The scheme is dynamic and will continue to embrace relevant research results which improve efficiency and profitability across the range of business types and sizes.



Further information

For more information on NIASA locally phone:
Queensland (07) 3277 7900.
Northern Territory (08) 8999 2338.
Western Australia (08) 9325 8252.
South Australia (08) 8303 9578.
Tasmania (03) 6336 5279.
Victoria (03) 9576 0599.
New South Wales (02) 9679 1472.

For information on national matters call Ian Atkinson, *National NIDO* (02) 6260 5880 or Gary Gibson, *Secretary National Accreditation Committee* (02) 9876 5200. We are also on the internet at

<http://www.niaa.org.au/niasa/index.html>



HORTICULTURAL RESEARCH & DEVELOPMENT CORPORATION

Why buy plants from NIASA Accredited wholesale growers?

They produce consistent quality products in accordance with an Australian developed and nationally recognized set of "Best Practice Guidelines".

What is 'Best Practice'?

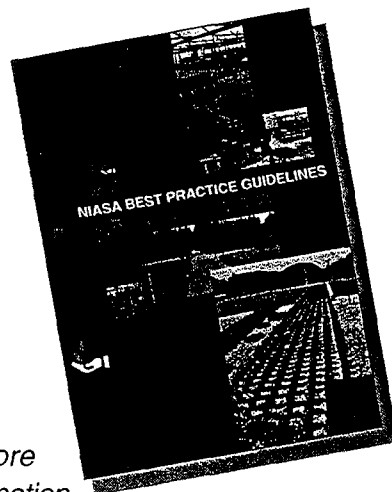
Best Practice nurseries have effective infrastructure and management in place to produce quality plants that can be relied upon. How? 1. Good hygiene to minimize pests and diseases. 2. Good plant management to produce vigorous plants. 3. Professional operations and management to provide quality products.

Who decides what's 'Best Practice'?

The Nursery Industry Accreditation Scheme, Australia (NIASA) is managed by the Nursery Industry Association of Australia, working with a group of industry and technical specialists. Accredited businesses are audited at least once a year by independent Technical Officers in accordance with the "NIASA Best Practice Guidelines".



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For more information

about NIASA see us on the World Wide Web at www.niaa.org.au or contact your local organization at -

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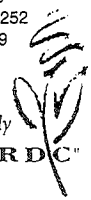
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"NIASA is proudly supported by HRDC"



brochure

What is NIASA Accreditation?

The NIASA STORY



BEFORE

"Joe decides there must be a better way to grow plants..."



Joe works with his local NIASA officer to implement 'Best Practice'.

"NIASA ACCREDITATION IS THE STAMP OF PROFESSIONAL EXCELLENCE. It delivers increased profitability and status by adoption of industry best practice."



AFTER



As a retailer

"Dealing with NIASA-accredited growers gives me confidence because they are nationally and independently assessed suppliers of consistent quality who will enhance my reputation and increase my profitability."



"As a consumer, NIASA accreditation trade mark gives me confidence that I'm buying a quality and reliable product that will perform"

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
Many people in the industry were confused about the relationship between NIASA and ISO9002. Often they were thought to be competing options for nursery QM.	Many in industry are now much clearer about the relationship. NIASA and ISO9002 are seen as complimentary systems with many businesses seeking ISO and NIASA.	A series of targeted articles were written or commissioned by the National NIDO. Published in the main national industry journals and also in State NIA's newsletters.	The first step should be NIASA. For some nurseries ISO is important and may need to be achieved.
There was a common misconception that ISO9002 was about producing 'best quality'.	Still a common misconception but there is a greater awareness that ISO is about 'adequate quality'.	As above. Articles featuring the practical experiences of growers were the most effective.	If ISO is done in conjunction with NIASA the benefits are greater.
Uncertainty about how applicable ISO9002 was to the nursery industry and concerns about extra 'paperwork'.	It has been clearly identified that ISO9002 works best in businesses which employ 10 or more staff and that the 'paperwork' is useful.	A number of case studies have been presented at conferences and published.	ISO is useful for those that may have inadequate records and procedures. Improving these should improve management.
Only one ISO9002 nursery in Australia.	Approximately 16 ISO9002 businesses in Australia (half of them are also NIASA)	Lots of hard work by individual businesses.	This should lift the standards of these businesses.

* *Industry comments from David Eaton (Falg Nurseries, South Australia) Chairman of National Accreditation Committee.*

Supporting documentation

1. "Nursery industry Accreditation (NIASA) and ISO 9000 Quality Assurance series." A paper at NIAN State Conference.

Nursery Industry Accreditation (NIASA) and the International ISO 9000 Quality Assurance Series

A paper given by Ian Atkinson to NIAN State Conference

There has been a debate in the Australian nursery industry in recent years over the issue of Quality Management and some of the options available. So is it a choice between NIASA and ISO 9000? Initially that was the thinking of many people in industry but recent experience has shown the two systems can complement each other very effectively. A number of nurseries have been implementing both NIASA and ISO 9002 with impressive results.

Firstly let's look at the sorts of reasons why nursery operators might be interested in formal Quality Management systems:

Why people show interest in quality management?

- Customers have suggested a quality system is required
- Increasing competition
- As a marketing edge in domestic and export markets
- To gain formal recognition
- Improve the consistency of products and services.

There are now over 100 nurseries in Australia that have adopted formal Quality Management systems in various forms. What benefits are they reporting?

Quality system benefits

- Improved consistency of product
- Improved competitiveness
- Enhanced reputation
- Increased production efficiency
- Reduced waste and rework.

So now to the options for an Australian nursery business interested in a formal, externally audited, QM system. The "Nursery Industry Accreditation Scheme, Australia" or NIASA, amalgamated a number of State based schemes under one umbrella in 1994. The scheme is supervised nationally by the Nursery Industry Association of Australia and implemented on the ground by State Accreditation Committees and Technical Officers. There are now over 100 businesses with NIASA accreditation in Australia with the majority in Queensland and Victoria. Why has NIASA been successful?

NIASA's best features

- Voluntary
- Designed for the nursery industry

- Audited by a third party
- Driven by industry
- Cost effective.

Over the 3 or more years NIASA has been operating we have been learning more about the implementation of NIASA and other QM systems. From a formal QM perspective what are some of NIASA's weakest areas?

NIASA's weaknesses

- Limited record keeping
- Limited staff involvement
- No 'quality plan' needed
- No continuous improvement pathway
- Limited work process analysis.

ISO 9002 - sound familiar? It is probably one of the most common QM standards mentioned in industry literature and in the media. It is one of a set of international standards for QM systems, the ISO 9000 series. The International Standards Organisation is responsible for many internationally recognised externally audited systems. There are a number of companies and government organisations in Australia who are able to offer their services as auditors to nursery businesses seeking ISO 9002. What does it offer?

ISO 9000 series strengths

- Internationally recognised
- Involves management & staff
- Involves customers & suppliers
- Documents work processes
- Develops 'quality plans'
- Excellent record keeping
- Path for continuous improvement.

Sounds good so far but what are the weaknesses of the ISO 9000 series for a nursery business ?

ISO 9000 series weaknesses

- Isn't industry specific
- Designed primarily for manufacturing industry
- Requires detailed record keeping
- Too complex for small businesses

- Expensive to implement and maintain
- Auditors know little about your industry.

So is it a choice between NIASA and ISO 9000? Initially that was the thinking of many people in industry but recent experience has shown the two systems can complement each other very effectively. A number of nurseries have been implementing both NIASA and ISO 9002 with impressive results. Why?

NIASA and ISO - a fruitful marriage

Combines NIASA's:

- Designed for the nursery industry
- Driven by industry.

With ISO 9000 series:

- Involves management & staff
- Excellent record keeping
- Development of 'quality plans'
- Path for continuous improvement

Auditors involved with the ISO 9002 inspections of these businesses have often remarked that NIASA accreditation has made their job easier and left them with more confidence in the business. Obviously this combination isn't going to be for everyone but the clear lesson is that they are not competing systems.

Where to from here?

NIASA has had several years to settle in and sort out some teething problems but it was never meant to sit still. The National Accreditation Committee and NIAA will be looking at ways to make NIASA more effective and to address some of the weaknesses identified. NIASA is Australia's major QM scheme for the Australian nursery industry and will continue to grow.

Businesses may wish to go to the next step of adopting one of the other QM packages for use in conjunction with NIASA. Options include ISO9002, the SQF2000 system originally developed in Western Australia and the Australian Horticultural Corporations "Australian Horticultural Quality - A Training Resource" package. QM offers many benefits to the individual business and the professional image of your industry and I encourage you all to seriously consider its application in your business.

Technology Transfer

Publication of Results from NIAA/HRDC Funded R&D

4.1

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
Research providers were given little direction about how to best assist industry when publishing the results of funded projects.	All research providers are now given a copy of the authors & editors guide to "The Nursery Papers" at the beginning of their projects and instructed to write at least one.	The authors and editors guide was developed by the National NIDO and jointly published by NIAA & HRDC. We also ensure that Chief Investigators get a copy.	I support these comments. Information transfer from researchers is now available to industry in a simpler, more readable form.
Many research providers used their existing publishing and distribution methods, mainly State based. This resulted in differences between states in the availability of information.	"The Nursery Papers" (TNP) are published in the national magazine which is distributed nationally to over 8,000 people around Australia. Their production and publication are funded by an independent NIAA/HRDC project.	NIAA established an independent project to fund "The Nursery Papers". The budget includes paying full colour advertising rates so that NIAA and the National NIDO retain full control over their style and content.	'The Nursery Papers' whet the appetite. Anyone wanting more information is directed to the full report.
Few Chief Investigators understood how to write for an industry audience and their scientific writing style was widely criticised.	The National NIDO determines who should write each TNP and makes frequent use of journalists and extension people to do this job.	The TNP project incorporates a budget for the payment of writers when required. The National NIDO decides who writes TNP.	(following on from above) Down to earth English is needed and now we are getting it.
There was a significant backlog of HRDC Final Reports whose results had not been publicised to the industry at large.	There is now almost no backlog of results. many TNP's are now being written during the progress of projects to get information out as soon as possible.	A plan was developed and implemented to get past projects written up as TNP. However some projects are not appropriate as TNP and others aren't worth publishing !	Many of us (on the R&D Committee) had a real concern in this area which has largely been addressed.
Where the results of R&D were published it often wasn't evident that the work was a result of NIAA/HRDC managed projects.	"The Nursery Papers" are done with a consistent banner and use the NIAA & HRDC logos. Correct acknowledgments are also used.	A graphic artist was paid to develop the template. All TNP are designed by the same artist and the style has been consistent throughout.	So true. Process in place to give credit where due now.

* *Industry comments from Edward Bunker (Bunkers Nurseries, Queensland) long time member of NIAA's R&D Committee.*

Supporting documentation

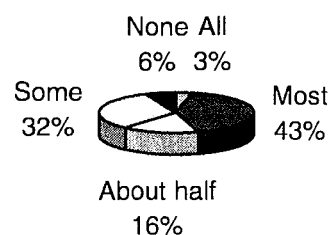
1. Summary of independent evaluation of "The *Nursery Papers*"
2. Index to "The *Nursery Papers*" to June 1998
3. A copy of "The *Nursery Papers* - A guide for authors and editors" 24 page booklet (attached to this report).

Summary of Independent Evaluation of 'The Nursery Papers'

The Nursery Papers **Summary of results of an independent readership review conducted in 1997.**

1. Readership level There was a moderately high level of readership with 61% of respondents reading half or more of TNP and the same proportion finding them useful or very useful.

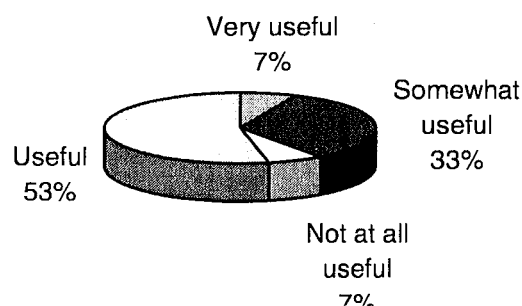
Figure 1 How much of The Nursery Papers do you generally read ?



2. Applicability of information

It appears that ANP are an effective extension tool, with almost half (48%) of respondents having applied information to their businesses in the last 6 months.

Figure 2 How useful have you found the information in the Nursery Papers as far as the practical management of your business is concerned ?



3. Recall of topics

Recall of TNP topics was also good with 40% of respondents nominating at least one title included in TNP in the last 6 months.

4. Kept as reference

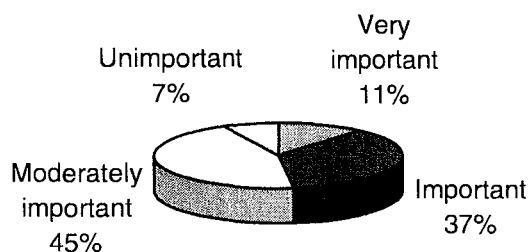
This effectiveness is further underlined by the proportion of respondents keeping TNP for further reference, i.e. 70%. Forty eight per cent rated them an important or very important source of technical information. If the responses for moderately important are added, this becomes 92%.

5. Format and presentation

TNP rated highly with readers for format and presentation. Sixty per cent of readers judged that they were “never” hard to read; 48% believed that they were always “pitched at the correct level”; and 65% judged they were a “good length”.

A high 38 per cent of respondents indicated that the format encouraged them to read TNP, a figure that reflects favourably on the designer. Fifty eight per cent of people said the format had no effect on whether or not they read TNP, indicating that if design changes are being considered they need only be minor ones.

Figure 3 How would you rate The Nursery Papers as a source of technical information ?



Index to 'The Nursery Papers'

- 1996#1 **Let's Do Our Own Research - and make the most sense of it** - This project resulted in the 'DOOR' (Do Our Own Research) manual which has improved the quality and usefulness of research carried out by nursery operators.
- 1996#2 **Plants face the heat on the way to market** - The temperature extremes that plants can be subjected to during transport were capable of severely affecting their quality in the retail nursery.
- 1996#3 **Savings in nursery despatch** - Dispatch costs vary between nurseries and can be reduced significantly to improve your profit margin.
- 1996#4 **Monitoring and managing recycled water quality in nurseries** - Anyone considering recycling or reusing water in the nursery industry can learn valuable lessons from the experiences of others.
- 1996#5 **Using ultra violet radiation and chlorine dioxide to control fungal plant pathogens in water** - Want to know the real effectiveness and costs of killing plant pathogens with these two techniques, puts the use of UV systems under the spotlight.
- 1996#6 **Year round production of Australian daisies as flowering pot plants** - A potential commercial winner for anyone willing to put in the effort.
- 1996#7 **Dynamic Pulse - a new method of propagating difficult cuttings** - A simple new technique worth considering for cutting propagation.
- 1996#8 **Biological control of thrips, mites and other insects** - Provides some background to this important and expanding area of pest management.
- 1996#9 **Reducing nutrient leaching from pots** - Includes world leading research on the ability of potting mixes to absorb water from irrigation and some ideas on reducing fertiliser and production losses.
- 1996#10 **WaterWork is working** - Chris Rolfe won an Award of Merit from NIAA for his work on this project helping nursery operators improve their water management.
- 1996#11 **Improving nitrogen management in wood waste based potting mixes** - Australian potting mixes use a lot of bark and sawdust and these require better than average fertiliser management to get the best results.
- 1996#12 **Controlling downy mildew in nursery seedlings** - One major seedling grower saved over \$20,000 in one year as a result of the work done in this project.
- 1996#13 **Rid seeds of disease - give them a sauna** - Many seed propagated lines will have better strike and survival rates through the application of this technique.
- 1997#1 **Benchmark study highlights labour and management shortfalls** - Interested in how Australian industries costs of production compare to those in the USA? Here is a good starting point.

- 1997#2 **Testing your potting media is being kind to your wallet** - Kevin Handreck isn't called 'Mr Potting Mix' for no reason and in this paper he describes the methods and benefits of testing your media.
- 1997#3 **Chasing consistent disease suppression in potting media** - Reductions in the use of fungicides can result from better media.
- 1997#4 **Increasing efficiency in nursery dispatch** - More outcomes of a major project aimed at reducing the cost of dispatch.
- 1997#5 **A step-wise program for practising IPM** - Integrated Pest Management isn't that hard to do and you may already be part way there so check out the process.
- 1997#6 **Controlling Botrytis (grey mould) in nurseries** - At least one major fungicide registered for the control of grey mould is worse than useless, so what are your best options?
- 1997#7 **Keeping pests out with screening** - If you weren't interested in insect screening before then the spread of Western Flower Thrips and Silverleaf Whitefly should've increased your interest !
- 1997#8 **Water disinfestation ? Chloro-bromination and ozone systems get the thumbs up!** - Two serious options for controlling plant diseases in water, one of which is also quite cheap to install and use.
- 1997#9 **Silverleaf Whitefly: management of a new nursery pest** - We are yet to see the full impact of this dreadful new pest and so these simple, practical steps are best acted on now !
- 1997#10 **New hygiene protocols will reduce disease and save on control costs!** - Never discount the real benefits of good hygiene and don't assume you are using the best methods for cleaning and disinfecting without a look at this.
- 1997#11 **Grubs in your pots? Are they weevils and what can you do about it?** - Operators in the more temperate regions of Australia will no doubt be familiar with grub pests but can you identify them and the best controls?
- 1997#12 **Managing Western Flower Thrips** - Another unwelcome addition from overseas this one not only causes damage by feeding on your plants but spreads virus infections and is resistant to most chemicals.
- 1998#1 **Garden Centres - make better business decisions with better information** - Point of sale, barcodes, computers, scanners and spreadsheets are all new tools that can help you make better decisions but where to start?
- 1998#2 **Getting control of weevil borers and leaf beetles in palms** - Whether you grow or sell palms we all need to keep a lookout for this potentially devastating pests and know how to manage them.
- 1998#3 **Tools to help with decisions on capital expenditure** - Thinking about building a new glasshouse or some other major capital expense, how best to finance it and will it be worth it? this paper can help.

- 1998#4 **Accreditation for business success** - The national accreditation scheme for growers and media manufacturers is the most successful industry run quality scheme in Australian horticulture and offers significant benefits.
- 1998#5 **Are trace elements a waste of money?** - It's not really a question to be answered that simply, read why.

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
Only two states, Victoria and WA, had state based NIDOs.	There are now five State based (VC funded) NIDOs .	State NIAs have seen the benefits and with national help set up NIDO	Industry has requested NIDO approach to its unique problems for the past 20 years. Now we have it, and it has been very successful in a short space of time.
There were no formal or even informal linkages between State positions.	NIDOs meet at least annually and are in regular contact with the National NIDO and each other.	This has become a key task allocated to the National NIDO. The NIDOs as professionals recognise the need.	The links between all NIDOs is well documented and they are working together well and industry is the beneficiary.
Links between State NIDO positions (VC funded) and the national R&D plan were limited.	Gradually the NIDO projects have become better aligned with the national R&D plan.	Key task allocated to the National NIDO by NIAA. HRDC has required State projects to conform.	Planning, implementation, conferring and publishing results well pleasing to all sections of industry.
NIAA's R&D Committee had no means of ensuring that national (levy) funded projects had some 'local input' to ensure they were appropriate and things got done 'on the ground'.	The R&D committee and Chief Investigators more regularly consult with the NIDOs. Where appropriate this leads to more hands on involvement in national projects by the NIDOs.	Partly a result of the closer links between state NIDO projects and the national R&D plan. The State NIA's see clear benefits of closer cooperation with levy funded projects.	Most pleasing to all State and national R&D committees is that their comments and requests are listened to and action results. So truly grass roots industry decision.
There were no common policies on issues such as professional indemnity insurance and reporting arrangements.	Many issues have been discussed and formalised into policy. Examples include insurance and unified milestone reporting.	Joint annual meetings of the NIDOs and reps from their NIAs have identified and resolved many issues.	Getting together in a formalised meeting brings to the front many needs and policy issues which are all documented and acted upon.

* *Industry comments from Ralph Groves, Baileys Fertilisers NSW, member of National NIDO Management Committee.*

Supporting documentation

1. Minutes of "Nursery Industry Development Meeting Hobart, Wednesday February 25th 1998"
2. Draft of TNP on the IDO Network, by Noelle Weatherly.

Nursery Industry Development Meeting

Wrest Point Casino-Hotel Conference Centre - 2 pm Wednesday February 25th 1998

1. Attendance

<i>NIDO</i>	<i>Industry rep</i>	<i>from</i>
■ John McDonald	Barry Naylor	QNIA
■ Richard Stephens	Scott Tallis	NIAN
■ Hans Kosmer	-	NIIV
■ Anne Frodsham	Graham Dellow	NLIASA
■ Sandy Pate	-	NIAWA
■ Ian Atkinson	Ralph Groves (chair)	NIAA

2. Apologies and introductions

Apologies from David Mathews (NIIV) and Greg Baldock (NIAWA).

3. Business arising from Sydney meeting

- 3.1 Formal meetings - endorsed.
- 3.2 Quarterly reporting- endorsed.
- 3.3 Relationship with national R&D plan - agreed that all NIDOs to ensure their projects link in with the national plan.
- 3.4 HRDC applications (inc Milestones) - Ian to write to HRDC suggesting that they produce a clearer set of guidelines.
- 3.5 IDO's review - all NIDO's will be offered the opportunity to participate in the review, expect contact soon. (note: this has actually happened as of 2nd April).
- 3.6 Surveys of R&D priorities - Ian has copies of NIAN survey conducted at their state conference and John will provide copies of QNIA survey when possible.
- 3.7 Skills & NIDO training - Ian collating information on NIDO skills, not everyone has responded. Copies of information about extension training were distributed to NIDOs by Ian.
- 3.8 Financial Benchmarking Project - The workshop in Queensland was very well received and 76 people attended. In NSW there were two workshops, both well attended (56 and 24) and the response was enthusiastic. In Victoria one workshop was held and was attended by 30 people with positive feedback. Preliminary results released at conference. More regional workshops are planned in the current project and Ian is to discuss format with FMRC. State NIDOs to assist with organisation.
- 3.9 NESA project - Full audit as carried out by Bob Smith in testing unlikely to be widely used as it was seen as too demanding.

4. NIASA accreditation matters

- 4.1 Grower Information brochure / 'Nursery Paper' - Richard and John have been collaborating on the production of a brochure based on the QNIA model to inform growers about the benefits of joining NIASA. Ian offered to produce it as one of "The Nursery Papers" as this would save significantly on costs. Everyone agreed to assist

with photo's, quotes and comment in order to ensure a national brochure. Deadlines were set and Ian would get back to NIDOs about cost of additional copies as current budget was only for 500 extra copies of each TNP.

- 4.2 NIASA Column in ANM - Ian asked if this was useful and what sort of material should be covered. Agreed that it should be done but try to have more 'case examples' and practical information from the front line ie TO's.
- 4.3 Articles for specialist magazines - Everyone was urged to write articles for their local industry media, in particular media aimed at our major customers. As examples Richard provided copies of articles he has written for NSW Landscape Contractors magazine and NSW Landcare newsletter. Ian will coordinate and were appropriate write articles for national magazines such as 'Good Fruit & Vegetable News'.
- 4.4 Introduction to NIASA training package - Richard is working with Greg McPhee and Ian to develop a draft national training package aimed at staff.

5. Retail accreditation, new project

At this point Richard DeVos and Karin (deep voice) Richards were introduced to the meeting. They are conducting the NIAA/HRDC project to develop the basis and framework for a National Retail Accreditation Program. They emphasised that there were no fixed ideas about how this should operate. Rather they were engaged to look at all possible options and to ensure that everyone had an input into it's development including state associations, GCA, retail groups and so on. They ran a short workshop with the group to get some input and guidance for the group. It will not be reported in detail here but suffice to say the response to the project was positive and they were very happy with some of the background and contacts offered.

6. Training update with Greg McPhee

Greg spoke to the group about his project and it's progress. In particular he spoke about two new national training packages which will be available soon. These are on Nursery Dispatch Systems, based on the work done by Voytek and others, and Do Our Own Research, based on the DOOR project but specifically aimed at nursery operators. All the states were urged to take advantage of Greg's project to enhance training.

7. Workshops available over next 12 months?

Information was exchanged by the NIDOs about what workshops they had planned or were wanting to do over the next 12 months. Concerns were expressed over duplication and lack of uniformity in courses about IPM, IPDM, P&D ID etc. As a result Hans is to ask IHD Knoxfield to ensure that their course is aligned with the nationally funded 'IPM in protected cropping' project currently under way with Stephen Goodwin.

8. Other business

Unfortunately there was no time left to discuss the following issues in any detail but Ian offered to provide sources of information relevant.

What other resources are needed and available to NIDOs? Establishment of networks or groups on specific issues? Methodologies for effective technology transfer & adoption. Evaluation of workshops and other TT efforts.

The IDO Network

a draft TNP

The national approach to industry development that works for you

The nursery industry and industries allied to it, like most modern enterprises, can no longer rely on the simple processes of a bygone era if they are to survive and remain profitable in the future. Technical and scientific advances have forever changed the face of these industries and will continue to do so well into the next millennium.

The major problem facing R&D institutions, however, is how to pass on the results of their endeavours to industry - a dilemma not unique to the horticultural industry. Many peak industry bodies have met the challenge head-on by establishing organisations like the Horticultural Research and Development Corporation (HRDC) to co-ordinate projects and publish findings in scientific or trade journals such as *The Nursery Papers*.

However, publishing results and having them adopted are two quite separate issues. Many horticultural businesses actively pursue information and adapt it to their own circumstances, but not all operators have the time or necessary skills to embrace new ideas without assistance. Acknowledging this difficulty some years ago, the HRDC approved funding for the employment on a project by project basis of Industry Development Officers (IDOs) within the nursery sector. These grants, specifically for industry development, have been enhanced by funds from the State associations and the Nursery Industry Association of Australia (NIAA) - the IDO network is the result.

National network

The network now covers Australia from coast to coast. Sandy Pate in Western Australia and his east coast colleagues - Anne Frodsham (South Australia), John McDonald (Queensland), Richard Stephens (New South Wales) and Greg King and Alan Hollensen (Victoria), together with National Industry Development Manager Ian Atkinson, form a strong association which meets and interacts regularly.

While their primary role is to ensure technology transfer - that is, to pass on new technologies that will enhance performance and profitability - the scope has been broadened and now encompasses almost every aspect of professional and industry development.

In this age where acronyms like 'TQM' and 'QA' roll freely off the tongue, governments and 'big' business are increasingly insistent that industries and individual businesses with whom they deal have reached a pre-determined level of quality assurance - a published Standard or recognised accreditation scheme.

The introduction of the Nursery Industry Accreditation Scheme, Australia (NIASA) is, at this stage, the most important tool the IDOs have to work with in the field of overall industry development. NIASA ensures that this industry is able to deliver a consistent level of quality nationally and it's rapidly gaining recognition in the wider business community.

Apart from the dissemination of information, the IDOs also undertake:

- the organisation and conduct of learning/training programs ranging from chemical handling, water recycling, efficient water usage, safe work practices, potting media safety and merchandising to retail improvement;

- the provision of advice and assistance to businesses working towards accreditation under NIASA; and
- the liaison with other agencies, committees and associations on issues of mutual benefit and interest to the nursery industry.

National Industry Development Manager

Ian Atkinson was appointed National Industry Development Officer in 1996 with the prime objective of addressing the issue of technology transfer, and this he has achieved through workshop sessions at National and State industry conferences, State-wide and regional training workshops and seminars, the NIAA publications (in particular The Nursery Papers), developing a NIAA web site on the Internet, formalising and publishing the NIASA Guidelines and a host of other initiatives.

He has contributed extensively to changing the industry's approach to and outlook on many issues which affect its future viability.

Based in Canberra where he can observe and take part in national issues, Ian plays a pivotal co-ordination role in the IDO network. He maintains close contact with State-appointed IDOs and is always available for advice and assistance.

"The nursery industry is becoming increasingly more national, with many businesses now frequently trading across State borders. The IDO network provides the means by which commercial and retail customers Australia-wide can be assured of a consistent level of quality and professionalism.

"One of the tasks of the National Industry Development Manager (IDM) is to ensure that each State IDO is undertaking a role consistent with accepted standards such as the NIASA Guidelines. Commercial organisations operating on a national level can then be assured that nursery products they purchase will be of a consistent standard regardless of where they are sourced.

"Ian is also the principle contact point for opportunities which may be passed on to the appropriate State IDO for action. It's important when dealing with Federal government bodies and agencies to have a national focus of effort and to speak with one voice.

"The national IDM also has the formal role of reporting back to the HRDC on its \$400,000 annual investment in the IDO program. The coordination and efficient operation of the network requires a level of management only achievable nationally and Ian fulfils that role well."

- Jolyon Burnett, Chief Executive Officer, Nursery Industry Association of Australia, Sydney

New South Wales

Richard Stephens was appointed by NIAN in August 1997.

"The challenge facing me at that time was to dispel the misconception that accreditation was only feasible for profitable businesses with money to spend or for those new to the industry who could set up in accordance with the NIASA Guidelines.

"While NIASA had in-principle support from most members, some lingering vestiges of the unfortunate State v National ill-feeling had to be overcome. I'm pleased to say that, today, NIASA and other programs we've initiated are now readily accepted," Richard said.

There has been a three-fold increase in the number of NSW businesses to have achieved NIASA accreditation this year, and many more are currently working towards it.

"It's important for businesses to keep up with changes - to 'learn how to learn better' - and NIASA embraces this concept. It's important to create and improve the culture of learning in the nursery industry, and accreditation is just the first step in an ongoing process" he said.

"NIASA provides a goal that, when achieved, leads to greater professionalism where everyone from management down is proud of the standards attained and the part each has played in achieving them," he added.

"Through the help of the Industry Development Officer (IDO), we have been able to gain NIASA accreditation. This has resulted in our working closer together, being more aware of quality and cleanliness and, most importantly, they have more pride in what they do."

"Our production manager, Geoffrey, attended an Integrated Pest and Disease Management course organised by the IDO. He now takes greater pride in what he does; we talk more about how to run the nursery and we learn from each other."

- Roger Martin, Plantland Nursery, Nowra, NSW.

"The nursery industry has to come to grips with the fact that it is a highly skilled profession and the IDOs are a very important part of realising and achieving this."

- Michael Gleeson, Castle-Lyn Nursery, Dural, NSW.

"NIASA accreditation, and all that is involved in achieving it, has resulted in us using less resources with a more profitable result. Our nursery is now cost-efficient and we have the added benefits of increased production as well as a very pleasant working environment. Staff morale has also been given a tremendous boost."

- Val Bombardiere, Avondale Nurseries Pty Ltd, Glenorie, NSW.

Queensland

John McDonald has just completed his second year as IDO and has faced many challenges in the position, one of which is the enormous territory he has to cover.

"We have production nurseries stretching from the Daintree in the north to the Tweed River on the New South Wales border, and that involves a lot of travelling!

"However, I've found it rewarding and have been gratified by the acceptance shown by the entire industry - it's really made my job a lot easier.

"The role of an IDO is extremely diverse - it involves a multitude of tasks and it takes some time to come to terms with all that is expected and involved. The sheer weight of issues was initially daunting but it's becoming easier as I settle in and become known within the industry," John said.

"Technology transfer is the principle focus of my activities - determining what is real and pertinent to industry development. I also see NIASA as the most important tool to promote industry 'Best Practice' and I'm working steadily towards seeing more businesses attain that quality standard."

South Australia

Anne Frodsham is currently the only part-time IDO - the South Australian industry association / HRDC funding provides for a three-day working week. She will also be providing assistance to the Northern Territory industry.

"The IDO appointment has presented me with many challenges, not the least of which has been juggling the many commitments associated with an IDO position within the time available. It really is a multi-faceted position," Anne said.

"However, after two years of working with South Australian nurseries and businesses in a one-on-one capacity, probably the most rewarding aspect has been the considerable upsurge in interest within the industry in:

- moving down the NIASA path; and
- attending workshops and training sessions.

"The success of our inaugural Annual Industry Technical Conference in July highlights this point," she added.

"The South Australian IDO has been a tremendous source of technical expertise for our business and we've gained a great deal from participation in courses and workshops she's organised. We're currently going down the quality pathway and have been greatly encouraged by the IDO - her support on a one-to-one basis has been invaluable."

- Trevor Martin, Salisbury Nursery Pty Ltd, Salisbury, SA.

"Since the introduction of an IDO in South Australia, we have seen regular technical workshops which have dealt with a wide range of topics relevant to our industry."

- Nick Smart, Smarts Nurseries, Brooklyn Park, SA.

Victoria

Victoria was the first State to appoint an Industry Development Officer in 1995. Hans Kosmer's contract has now expired and in another industry-first, Victoria recently appointed two IDOs to build on the projects initiated in the preceding three years.

Alan Hollensen, working part-time has been given the specific role of retail sector development, including the setting up of a retail accreditation or improvement scheme, while Greg King works full time on the production side of the industry.

Alan and Greg are still finding their way, having only been appointed last August. However, both have already been well received by industry members throughout the State and are confident of quickly settling in to their respective positions.

Since the adoption of NIASA, there has been a marked increase in the number of accredited business, due in no small way to the dedication of Hans who was also instrumental in initiating

many training programs, information seminars and visits which have been well supported by industry members.

"The IDOs assist the nursery industry to develop and maintain high standards at all levels of operation. In our business, this has resulted in better quality plants produced under the most hygienic conditions possible.

"Improving standards is extremely importance and the IDOs provide us with the information and tools we, as an industry, need to achieve this.

"The industry in general, and specifically our business, has benefited from the open exchange of information between nursery operators that has occurred at workshops and training sessions organised by the IDO."

- Robin Lang, Scoble's Nursery Pty Ltd, Heatherton, Victoria.

Western Australia

Sandy Pate is currently Australia's longest serving IDO.

"At the time of my appointment in 1996, I was only the second Nursery IDO and fourteenth IDO in Australia across all horticultural industries. The greatest challenge I faced therefore was to overcome the suspicion or 'fear of the unknown' in relation to the IDO position.

"My nursery background involved running a mine rehabilitation plant nursery and later I was manager of Australian Flower Farms at Coorow - at that time the largest 'open field' flower farm in Australia," Sandy said. "Two months into the job, I sent out a survey in NIAWA's 'Nursery News', titled 'are there any problems out there?' I listed twenty possible areas in which I could provide assistance. Only one reply, with facetious answers, was forthcoming! Many people told me that they had intended to reply, but 'never got around to it'.

"It has required considerable persistence to make progress as an Industry Development Officer. I consider that widespread acceptance of my commitment to the nursery industry is probably the greatest reward of the position. This is manifested by the amount and type of questions and inquiries that I receive on a daily basis," he explained.

"The nursery industry is a complex and highly technical industry with a very high reliance on the labor force in most cases. I have skills in many areas, but of course not all of these required. One of my roles is that of a catalyst, ie. speeding up a reaction without taking a major part.

"My current IDO project finishes in March 1999. The NIAWA Board has consented to my request of a further extension of three years - I have still much unfinished business in the nursery industry!", he concluded.

"For the first time, NIAWA has an annual program of seminars and workshops. Notification is circulated on a yearly planner to all members and we can plan around them accordingly."

- Michael Reidy-Crofts, Azalea Gardens Nursery, WA

"We feel one of the most valuable assets of our IDO has been his attendance at other horticultural industry field days, associated workshops and allied trade meetings, which has enabled him to provide us with valuable information as to how to co-ordinate structured programs for our members and this industry generally."

- Members of the Board, Nursery Industry Association of Western Australia.

"The provision of an IDO for the nursery industry in WA has provided educational institutions like ours with a better link and understanding of what is needed to achieve well trained and worthwhile employees for companies who might employ our students in the future. It also gives us a direct point of call and instant feedback."

- Christine Cooper, Principal Lecturer, South Metropolitan TAFE, Murdoch, WA.

"Our State is very large - one of the greatest benefits to this industry of an IDO is that he is able to keep in touch with nurseries in country areas."

- Jeff Dorrington, The Rare Tree Company, Mt Helena, WA

The bottom line

The national IDO network, while working on a day-to-day basis with individual businesses within the nursery industry, has as its focus the development of the industry as a whole. Using tools like NIASA, WaterWork workshops and similar training and information programs, the Industry Development Officers are actively promoting the introduction of new principles and technologies to guide the industry profitably and efficiently into the new millennium. Their objective, however, can only be met when they are whole-heartedly supported by the members of the industry - that means you!

Acknowledgments:

The author (Noelle Weatherley) thanks the IDOs and individual nursery operators who generously gave of their time to provide information for this article.

Further Information

State and National Nursery Industry Associations.

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Conferences, Workshops and the World Wide Web

4.3

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
Technology transfer at NIAA's Annual Conferences was something of an 'add on' which had no consistency year to year or post conference evaluation.	Technology transfer forms a major component of annual conferences. Post conference evaluation is used to improve subsequent events and the overall TT effort is more consistent.	National NIDO is a permanent member of annual conference committee and develops the application to HRDC for TT. Also conducts post conference evaluation.	TT has enabled nurserymen and allied trades to make considerable gains in productivity and work towards meeting environmental requisites.
Workshop packages were produced by individual state based people and not designed for national use. This often meant duplication of effort and variable quality.	Packages still developed by states but there is a much higher level of communication and cooperation across borders. Duplication is less common and quality has improved.	NIDO Network, and more recently the National Training Officer, have all actively worked on improving workshop packages available to industry.	Nursery people, practical by nature and necessity respond to workshops rather than 'reading'.
Only NSW organised a State conference to provide information to industry. Industry surveys indicated conferences as a valued source of information.	Four states now run annual or bi-annual conferences with significant TT components. Outcomes of national (levy) funded projects are commonly sought for these events.	State NIDOs have been instrumental in most state conferences. State NIAs have been actively encouraged by National NIDO to run effective conferences.	The introduction of the National NIDO to conference committee combined with HRDC funds has produced excellent programmes rather than piecemeal TT.
Industry only had limited 'out of hours' access to information about national R&D projects.	The full NIAA R&D Plan and copies of "The Nursery Papers" are available to all at www.niaa.org.au	The National NIDO ran a NIAA/HRDC project to establish the site. TNP's added when available	One benefit is that the next generation are utilizing the web when studying and NIAA's is leading by example.

* *Industry comments from Geoff Richards (Richgro, WA) immediate past president of the NIA of WA.*

Supporting documentation

1. Post conference evaluation summary of 1998 NIAA Conference
2. Copy of program from 1998 NIA of WA state conference.

Post Conference Evaluation, NIAA '98 Hobart

To date we have received 69 responses from people who went to the Hobart conference. The biggest group is growers with 31 responses, followed by allied & other with 24 responses and lastly just 14 responses from retailers. It is very clear that the less formal sessions (concurrent and marketplace) were successful and in fact many people would like to see more in place of the bigger sessions.

1. Combined responses

	too little	ok	too much
Formal Sessions - eg Keynote speakers	2	50	17
Informal Sessions - eg marketplace	29	38	2
Informal chat - eg morning tea	11	55	3
Social functions	none	61	8

2. **Length of conference** - No one thought it was too short, 60 thought it was OK and only 9 thought it was too long.

3. **Specific comments on Hobart and for Melbourne** - People were asked for "Any comments on this or next years conference?"

3.1 Retailers said:

- Timing of speakers was spot on
- Some of the marketplace sessions could've been longer
- Prefer Perth format with separate GCA program
- Start at 9am
- Well done overall but use less 'funny' speakers
- Congratulations to the organisers, very professionally run
- More retail, it's the heart of industry.

3.2 Growers said:

- Marketplace was great, smaller groups work well
- More time on nursery tours
- More on technical / HRDC projects
- More concurrent sessions
- Good location, excellent social functions
- More grower orientated speakers and more tours
- Need to have more stuff that is useful today
- Pre & post conferences needed, some technical?
- More marketplace, more nurserymen as speakers
- Post conference tour to Huon was a ripoff
- Keynote speakers after morning tea please

- Lollies for sore throats and more choices for non alcohol drinkers
- Could be run in 3 days
- Use formal guides during nursery tours
- Partners should get full rego at less cost
- Lots of visits to Vic's best nurseries
- Night or day sightseeing tour
- More industry relevant key speakers, keep marketplace
- Have proceedings available at start of conference
- BPA/HPA meetings at beginning of conference.

3.3 Allied traders and others said:

- Don't make Melbourne too glitzy
- Workshops on water issues please
- More relevant nursery speakers for keynote
- Excellent conference, perhaps use shorter days
- Workshops were the highlight but too rushed
- Send ladies shopping in Melbourne
- Workshops very beneficial and kept a buzz at conference
- Make Hort. Media sessions longer
- Better quality keynote speakers needed
- Prefer more 'heavy weight' speakers, less funny ones
- Longer workshops would be better
- More audience participation needed
- Not much bite at Conference, no controversy
- Very well run conference
- More technical info and interactive group workshops
- Offer separate growers and retailers program
- Have poster session or more tech sessions
- Well balanced program, needs better marketing
- HMA sessions longer and not broken in two.

1998 Program of NIA of WA State Conference

Wednesday, 2nd September 1998

8.00am	REGISTRATIONS
8.45am	Keynote Speaker (<i>Valerie Davies</i>)
9.30am	What Does it Cost to Run a Garden Centre? (<i>Paul Watkins</i>)
10.30am	MORNING TEA
11.00am	The Value of Overseas and Interstate Trips - Reading the Trends and Keeping Up (<i>Steve Wood</i>)
11.20am	National Marketing Strategies (<i>Geoff Richards</i>)
11.45am	Current Market Trends and Future Opportunities (<i>John Stanley</i>)
12.30pm	LUNCH
1.30pm	Visual Merchandising - Colourful Displays to Sell More Plant Material (<i>Aly May</i>)
2.15pm	The GST and How it Will Impact on the Industry (<i>Graham Ruthven</i>)
3.00pm	AFTERNOON TEA
3.30pm	Where is Your Pot Levy Going? (<i>Libby Abraham - HRDC</i>)
4.00pm	ANNUAL GENERAL MEETING
5.00pm	Conclusion of Conference Proceedings
7.00pm	ANNUAL DINNER - INDUSTRY AWARDS with Entertainer, Steve Armstrong and Live Band, "Count Me In".

Thursday, 3rd September 1998

8.00am	REGISTRATIONS
8.30am	Sex Sells (<i>Michael Brophy</i>)
9.30am	Increasing Your Bottom Line - Is it a Hurdle or a Highjump? (<i>Clive Larkman</i>)
10.00am	MORNING TEA
10.30am	Change or Perish (<i>Eva Maria Herb and Chris Godwin</i>)
11.15am	Are You a Business Manager or an Environmental Manager? <i>Do you need to be both?</i> (<i>Ian Atkinson</i>)
11.45am	Keeping Out of Trouble - Your Worksafe Responsibilities (<i>Anne Bellamy</i>)
12.15pm	LUNCH and TRADESHOW
1.30pm	The Holistic Approach - What does the public expect from a good Garden Centre and what does the Retailer expect from the Grower? (<i>Verity James, Sandy Pate & Ian Atkinson</i>)
2.00pm	Potting Media (<i>Greg McPhee</i>)
2.30pm	AFTERNOON TEA
3.00pm	Systems Technology Versus Paper - Supplier linking in with grower systems and ordering, receiving, cost updates, payments direct into accounts. (<i>Peter Coole</i>)
3.45pm	The Untapped Resources of WA Flora (<i>Mark Webb</i>)
4.15pm	Keynote Speaker (<i>Jon Doust</i>)
5.30pm	Conclusion of Conference Proceedings

R&D Management

Industry / NIAA Involvement

5.1

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
NIAA's R&D Committee was made up entirely of volunteers, all with limited time. This was an impediment to industry input in the management of the NIAA/HRDC program. Particularly in regard to issues such as commissioning and assisting HRDC with 'problem' projects.	The National NIDO position has evolved to include a major component of 'providing industry input into the management of R&D projects'. As a salaried employee the National NIDO is able to devote significant time to this task.	NIAA's R&D Committee includes the National NIDO as a permanent member. Close liaison with industry representatives, HRDC Program Managers and project Chief Investigators ensures better communication.	This involvement has ensured that the national NIDO brings to the R&D Committee first hand knowledge of projects as well as the R&D needs of the industry at large.
Researchers had little if any access to someone who could provide comment on project proposals from the national industry perspective.	Chief Investigators are encouraged to discuss all new project proposals with the National NIDO.	Both NIAA and HRDC have stressed the importance of improving industry consultation prior to project submission.	Coupled with the 5 year plan this initiative ensures that researchers are focussed on meeting industries needs.
NIAA had a very small office staff (three people) and this limited NIAA's participation in joint management of the R&D program.	NIAA's extended office includes the National NIDO and the National Training Officer. NIAA is better able to meet industries needs.	Employment of the National NIDO within the structure of NIAA ensures that the focus of the position is on industry outcomes.	The national NIDO position has been an excellent vehicle for communication with industry on R&D matters. A host of commercial needs and issues have also been addressed.

* *Industry comment from David Cliffe (Narromine Transplants NSW), Chairman NIAA R&D Committee.*

Technology Transfer Component of National (Levy) Funded Projects

5.2

Before National NIDO	After National NIDO	How was this done?	Comments from industry*
Most NIAA/HRDC projects were undertaken by Research Scientists in State departments and had either no TT component or it was a poor after thought.	Many projects now have TT as their primary focus eg The Nursery Papers and NIDO projects. Many others have substantial TT components aimed at achieving outcomes.	TT is one of six key areas identified in the current NIAA R&D plan. NIAA and the National NIDO have been closely involved in the development of project applications.	The Nursery Papers, NIAA web site, Roadshows, WaterWorks etc. have been excellent examples of successful NIDO initiated TT projects.
TT was often seen as the last stage in three year projects rather than an integral part of the process.	Most projects now include a continuum of research and TT during the life of the project.	Joint efforts of the NIAA R&D Committee, National NIDO and HRDC Program Manager.	TT must be an on-going process if we are to maximise adoption of funded projects outcomes.
Most projects were undertaken in one state with the results to be extended later. Consequently industry in the host State often received the most benefit.	Multiple state/agency projects are more common. Research providers must demonstrate how the results of projects will be available to the total industry.	Joint efforts of the NIAA R&D Committee, National NIDO and HRDC Program Manager.	NIAA thinks nationally and this attitude is critical to ensuring as many businesses as possible are exposed to the benefits of levy funded R&D.

* *Industry comment from David Cliffe (Narromine Transplants NSW) Chairman NIAA R&D Committee and President of NIAA.*

Supporting documentation

1. Proposal brief to Queensland Horticultural Institute, "Optimum work methods in the nursery potting process" 1998.

Optimum Work Methods in the Nursery Potting Process

NY98031 - Proposal Brief To Queensland Horticultural Institute, 1998

Background

The issue of labour efficiencies is a significant concern to the nursery industry and has led to much discussion over the past few years in terms of what can be done to increase nursery production efficiencies and minimise labour costs. This is a very broad issue and to comprehensively address all areas of labour efficiencies in production nurseries is well beyond the resources of the Industry.

To identify the research priorities in work efficiencies in order to determine the direction and nature of this project, the Nursery R&D Committee encouraged Qld DPI at Redlands to conduct a mail survey. Based on preliminary results from the survey it has been identified that research priorities in work efficiencies are, in declining order; growing on, propagation, dispatch, administration, and other. The split of priorities under the heading 'growing on' are; preparation, potting, placement, plant maintenance, organising, area maintenance, irrigation, and other.

On 4th June a workshop was held involving members of the Nursery R&D Committee, nursery industry representatives, research providers, nursery IDs and HRDC to discuss the development of the project specifically in the areas of the propagation process and the potting process. Both were examined closely but when the groups began discussing the propagation process there was significant differences of opinions about where this began and finished. It was concluded that there were far more potential gains to be made in the potting process initially.

It was felt that at least some of the results of work to improve potting processes would be applicable to propagation. A unanimous decision was made to concentrate the workshop and subsequent project on potting up from propagation container to first saleable size container.

Aim

- To identify and recommend methods for improvements in nursery labour efficiencies in the area of potting up from propagation container to first saleable size container.

Project outline

Stage One: project development

The first stage involved in the project development will be the confirmation and briefing of the other team members along with the cooperating nurseries. The manufacturers of potting machines (Javo, Comet and Flat Fillers) also are to be contacted to obtain information on optimum methods for use of their particular machines and other useful information such as benchmarks for output etc. The manufacturers may also be requested to contribute to the project with potting machines and/or financial contributions (I will be available to assist if necessary). This stage will involve the development and writing of the proposal, and submission to HRDC. HRDC will then review the application and once accepted the first payment will be made.

Selection details of nurseries to be involved:

10 nursery cooperators needed per state involving Qld, NSW and Victoria.

1. Selection criteria should include:

- willingness to share and compare
- majority of stock/sales 100 mm to 200 mm sized pots
- track record of recording information.

2. Mix of staff numbers in cooperating nurseries

Number of staff (including owners)	% wanted in cooperator group
3-5 staff	40%
6-15 staff	40%
over 15 staff	20%

3. Group selection

It is preferable for the project cooperators to work in groups using action research principles rather than as individual scattered businesses. The workshop participants decided to work with existing industry groups where possible to simplify the process. The groups nominated and suggested coordinators are:

State	Group/Region	Organiser(s)
Qld	South East Qld and Northern NSW	Keith Bodman and John McDonald
NSW	NIAN's Tree and Shrub Group	Jeremy Badgery-Parker and Richard Stephens
Vic	NIAV's Tree and Shrub Group	Victorian IDO

In the case of Victoria, the IDO position is presently vacant for 1998/99 but Stuart Holland, the Executive Director of the Nursery Industry Association of Victoria has committed the involvement of the new IDO to the project. However, the involvement of Agriculture Victoria in the project is still uncertain. The situation at the Institute for Horticultural Development is expected to be resolved within a month, but in the interim the proposal should be written and budget provision made for the the services of a private consultant if Agriculture Victoria are not able to be part of the research team. If a private consultant is required I am available can assist.

4. Mix of potting methods used by participating nurseries

4.1 hand potting

- standard bench
- Modified bench (including Hopper).

4.2 machines

Javo Comet Flat fillers.

Stage 2: development of data collection methods and testing of methods

In the workshop it was identified that there are a number of methods of data collection. The following are a number of options available:

Video, Timed, Survey, Data collection system.

The research team should determine which methods are the most appropriate for the project. The methods then need to be tested on cooperating nurseries.

Stage 3: collection of data

1. Who should collect the data?

The workshop identified the following as options for the collection of the data:

- Cooperating nurseries
- State department staff
- NIDOs
- Students.

The research team should negotiate and determine the most appropriate collectors.

2. The collection process

The workshop identified the following efficiency measures being vital in the collection of data, along with suggestions of who should collect it:

Team Member (T) or Nursery (N)	Efficiency Measure
T	Set up time for potting ie. shed and rollers
N or T	Management planning
T	Number of people involved in potting
T	Output/hour for one (1) potting event
T	Pot sizes
T	Clean up function
T	Recording and labelling
T	type of plants (pottability)
N or T	Potting event (considering seasonality, and capital and depreciation)
N or T	Ability to do other functions simultaneously, ie staking, fertiliser, take off, dispense pots etc

Stage 4: evaluation of the data collected

The data collection team will also analyse the information collected and make recommendations to be actioned in Stage 5.

Stage 5: Recommendations for improvements and testing

Recommendations tested in cooperating nurseries as per evaluation and recommendations made in Stage 4.

Stage 6: Re-evaluate findings and final recommendations made

The data collection team will analyse the data collected in Stage 5 and make final recommendations for reporting.

Getting the results out to industry

1. Targets in order of priority

1. Production Managers
2. Managers/Owners
3. Consultants /IDO's/Advisers
4. Engineering/Allied businesses

2. Getting project information and findings out to industry

Vehicles	Starting in
Project group meetings	Year 1
Print media - The Nursery Papers, Trade magazines	Year 1
Conferences/Field Days	Year 2
Workshop packages	Year 2

The workshop development team will be responsible for the development and delivery of the technology transfer strategy.

Research Team

The workshop fully endorsed the following team:

Leader	Keith Bodman
Engineering (machinery)	Voytek Radajewski
Economist	to be appointed
Coordinators for data collection	Qld - John McDonald and Keith Bodman NSW - Jeremy Badgery-Parker and Richard Stephens Victoria - NIDO (to be appointed)
Workshop development	Greg McPhee, Keith Bodman, Richard Stephens
Workplace, design (labour/human)	Voytek Radajewski

Timeline

Activity	Estimated Time
1. Proposal development	1-2 months
■ Development of project team	
■ Research team develops proposal	
■ Acceptance of proposal by HRDC/NIAA	
2. Data collection methods	1 month
■ Development of methods	1 month
■ Testing of methods	
3. Collection of data	3 months
4. Evaluation of data	2 months
5. Recommendations for improvement and testing	
6. Re-evaluate data and final reporting	10-12 months
Total	2 years

Other requirements - In developing the proposal it is necessary that all members of the project team are either, involved in the process, or have the opportunity to review the proposal before submission to HRDC.

Other references - Notes from the optimum work methods meeting on 4th June for details about the potting process, potting operation and measures of efficiency.

Reporting details to HRDC

- Biyearly milestone reports.
- Final Report three months after completion of project.
- Both of these reports will be forwarded by HRDC to the Nursery Industry Development Manager and subsequently to the Nursery R&D Committee.

Budget - The budget allocation for the project is \$60,000 per year, this includes all aspects of the research, liaison and reporting.

Completion date - August 2000.

Payment details - Payments will be based on successful completion, and achievement of milestones.

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Major Publications

Written or edited

Title	Publication type	When	Audience	Notes
Quality Management and Accreditation	Information package for State associations	May 1997	State association executives, NIDO's and members	Limited distribution, collection of articles and contact information
TOG Newsletter	Occasional newsletter	various	NIASA Technical Officers	
The Nursery Papers - A guide for authors and editors	24 page A5 size booklet	April 1997	Chief Investigators and other writers & editors	Published jointly by NIAA & HRDC, widespread distribution.
Nursery Industry Water Management - Best Practice Guidelines 1997	64 page A4 size booklet	February 1997	Industry and local government regulators.	First of it's kind by any Australian horticultural industry.
Australian Nursery Industry Conference 1997 - Technical presentations	50 page proceedings from Perth NIAA Conference	February 1997	Conference delegates and wider industry	An outcome of the TT component of conference 97.
NIASA - Best Practice Guidelines	72 page booklet	June 1997	NIASA participants and wider industry.	Followed a review of the original guidelines by NAC and TOG.
What is NIASA Accreditation?	A4 bi-fold brochure	February 1998	Customers of NIASA businesses	product of NAC
Handbook of the major pests and diseases of nursery plants - 2 nd Ed.	40 page A4 size booklet	November 1997	Growers and retailers of nursery plants	Joint effort with NSW Agriculture
NIAA Submission to NRA revue of ENDOSULFAN	20 page report	May 1998	National Registration Authority	In response to NRA draft review.

Conferences, workshops

and field days organised or assisted

1996/1997 Financial Year

7.1

Event	Where	Notes
95/96 NIASA Annual Conference	Brisbane	First formal conference for both Technical Officers and National Accreditation Committee
WaterWork workshops	Brisbane, Melbourne, Kempsey, Sydney, Perth, Darwin, Launceston	First successful national workshop series
NIA of NSW State Conference	Sydney	Presentation on R&D plan
Web site development workshop	Lismore, NSW	To determine content and style of NIAA web site
Comparative analysis and Best practice workshop	Melbourne	Small workshop exploring benchmarking for business improvement
Workshop to develop new 5 year R&D plan for nursery industry	Sydney	Major milestone in National NIDO project and resultant plan has been highly praised.
'Implementing Quality Management' workshops	Alstonville, NSW	Testing of AHC Training Package
Workshop of authors 'Best practice for sustainable water use'	Ballina, NSW	A major part of the process which lead to the Best Practice Guidelines book.
NIASA 96/97 Annual Conference	Melbourne	First use of 'moderation' exercises.
NIAA Annual Conference	Perth	First technical proceedings produced with NIAA/HRDC funding

Event	Where	Notes
NIA of NSW State Conference	Port Macquarie	Presentation on Quality Management
Workshop on surface disinfection practices	Ballina, NSW	Collated best available information (published as a TNP) and developed brief for NIAA/HRDC funded research project
'WaterWork' workshops	Perth, Sydney, Adelaide	Moving into 'Train the trainer' phase
IPPS Annual Conference	Wollongong, NSW	Presented paper on technology transfer
Inaugural NIDO's meeting	Sydney	First meeting of NIDO's and reps from their NIA's
NIAA 'Roadshow'	Perth, Adelaide, Ballina	Presentations on NIDO role and national R&D plan
NIASA 1997/98 Annual Conf.	Coffs Harbour, NSW	Development of unified marketing plan for NIASA
Vic. industry dev. Workshop	Melbourne	Provided input into NIAV planning workshop
Irrigation Training Workshop	Melbourne	Run by Irrigation Assoc. of Australia. Aim to reduce duplication of effort.
Weed management workshop	Adelaide	Working with CRC for weeds to develop plan to target garden escapees
NIAA 1998 Annual Conference	Hobart	Move towards concurrent sessions a great success
AQIS Hort. Ind. Cons. Comm.	Melbourne	Representing nursery industry
2 nd NIDO's Annual meeting	Hobart	Continued on success of first meeting
Minor Use Chem. Workshop	Melbourne	Looking at improving legal access to minor use agricultural chemicals
Greenhouse IPM review w/shop	Sydney	Reviewing progress of this joint industry project
Retail Accred. Project	teleconference	Providing input into project for National Accreditation Committee
HRDC IDO review	Sydney and teleconferences	Member of steering committee appointed by HRDC to assist review

Resume

Ian Atkinson

Personal particulars

- Full Name: Ian Charles Atkinson
- Date of Birth: 14 August 1959

Educational qualifications

Tertiary Studies:

- Bachelor of Agricultural Science
- University of Adelaide 1982, majors- Horticulture, Ag. Economics
- Graduate Diploma in Horticultural Science
- University of Sydney, 1986, majors- Weed Science, Soils, Computing

Member:

- Australian Institute of Agricultural Science & Technology

Experience - current position

- National Nursery Industry: Nursery Industry Association Development Officer

Experience - previous positions

- Research Assistant
Waite Agricultural Research Institute, Adelaide 1983
- Research Assistant
Loxton Research Station, South Australian Dept. of Ag. 1983/84
- Agricultural Survey Officer
Bureau of Agricultural Economics, Canberra 1984/85
- Rural Studies Lecturer
Sydney Rural Technical College, Sydney 1986
- Extension Horticulturist
Queensland Dept. of Primary Industries, Gatton Advisory Office 1987/88
- District Horticulturist: NSW Agriculture, Mullumbimby NSW 1989 to 1996
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Study tour

of the USA

In 1997 NIAA's R&D Committee asked Ian Atkinson to conduct a study tour of the industry in the USA, this article summarises the outcomes. The article was published in NIAA's magazine 'Australian Nursery Manager'.

The Australian nursery industry need not be in awe of our American counterparts. That was one of my main conclusions from a recent 3 week study tour of the USA. Their production industry is similar to ours and many of the differences are due to the size of their market. Like us they do some things well and others not so well.

The USA's population is around 265 million people or some 15 times the size of Australia's. Their market is growing quite fast due to an expanding population and increasing expenditure by households on gardening and floriculture. Our climates are quite similar in their range except that many cities in northern USA experience significant periods under snow.

Consequences of this include the presence of very big businesses and a greater level of specialisation. **Monrovia Nurseries**, a well known long running firm, have three production nurseries and one site alone covers 650 acres (264 hectares). The **Color Spot** group has grown by buying out other operations and at last count had 19 sites ranging in size from 30 to 275 acres (12 to 111 hectares).

One outstanding specialist nursery I visited was **Iseli Nursery** in Oregon which covers 400 acres (162 hectares) and produces mainly speciality conifers and Japanese maples. Amongst their 140 staff are a select group of 'artists' who are full time involved in the production of topiary lines. King amongst their products were some grafted Japanese maples which had been manicured for over 30 years and were on sale for US\$7,500 each !

The markets size is also reflected in the allied sector of the industry. Kevin Heinze, an insect specialist from Texas A&M University, estimated that there are over 160 firms involved in the production and sale of biological control agents to the horticultural industries. Manufacturers of specialised equipment are able to succeed even with relatively low market penetration, a small percentage of a big number is still respectable.

A good example is the **Electrostatic Spraying Systems** company who manufacture and distribute some of the most efficient pesticide application equipment I've ever seen. Their sprayers are highly specialised and cost significantly more than the 'average' but the USA's greenhouse industry is large enough for them to succeed.

What can we learn from the USA ?

The degree of specialisation and similar product range means that the USA is a good source of information on many crop specific aspects of production. An obvious example is if you wanted to learn the latest and best about poinsettia production then you'll find it there. The number and quality of their Trade Journals (eg Grower Talks, NMPro) reflects this also.

Big nurseries have big workforces and efficient management of staff is a universal challenge. Several of the operations I visited are achieving excellent productivity improvements with 'teams based' management. This involves empowering the workers through training and giving them more input into decision making. This approach is not uncommon in manufacturing industries but I'd not seen it in practice in our industry.

Events such as the **Ohio Short Course and Trade Show**, and the **Southeast Greenhouse Conference and Trade Show**, which I attended are amazing one-stop-shops for the latest in production information and technology. In Ohio there were over 415 stands in the Trade Show crammed with the latest equipment. The information seminars were generally well presented even if the presence of over 400 people at some limited the chance of questions !

What should we avoid ?

A lot of R&D is undertaken by universities in the USA but it is suffering a lack of funds and some industry leaders question the value of the work done. The universities are the product of USA's unique 'land grant universities' established in the 1800's to assist with agricultural development. Unfortunately there appears to be little co-ordination between the states at both the funding level and the researcher level. Everyone I spoke to was envious of Australia's R&D levy system and in particular the \$ for \$ matching funding available through our Horticultural Research & Development Corporation.

The legislative and regulatory environment in the USA makes ours look good ! The division of responsibility between local, state and federal governments isn't as clear as in Australia. Just take tax, in some cities I paid a GST type tax imposed by that state and one imposed by the city (or county) !

All three levels of government can enact laws on some issues. 'Right to Know' laws require businesses to keep accurate records of all chemical use and to make these available to anyone defined as having a right to know. This may include workers, neighbours, county (shire or council) regulators and so on.

Some states have introduced such laws but exempted agriculture, others require it for agriculture as well. To further complicate it the local city or county can impose it's own "Right to Know" laws. The situation was similar for laws and regulations relating to issues such as pesticide use and water runoff. So never accept on face value statements about what laws USA's growers have to comply with as they may only apply in some states or even counties.

Sales into the USA ?

There seems to be an insatiable demand for new plant lines in the USA and we are certainly a popular source of new plants at present. I doubt that we could sell much finished product into their market but what about plugs and tubestock ? There are moves to change the US Quarantine restrictions on 'soils' which have made things difficult in the past. Find the right product and then develop a partnership in the USA perhaps ?

Summary

We need to keep an eye on USA's industry because many trends, both good and bad, originate there. However we should be proud of the achievements the Australian industry has made and not give ourselves a big brother complex. Closer contact between Australian industry associations and their USA counterparts and the universities won't be easy. However we should develop and maintain the linkages as they will be beneficial for all involved. There has been some thought about organising an Australian group tour to the Ohio Short Course and perhaps California and Oregon, anyone interested ?