Weed proofing Australia: a way forward on invasive garden plants

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Summary Escaped invasive garden plants are the major source of weeds in Australia. This paper outlines a 10 point policy package to mitigate the risk posed by invasive garden plants.

Keywords Invasive garden plants, national labelling scheme, national noxious weed list.

INTRODUCTION
Escaped invasive garden plants are a significant source of weeds in Australia (Groves et al. 2005). As such, a key focus of Australia’s weed defence system needs to be implementing an effective response to this threat. This paper outlines a strategic response to this challenge; one that can enable both the garden industry and Australian communities to play a significant and positive role in weed proofing Australia. It includes opportunities to create new markets for low risk plants, and to enable the garden industry to move decisively onto the front foot in responding to the invasive plant problem and future civil liability risk.

Some of the issues that need to be resolved through the proposed policy package are:

- Uncertainty about the weed status of garden plant species in the garden industry;
- Lack of comprehensive and detailed knowledge about the nature and extent of the garden industry pathway for propagation and movement of invasive plant species;
- A suite of poorly harmonised weed lists;
- No convenient information measures in place to enable consumers to easily identify and properly care for medium risk garden plant in response to growing social concern about weed impacts; and
- Potential for industry leaders to be commercially undermined by those in the industry not adopting positive measures.

A WAY FORWARD: A 10 POINT PLAN
Australia has the challenge of developing an effective, least cost solution to tackling the causes and sources of the invasive garden plant problem. We have a superb opportunity to develop this solution in a strategic and systematic way so that all stakeholders go into a change process with their eyes open and are able to participate in an ordered transition. The starting point is the need to recognise that most garden plants in trade have no weed history and can be considered environmentally safe. This creates an opportunity to shift the market towards the majority of low risk plant species.

A policy package is needed that strives to achieve a 2015 vision of a prosperous garden industry built on the sale of low-risk garden plants, encouraged by an empowered and enabled community that wants to reduce their weed spread risk footprint. A 10 point policy package is outlined below.

1. CLOSE AUSTRALIA’S FRONT DOOR TO NEW WEEDS

Comprehensive permitted list/weed risk assessment system by 2006 The Australian Government has committed to ensure all new proposed imports of plant species are subjected to a weed risk assessment by 2006. When implemented, over 5000 weedy species not yet in Australia will no longer be able to be legally brought here (Glanznig 2005).

2. GIVE GARDEN INDUSTRY AND COMMUNITIES CERTAINTY ABOUT WEED STATUS OF GARDEN PLANTS

National list of invasive plant species The weed issue is characterised by a multitude of weed lists, combined with varying degrees of uncertainty and confusion about which garden plant species are invasive. To fix this problem, both the Nursery and Garden Industry Australia (2004) and WWF (Glanznig et al. 2004) are calling for governments to develop one national ‘master’ list of invasive plants under which State, regional and local lists are nested. This should build on the existing national list of naturalised plant species (Groves et al. 2003). The National List should be divided into various threat or risk based categories, which clearly delineates between high-risk and medium risk plant species.

3. BETTER UNDERSTAND EXTENT AND RISK FROM CONTINUED TRADE IN INVASIVE GARDEN PLANTS

The last reasonably comprehensive audit of known referenced weeds in trade in the garden industry was completed in 1998/99 by the WA Department of Agriculture. As such, there is a pressing need for a national audit of garden plant species in recent trade, to identify...
a comprehensive shadow list of high risk plant species that need to be removed from trade to reduce the risk of them causing significant harm to agriculture and/or the environment, particularly those yet to naturalise or become widespread. This national shadow list should be a focus for full weed assessments by government agencies (see Plan Point 8), and self-regulation by nursery growers (see Plan Point 6).

4. BUILD KNOWLEDGE OF STERILE GARDEN PLANTS AND DYNAMICS OF INVASIVENESS

Research into why and what plants become invasive Research into invasion biology and ecology is a growing field of scientific endeavour. This work needs to support the National List of Invasive Plant Species.

Research to produce genuine sterile cultivars There is a market opportunity to produce genuinely sterile cultivars of profitable invasive garden plants. To ensure that governments recognise these 100% sterile cultivars, they would need to be vetted through a national sterile cultivar accreditation scheme (see Plan Point 7), and to enable efficient compliance they would need to be able to be easily told apart from invasive varieties by having unique features, such as unique coloured flowers or stems.

5. BUILD GARDEN INDUSTRY UNDERSTANDING ABOUT RISKS AND COSTS ASSOCIATED WITH INVASIVE GARDEN PLANTS AND CAPACITY FOR POSITIVE ACTION

Garden industry invasive plants capacity building program The garden industry needs to strategically reposition itself to play a major and positive role in the solution to the invasive plant problem. Governments and key scientific bodies, such as the Weeds CRC, need to support these efforts. Opportunities include training, incorporation of invasive plants in accreditation standards, positioning garden centres as knowledge providers on invasive plant solutions to consumers and becoming leaders in community involvement programs to replace high risk with low risk plants.

National weed information system/portal Information to identify and manage weed issues is scattered among a wide range of sources. This makes it difficult for the community and garden industry alike to keep abreast of new information, as well as the changing legal status of plant species. What is needed is a one-stop-shop national weeds information portal that becomes the premier gateway for information about weeds in Australia.

6. MOBILISE GARDEN INDUSTRY TO RESPOND POSITIVELY TO THE INVASIVE SPECIES CHALLENGE

Garden industry policies Peak garden industry groups have a strong leadership role to play in the industry’s response to the invasive garden plant challenge. The Australian Institute of Horticulture (AIH) recently released its updated weed and invasive plant policy (AIH 2006), and the Nursery and Garden Industry Australia (NGIA) policy is due for release in late May 2006. An opportunity exists in these policies to spell out the industry’s duty of care to mitigate the risk posed by invasive garden plants (particularly high-risk invasive plants), as well as committing to develop appropriate codes of conduct. These industry policies also have an important visioning role, exemplified by the AIH commitment to support all programs that will ensure no new invasive plants become naturalised in Australia from 2010 onwards.

Beyond compliance: institutionalising corporate social responsibility (CSR) Australia is in a period of policy flux as governments move to strengthen measures for weed prevention and control. Rigorous weed risk assessments of candidate weeds take time and as a result many States have a large backlog of plant species to be assessed. The consequence is that there are significant lead times between State agencies identifying a candidate weed and its final declaration as a noxious weed. The opportunity exists for garden plant growers to move beyond compliance by using resources such as the Global Compendium of Weeds (Randall 2002) to identify high risk candidate invasive garden plants and, in consultation with weed scientists, put them in a holding pattern until they can be risk assessed.

7. PROTECT GARDEN INDUSTRY LEADERS AND REDUCE TRANSACTION AND COMPLIANCE COSTS BY ESTABLISHING A STREAMLINED NATIONAL REGULATORY FRAMEWORK

The garden industry is a national market, though domestically weed control is covered by eight separate jurisdictions each with different laws and lists. The result is inefficiency and inconsistency. Experience in the United States (Caton 2005), New Zealand and Australia (Moss and Walmsley 2005) shows that to protect those industry leaders that do the right thing and remove high-risk species from trade, laws are needed to create a level playing field with all growers and sellers required to remove high-risk plant species. Voluntary approaches alone do not work.
**National post-border permitted plant list**  The most cost effective way for governments to prevent new weed problems is to implement permitted list/weed risk assessment systems, making any proposed new plant species a prohibited import until proven low-risk by a weed risk assessment process. Post border permitted lists are needed to complement the Australian Government’s national border permitted plant list. This double permitted list approach is the most effective and efficient policy approach to prevent new weed problems and also remove the incentive to smuggle new invasive plant seeds into Australia from overseas and then exploit the weaknesses in narrow State and Territory prohibited lists.

**National noxious weed list**  It is inefficient and illogical to have one government trying to control a weed species while it is being sold in another jurisdiction. CSIRO found that 40% of naturalised invasive garden plants declared noxious in one jurisdiction were available for sale in another (Groves et al. 2005). The focus of the proposed national noxious weed list should be on those high-risk plant species that are yet to naturalise, or are not yet widespread where restricting supply will result in a reduction of establishment and invasive success.

**National mandatory invasive plant labelling scheme**  Consumers have a right to know if they are buying a potentially invasive plant. They also need to know how to reduce their weed spread risk by knowing if the plant is suitable for the proposed location, how to maintain it and how to dispose of green waste responsibly. This can be facilitated at Point of Sale through a label or as part of a broader education program that gives consumers ‘care’ information. Labelling will be particularly useful for the growing market of garden plants sold through hardware and supermarket chains, which do not offer advice to consumers. Experience shows that to be work properly, the labelling scheme needs to be mandatory (George Wilkenfeld and Associates 2003).

**National sterile cultivar accreditation scheme**  There is some controversy about whether new varieties of lantana and black agapanthus are truly sterile. To give consumers certainty and peace of mind, and also ensure that claims of ‘non-invasiveness’ on labels are not misleading, sterile plant varieties could be vetted through an independent and scientifically robust national sterile cultivar accreditation scheme. Varieties that were scientifically proven to be sterile could be accredited and branded as ‘environmentally safe’. To provide a market incentive, these varieties would need to be exempted from sale bans, but to ensure easy compliance people would need to be able to easily tell the difference between invasive varieties and the sterile variety (see Plan Point 4).

8. **PHASE OUT SUPPLY AND TRADE OF HIGH RISK INVASIVE PLANTS NATIONALLY**

**National invasive garden plant accord**  There is a pressing need to phase out the supply and trade of high risk invasive plants nationally, particularly those that are not yet naturalised or widespread. To achieve this aim requires a national process that is scientifically robust, enables all stakeholders to have a say and financial implications to be fully considered. If for example, Plant Breeders’ Rights (PBR) are unduly impacted, industry has strong grounds to negotiate a structural adjustment package. The experience and process used to determine the Weeds of National Significance, as well as the New Zealand experience and process to develop the statutory National Pest Plant Accord offer useful models that could assist development of the aspect of the proposed National Noxious Weed List that pertains to high-risk invasive garden plants.

9. **INCREASE PRODUCT DEMAND FOR LOW RISK GARDEN PLANTS**

**National weed awareness and education campaign**  Urban Australians have low awareness about weed issues. However, market research shows they have strong latent demand to adopt behaviours that reduce weed spread risk if it is easy and convenient. The increase in awareness about the impacts of weeds and where they are coming from over the next several years, will lead to strong community expectations for governments and the garden industry to implement effective solutions to the invasive plant problem.

**National voluntary grow me instead labelling scheme**  A possible flip-side to the national mandatory invasive plant labelling scheme mentioned in Plan Point 7 is a national voluntary labelling scheme that leverages off the ‘Grow Me Instead’ brand. It could promote low risk garden plants as an alternative to higher risk garden plants. The scheme could complement a set of educational materials (e.g. brochures, posters, guides) developed for major urban centres.

**Invasive garden plant swap (future-fitting) scheme**  Many gardens contain high risk invasive garden plants. Encouraging home owners to participate in schemes that audit their gardens and help them replace high risk plants with those that are environmentally safe needs to be part of the weed proofing solution. This ‘future-fitting’ is analogous to homes installing more
efficient lights or showerheads to save energy and 
water respectively. If widely promoted, this scheme 
has the potential to create a new market for low risk 
plants.

10. MOBILISE COMMUNITIES TO SEARCH 
AND DESTROY NEW INFESTATIONS OF 
ESCAPED INVASIVE GARDEN PLANTS 

**National weed alert early warning and rapid re-
response system** Early detection of new invasions is 
esential for cost-effective intervention. Evidence 
from Australia shows that most new plant invasions 
are escaped invasive garden plants that appear around 
population centres (Hosking et al. 2004). Victoria 
already has a world leading ‘Weed Alert and Rapid 
Response System’ in place. This needs to be rolled 
out nationally to encourage communities to take part 
in surveillance efforts. Garden centres could also 

promote local surveillance efforts.

**CONCLUSION**

The 10 point plan proposed in this paper has the poten-
tial to strategically reposition governments, the garden 
industry, NGOs and communities, so that they are 
working together collaboratively to markedly reduce 
the weed spread risk and future costs posed by invasive 
garden plants. Australia deserves nothing less.

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