

# NURSERY PAPERS

DECEMBER 2010 Issue no.11



## National Invasive Plants Survey

In 2009, Nursery & Garden Industry Australia (NGIA) undertook a survey to identify the success of industry initiatives associated with invasive plant management. The survey titled 'National Invasive Plants Survey' was undertaken by Dr Anthony Kachenko (NGIA Environmental & Technical Policy Manager) and Delwyn Thomas (Project Consultant) and involved two parts. The first part evaluated production and availability lists from 328 businesses across the country whilst the second part of the survey was a questionnaire relating to awareness of industry invasive plant initiatives.

In this Nursery Paper, Dr Anthony Kachenko reports on the key results and recommendations of this survey.



# National Invasive Plants Survey

## Background

Invasive plants, also referred to as environmental weeds, is one of several key issues the Australian nursery and garden industry is actively engaged with. Over the past decade, NGIA has taken considerable steps towards reducing the spread of invasive plants with campaigns such as Grow Me Instead (GMI) providing relevant information to nursery operators and the wider gardening public about plants which are potentially invasive. This is one of many industry initiatives campaign highlighting industry's desire to minimise the spread of potentially invasive plants in a proactive and positive manner.

In order to maintain a proactive position in addressing invasive plant issues, it's necessary for industry to demonstrate that it is a responsible and assertive leader on this key environmental issue. In order to achieve this, NGIA commissioned a survey to clarify key achievements and identify if any gaps existed in current knowledge on invasive plant issues. This information would then enable NGIA to demonstrate its environmental performance with the outcomes used to inform, develop and improve industry strategy and policy positions on invasive plants and biosecurity.

## Objectives

The key objectives of the survey were to:

- Examine the production and availability of potentially invasive plants on nursery availability lists nationally;
- Identify the level of industry awareness of industry and government invasive plant/weed programs; and
- Identify gaps and functions industry can perform in this area.

## Methodology

To address the objectives the survey was undertaken in two parts.

### Part A: Evaluation of Production/Availability Lists

The initial aim of Part A was to obtain plant production/availability lists from production nurseries across Australia, and evaluate them for:

- 1) Weeds of National Significance (WONS),
- 2) National Environmental Alert Weeds,
- 3) Sleeper Weeds, and
- 4) Recognised garden escapes (As per each regional GMI booklet).<sup>1</sup>

Production nurseries, mail order businesses and internet businesses were targeted in this component of the project. If annual production/availability lists weren't available, the current availability list was deemed sufficient.

In total, 328 production/availability lists were received, the majority of these returned by email or downloaded online.

### Part B: Industry Survey

Following consultation with industry, a survey was designed to target the broader national audience of production and retail nurseries. The survey was accessed online and took approximately 10 minutes to complete. The survey consisted of 6 main sections and contained 24 questions. The sections covered:

- Background Information
- Invasive Plants Awareness
- Invasive Plants Resources
- Invasive Plants Extension
- Invasive Plants Management
- Further Comments and Suggestions

A total of 244 (or approximately 12%) businesses returned a completed survey. The majority of responses were received by production nurseries (n = 138) followed by retail nurseries (n = 83).

<sup>1</sup> The production/availability lists from Queensland were not included in this survey as the GMI program in QLD was not available at the time of writing this report.

## Survey Results

### Part A: Evaluation of Production/Availability Lists

Of the production/availability lists received (n = 328; Table 1), 57% were from member nurseries. The majority of respondents were located along the east coast (86%) with the highest number of respondents from Queensland (40%) followed by NSW (29%) and Victoria (17%).

State/Territory	Member	Non Members	Total Responses
QLD	61	71	132
NSW & ACT	56	38	94
VIC	37	18	55
TAS	2	5	7
SA	10	2	12
NT	3	0	3
WA	18	7	25
Total	187	141	328

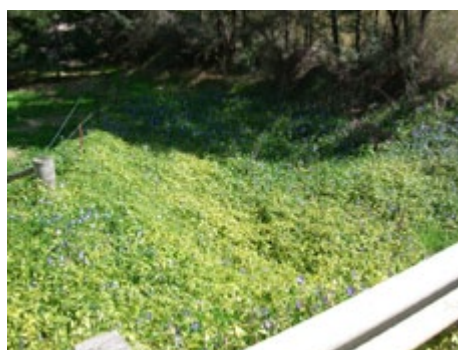


Table 1 Production lists by Membership

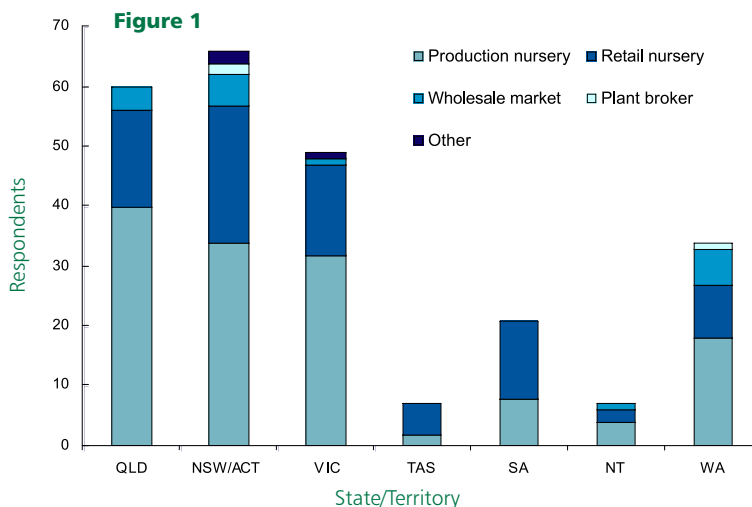
No Weeds of National Significance (WoNS) or Sleeper Weeds were found on any production/availability list. Three nurseries (<1% of surveyed nurseries) were found to be growing *Tipuana tipu* (Rosewood), a tree listed on the National Environmental Alert List.

Only 8% of surveyed production/availability lists (excluding QLD) were found to be growing GMI plants.

### Part B: Industry Survey

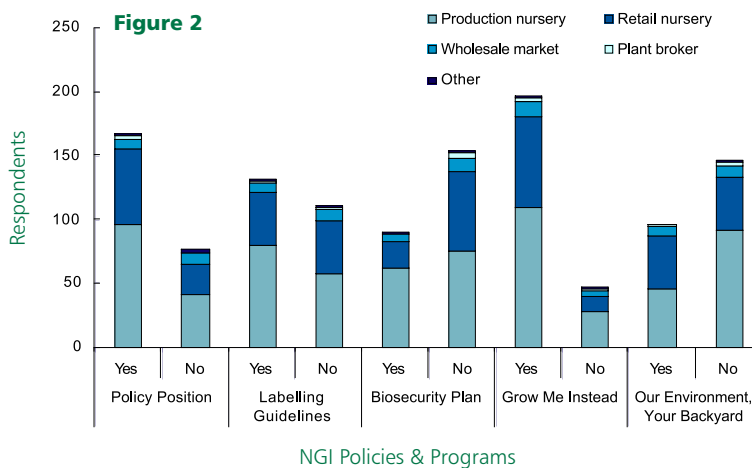
Completed survey responses were received by 244 nursery businesses. The majority of these respondents were located along the east coast (72%) with highest number of respondents from NSW (27%) followed by QLD (25%; Figure 1).

Figure 1 Survey respondents by state/territory & sector



Part B of this survey provided comprehensive and reliable information on industry attitudes to industry and government invasive plant/weed programs. One of the key questions in the survey asked respondents to identify their level of awareness to industry policies and programs. Greatest awareness among respondents was for GMI (81%) followed by the NGI Invasive Plants Policy Position (68%). Whilst these results demonstrate that industry programs have brought about educational changes in attitude and access to information, opportunities remain for industry to better communicate the objectives of these programs.

Figure 2 Awareness of respondents to industry policies and programs



The results in Figure 3 gauged the availability of resources among respondents. The results indicated that apart from GMI, the majority of respondents were not in the possession of industry policies and programs. Indeed, over 78% of respondents did not have the National Nursery Industry Biosecurity Plan, NGI Invasive Plants Position, NGI Plant Labelling Guidelines or the Our Environment, Your Backyard Education kit. Conversely, 58% of respondents had a copy of the GMI regional booklets. This data suggests there remains opportunity for communication of NGI policies and programs to whole of industry.

Figure 3 Number of respondents in possession of industry policies and programs

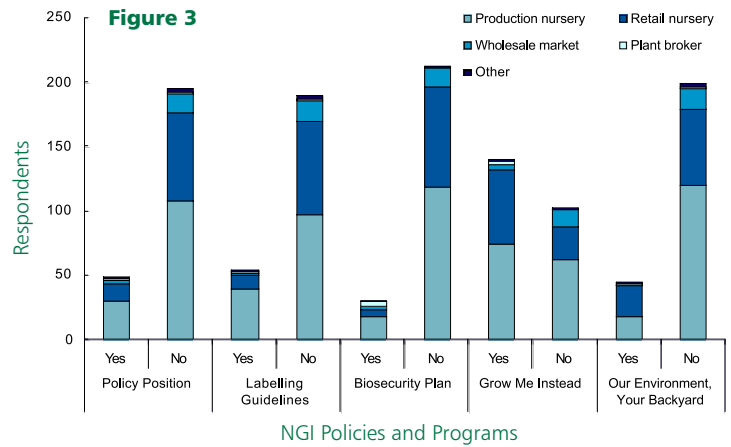
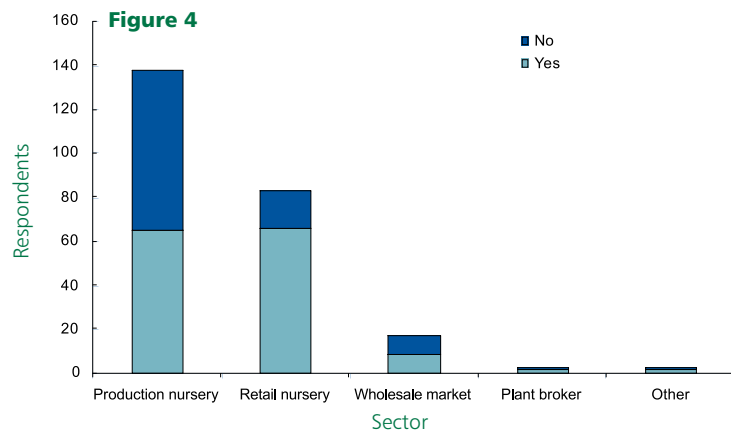


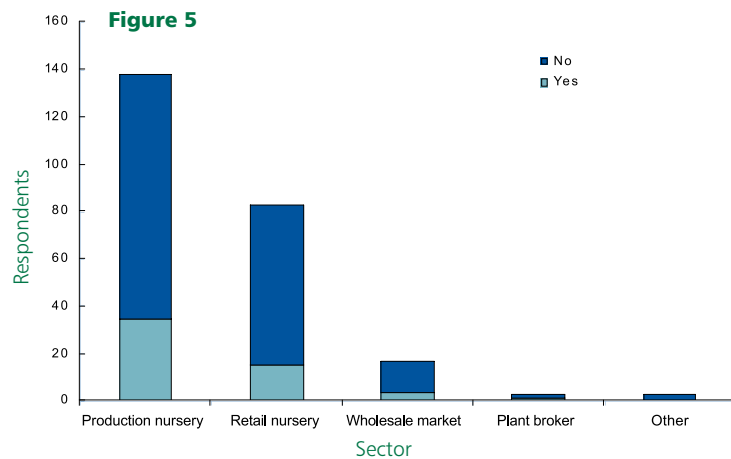
Figure 4 demonstrates the number of respondents that actively promote GMI alternatives (not necessarily those listed within the GMI regional booklets). Across all sectors, 59% of respondents promoted GMI alternatives. The retail sector was the most proactive sector with 78% of respondents indicating that they promoted GMI alternatives.

Figure 4 Number of respondents that promote GMI alternatives or other alternative plants



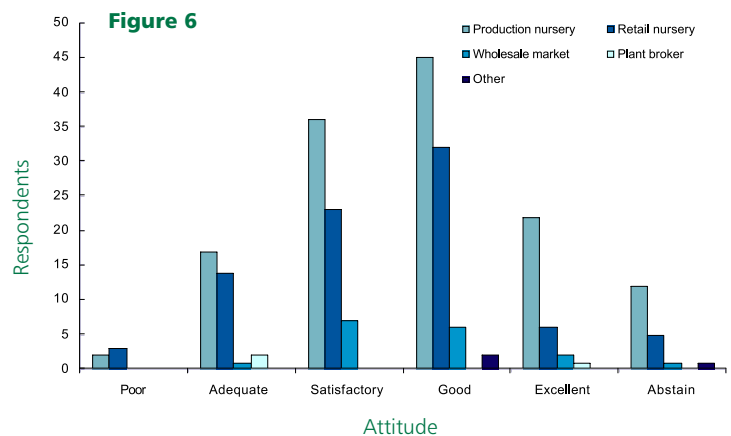
The survey also asked respondents to indicate if they followed a documented weed management plan (WMP). A WMP is a documented position for businesses to guide them in the management of weeds on-site. Across all sectors, 23% of respondents indicated that they had a documented WMP (Figure 5). This indicates opportunity for businesses to consider implementing a documented strategy to manage weeds on-site.

Figure 5 Respondents with a documented weed management plan



Lastly, the survey asked respondents to rate their attitudes to weed management strategies on-site. Across all respondents, 90% indicated their attitude to weed management was adequate to excellent (Figure 6). In general, this demonstrates an integrated level of awareness among respondents.

Figure 6 Respondents attitudes to their weed management performance.





## Other Key Findings

There were many other key findings identified in Part B including:

### Business Trends

- Results indicated that a high proportion of plant material is moved intra and interstate. This included sourcing plant material (such as plugs, propagation material etc.) and distributing plant material (such as finished products, tube stock etc.).

### Invasive Plants Awareness

- A high degree of awareness to local, state and national government weed lists excluding sleeper weeds was observed which is likely attributed to the agricultural context of this list.
- Government weed agencies and industry resources were highly regarded for providing reputable information on declared weeds and invasive plants by survey respondents.

### Invasive Plants Resources

- Industry was not adequately resourced with local, state and national government weed lists.

### Invasive Plants Extension

- The majority of businesses (59%) distributed information on declared weeds and invasive plants within their business. This was greatest for retail nurseries (73%).
- Over 50% of production nurseries did not formally distribute information on declared weeds and invasive plants within their business.
- Electronic distribution of information on declared weeds and invasive plants was the least favourable mechanism of information transfer within business (7%). Staff training also rated poorly (12%).
- Educational collateral such as posters were utilised by the minority of businesses (35%) to provide relevant information on weeds and invasive plants to staff and customers.

## Invasive Plants Management

- The majority of industry monitored their boundary for naturalised plants at least annually, with one in five monitoring their nursery every week.
- Protecting onsite native or indigenous vegetation ranked highly among industry (46%).
- The majority of industry (86%) considered pest/production weeds a major priority.
- Several strategies were commonly used to control pest/production weeds, with herbicide application and hand weeding the top two control strategies (87%).

## Next Steps

Several recommendations listed in the National Invasive Plants Survey were identified and included:

- A targeted communication strategy to reinforce the responsibility of nursery businesses in minimising the spread of potentially invasive plants that may occur from the high volume of border trade in live plants.
- Greater uptake of NGI voluntary Plant Labelling Guidelines to prevent the possibility of further enforced legislation.
- Industry develops future World Environment Day campaigns that focus, in part, on invasive plant issues and more broadly biodiversity conservation.
- Greater uptake of on-farm biosecurity measures among production nurseries and growing media businesses through NIASA and BioSecure HACCP.
- Continued engagement with government and external stakeholders at all levels to demonstrate that industry is proactive in dealing with invasive plants
- Consideration by governments that a nursery registration system to enhance business, industry and government communication is warranted.

- Industry in partnership with government agencies should jointly develop a weed risk assessment (WRA) system to assess weed risk of plant species and other taxa (i.e. cultivars, varieties etc.) currently being sold or proposed for sale in Australia (pre-release).
- The development of a national web portal to house all local, state and federal weed lists and relevant information.
- Greater uptake of industry's Environmental Management System (EMS) EcoHort and consideration in the developments of a similar program for retail garden centres.
- Industry continues to resource the program 'What does your garden grow?' to encompass and capture the nursery industry more fully. This is the only training program designed for industry to equip them with the skills to manage invasive plant issues.
- Industry support widespread distribution of Grow Me Instead (GMI) booklets
- Support for cooperative action among all stakeholders to continue the fight against invasive plants.

## Further Information

For additional information, consult the following nursery papers:

- [Grow Me Instead - How the nursery industry is addressing the spread of invasive plants](#)
- [Plant labelling – The first point of contact in knowing about the plant](#)
- [Weeds and the nursery industry](#)
- [Understanding and managing nursery weeds](#)