

## Invasive Plants and the Nursery Industry<sup>©</sup>

**Robert Chin**

Nursery & Garden Industry Victoria, PO Box 431, East Caulfield, Victoria 3143

Email: rchin@ngiv.com.au

### INTRODUCTION

There are many issues that the nursery industry faces in tackling invasive plants in Australia. This is one of many environmental problems that face our industry. There has been a lot of misinterpretation as to the causes of invasive plants and their impact in Australia, and there are also a lot of interested parties and key stakeholders, from government (federal, state, and local), conservation groups, the media, the public, and the nursery industry.

The history of weeds in Australia is varied, and yes, the nursery industry has contributed to it — but we are actually working very hard to stop the impact of invasive plants on our natural and built environments. We need the help of industry, government, and the media to spread the word on minimising the impact of invasive plants.

There are too many instances of invasive plants being declared without industry consultation. We need to work together — not against each other. We have a role to play as an industry and this means you!

### WHERE DO INVASIVE PLANTS COME FROM? — A BIT OF HISTORY

Invasive plants come from a range of different sources. Some of them come in by mistake, and others are deliberately introduced for what seemed like very good reasons at the time. What is a weed now wasn't always. Here are some examples:

- 1) **Blackberry (*Rubus fruticosus*)** — one of our biggest invasive plants. Initially spread by Baron Von Mueller as a food source for drovers.
- 2) **Prickly pears (*Opuntia*)** — brought to Australia by Captain Arthur Phillip on the 1st Fleet to start a cochineal industry to dye the uniforms for the colonies' soldiers.
- 3) **Chilean needle grass (*Nassella neesiana*)** — introduced to Australia from South America (circa 1934) as a contaminant of sheep wool or fodder.
- 4) **Bitou bush (*Chrysanthemoides monilifera* subsp. *rotundata*)** — planted along the NSW coast by the NSW Soil Conservation Service to reduce dune erosion and assist in post mining rehabilitation.
- 5) **Garden introductions** — of course, but not always.

### WHAT IS A WEED AND WHY IS THIS IMPORTANT?

I learned at college that a weed was “a plant growing out of place.” This definition is probably not adequate now to explain what a weed actually is and the impact that they have. So what is a weed now and why is this important?

As an industry we need to know if a plant is declared a weed that it actually is one. There are many plants that are “declared” noxious (read illegal) and many that people say are just “weedy.” Who decides what is weedy and what safeguards are

there on this? Declaring a plant a weed can have significant financial implications for members of our industry.

The State Government of Victoria describes a weed as: “*plants that are unwanted in a given situation and may be harmful, dangerous, or economically detrimental.*” (Tenni and Faithful, 1998).

They suggest that there are really three broad groups of weeds:

- 1) Declared noxious weeds.
- 2) Environmental weeds.
- 3) Agricultural weeds.

**Convictions.** Governments and other regulators are determined to control invasive plants. In fact they are obligated to. In Victoria there have recently been a couple of convictions relating to the sale of “declared” noxious weeds. Interestingly one of these was for the sale of plants on-line via eBay®.

### WHAT IS A WEED NOW WASN'T ALWAYS!

The “weediness” of plants has changed. History is littered with well-intentioned people and organisations wreaking havoc on the environment. In fact people have not always known of, or even cared about, the environment. It is only relatively recently that the general public has started taking an interest in invasive plants.

There are many examples of plants that were brought into Australia for use as crop plants, fodder, grains, etc. that are now considered invasive plants. Many of these were imported and recommended by government departments.

Is canola the next big weed? Would we have a soft timber industry without those *Pinus radiata* that have been known to jump the fence? What about olives?

Many individuals and organisations have contributed over many years and the nursery industry is one of those. This is the case, and everybody needs to take responsibility for their actions. Weeds are a whole community of problem.

### WEEDS IN DUBBO?

Dubbo is a large regional town in rural New South Wales. It is not free from weeds, and many of these are planted and maintained by the local council. They might not be “declared” weeds but they may be environmental weeds. Some of the weedy plants that I have seen here include:

- Gazanias.
- Ivy — variegated and green.
- Privet bush.
- Hens and chickens.

### SOME WEEDY PLANTS — ARE YOU GROWING OR SELLING THESE?

There are many people and organisations who call plants weeds. Here are some common garden plants that are known to be grown in gardens around Australia. Some are still sold in good numbers within the nursery industry. Some of them are definitely weedy across Australia and some only locally or regionally. Which ones of these are you growing or selling?

- Cootamundra wattle — *Acacia baileyana*
- Asparagus fern — *Asparagus scandens*
- Willows — *Salix* sp.

- Japanese honeysuckle — *Lonicera japonica*
- Peppercorn tree — *Schinus molle* var. *areira*
- Nasella grasses — *Nassella* sp.
- Mirror bush — *Coprosma repens*
- Freesias — *Freesia* hybrids
- Cotoneasters — *Cotoneaster* sp.
- Hawthorn — *Crataegus monogyna*
- English ivy — *Hedera helix*
- Pampas grass — *Cortaderia jubata* and *C. selloana*
- Spanish heath — *Erica lusitanica*
- Sweet pittosporum — *Pittosporum undulatum*
- Kikuyu grass — *Pennisetum clandestinum*
- Lantana hybrids — *Lantana camara* hybrids
- Blue periwinkle — *Vinca major*
- Gazanias — *Gazania* hybrids
- Bridal creeper — *Asparagus asparagoides*
- Agapanthus — *Agapanthus praecox* subsp. *orientalis*
- Arum lily — *Zantedeschia aethiopica*

If these are on your list then you should consider not growing and selling them. Consider higher-value alternatives that will not risk the environment or open you to criticism by local regulators or environmentalists.

#### WHERE ELSE ARE INVASIVE PLANTS?

A lot of negative government and media attention is aimed at the nursery industry. Invasive plants occur not only in private gardens; they occur in public spaces. This is not always reported. Consider the invasive plants you see on land that is owned or managed by some of the following:

- State and federal governments.
- Other regulatory bodies — railways, water authorities.
- Local governments.
- Agriculture.
- Hobby farmers.
- Pastoralists.

#### WHAT IS THE NURSERY INDUSTRY DOING? NATIONALLY

So what is the nursery industry doing about this important social and environmental issue? Here are some examples of what we are doing on a national and more local scale.

**A) Invasive Plants Policy Position.** Identifying the key issues, concerns, and responsibilities for the industry; promoting the industry's initiatives and commitment to addressing environmental issues such as invasive plants. This important document is available on the Nursery & Garden Industry Australia website <[www.ngia.com.au/home\\_gardeners/invasive\\_plants.asp](http://www.ngia.com.au/home_gardeners/invasive_plants.asp)>.

**B) Appointment of NGIA Environmental Policy Manager and National Environment Committee.** Some of their roles include:

- Coordinating the industry's response to key environmental issues, including invasive plants.
- Liaising with key weeds stakeholders, including governments, weeds committees, and others.

- Coordinating industry investment in best management practices and consumer education programs to address invasive plants.

This position is currently filled by Robert Prince and is based within the NGIA office in Sydney.

**C) Industry Programs.** There are various industry programs that either are based on or include invasive plants:

- Nursery papers and various other communications, e.g., Ezine, Clippings.
- Accreditation programs (NIASA and AGCAS) (Nursery Industry Accreditation Scheme — Australia and Australian Garden Centre Accreditation Scheme).
- EMS (Environmental Management System) programs — EcoHort and a retail program.

**D) Other Initiatives.** A commitment to developing industry based communications and awareness programs including:

- Grow Me Instead — nationally.
- National education programs.
- Appointment of development officer with national responsibility for weeds — this position is currently filled by me, Robert Chin, NIDO — NGIV (Nursery Industry Development Officer — Nursery & Garden Industry Victoria) Victoria.

***Grow Me Instead — a Model.*** This is a great example of what the industry is doing. It started as a regional program for the last 2 years in the Greater Sydney Basin — being expanded to other regions and states. It has several objectives and achieves these well.

- 1) Identifies a list of target species that are garden escapees.
  - A plant that was behaving “aggressively.”
  - A plant that was actively modifying the ecosystem.
  - Currently available for sale in garden centres and nurseries.
- 2) Identifies non-invasive alternatives that can be used in place of the “problem” plants which:
  - Will fill the same role in the garden.
  - Are suitable for a range of local conditions.
  - Are commercially available.
- 3) Encourage gardeners to remove and replace target problem species.
- 4) Encourage nurseries to stop selling problem species and promote alternatives.

## **WHAT IS THE NURSERY INDUSTRY DOING? VICTORIA**

In Victoria, the state that I am based in, we have been particularly active in the area of invasive plants. Here are some examples of this work. The list is not exhaustive but indicative.

**A) Joint Plant Advice Clinic at the Melbourne International Flower and Garden Show.**

- Showcased at MIFGS (Melbourne International Flower & Garden Show) 2006/07.

- Significant display of pest plants.
- Great partnership with HMA, NGIV, and DPI/DSE (Horticultural Media Association, Nursery & Garden Industry Victoria and Department Industries/Department of Sustainability and Environment).
- Great model of working together.
- 115,000 people attended.
- We have also run this clinic at the very popular Garden Australia Live expos.

**B) List of 50+ Invasive Plants — Voluntary Removal.** NGIV (Nursery & Garden Industry Victoria) has developed and agreed to the voluntary removal of a list of nondeclared weeds that they have promoted that should be removed from sale and not grown any more.

- Developed list in partnership with DPI (Department of Primary Industries).
- Agreed to list of plants for voluntary removal.
- Distributed information/list to industry.
- Easy to implement.

**C) Spreading the Word.** We communicate this important information on invasive plants in many ways. Some of these include:

- Several articles in our *Groundswell Magazine*.
- Distribute list of declared weeds through magazine.
- Talk about invasive plants to various industry bodies.
- Presentations and papers at conferences like this.
- Joint workshops.

**D) Other Things NGIV Are Doing/Planning.**

- Assisting DPI and DSE (Department of Primary Industries and Department of Sustainability and Environment) with various weed initiatives (time consuming).
- Victorian “Grow Me Instead” brochure is being drafted.
- On-going communication with industry, government, the media, and other stakeholders.
- Joint workshops.
- Complement NGIA work.

## WHICH LIST?

Undoubtedly one of the biggest problems facing everybody that is involved with invasive plants is which plants are weedy? Who defines a plant as a weed, and what criteria are used. Who approves a plant’s “weediness” and what say, as an industry, do we have. Here are some of the many stakeholders that have lists of weeds:

- WONS (Weeds of National Significance) through the National Weeds organisations and now declared in each state.
- Weed alert list (like Weeds of National Significance 2).
- Biosecurity Australia.
- AQIS (Australian Quarantine Inspection Service) list.

- State governments — declared noxious lists. These can be declared across the state or regionally. Some local governments have legal controls and obligations in some states.
- Local government lists.
- Local landcare and green groups lists.
- New CRC (Co-Operative Research Centre – Weeds) lists — easier but more confusing!
- WWF/CSIRO (World Wildlife Fund/Commonwealth Scientific and Industrial Research Organisation) list — is this a good list?

But as an industry we need to ask the following questions:

- What assessment process or evidence is being used to create all these lists?
- Which ones are based on fact or science?

**Back to Basics — What Is a Weed?** As an industry we need to be comfortable with the declaration of plants as weeds. How weeds are declared and who defines them is very important to us. We believe that:

- There must be a basis in scientific fact and evidence of a problem — weed risk assessment.
- We should not rush listings.
- Just because it is a weed in one area of one part of the world, or even a state, does not mean that it will be a weed here in Australia.
- Not all plants of a weedy genus are weedy though often the whole genus is declared.
- There is even a difference between and within species.
- What about sterile hybrids?
- A plant shouldn't be declared just because they are popular and there are a lot of them.
- How do we as an industry know if it is a weed if we don't see the research?
- What if the plant is already in Australia and has recently passed import controls?
- Whose responsibility is this and what say does industry have?

There was a recent example in New South Wales where gauras and lantanas were declared illegal with very little notice. This had, and is still having, a significant financial implication for those that grow and sell those plants.

## THE WAY AHEAD

It is no good complaining about what has gone on in the past. We need to look forward. It's simple — the industry, media, government, and other stakeholders should all work together in a positive way.

- We can not rush into declarations to ban plants.
- Any declarations must be based on facts and clear risk assessment.
- Industry should be fairly consulted and notified in advance about any bans of nursery and garden species — time to adjust.
- Which list do we use and how do we tell people about it? The government gazette in a state is not adequate — need wider communications plan.
- Don't play the blame game!

- Cannot afford to be too simplistic. Businesses and employment are at stake.
- The industry has an important role as a credible and influential source of advice to home gardeners — this can be used to address the issue of invasive plants positively.

If we all work together then we will all benefit.

**What Can You Do?** These problems can't be solved overnight, and you need to rely on other people and organisations doing the right thing. Your industry body (NGI **(Grow Me Instead)**) is working on this as well. But what can you as a nursery person and individual do? Here are some things you should consider:

- Be aware of what plants are weedy and keep up to date with this information.
- Check the species name and any selections being sold against weed lists in your region. Consider alternate names as well.
- Identify any sterile selections that are available when discussing weed species.
- Sell non-weedy alternatives.
- Suggest alternatives that can be used in place of invasive species — encourage people to “retrofit” their gardens!
- Promote good gardening practices as a way of reducing the risk of garden plants becoming a problems, e.g.,
  - Disposal of green waste/garden clippings.
  - Deadheading/removing seeds.
  - Care with mulching and composting.

#### FURTHER INFORMATION SOURCES AND REFERENCES

- Enviroweeds — online weeds discussion group.
- Australian Quarantine & Inspection Service (AQIS) has information on what plants can be bought into Australia <[www.affa.gov.au/aqis](http://www.affa.gov.au/aqis)>.
- The Australian Weeds Committee has a comprehensive resource available on the web: <<http://www.weeds.org.au>>.
- The Cooperative Research Centre for Australian Weeds Management (Weeds CRC) that does a lot of work in this area. Its outputs are not always friendly to the nursery industry but is a key player: <[www.weeds.crc.org.au](http://www.weeds.crc.org.au)>.
- The Nursery and Garden Industry Victoria has some of the lists mentioned earlier: <[www.ngiv.com.au](http://www.ngiv.com.au)>. We have also put the relevant links to all the state authorities there.
- Chin, R. 2005. Nursery people are not all environmental pests. Proceedings Weed Society Victoria Conference 2005.
- Chin, R. 2006. 2006, Nursery Paper — Issue 11: Weeds and the nursery industry.
- Tenni, A. (Melbourne), and Ian Faithfull (Frankston). 1998. What is a weed — Landcare Note (LC0171.) State of Victoria Department of Natural Resources and Environment 2002.

**Table 1.** Australian States Invasive Plant listing of relevant authorities contact points and web links.

State	Responsible Authority	Phone	Weed Information	Weed List
VIC	DPI & DSE	136 186	<a href="http://www.dpi.vic.gov.au/dpi/nren-fa.nsf/child/docs/-C288566198D-9F56E4A2567D80005ACFB-ADI311E486E564954A2567D80009DE05?open">http://www.dpi.vic.gov.au/dpi/nren-fa.nsf/child/docs/-C288566198D-9F56E4A2567D80005ACFB-ADI311E486E564954A2567D80009DE05?open</a>	<a href="http://www.dpi.vic.gov.au/dpi/nreninf.nsf/fd/221FCB56BB36D190CA25715500141ED3">http://www.dpi.vic.gov.au/dpi/nreninf.nsf/fd/221FCB56BB36D190CA25715500141ED3</a>
S.A	DWLB	08) 8463 6800	<a href="http://www.dwlbc.sa.gov.au/biodiversity/pests/index.html">http://www.dwlbc.sa.gov.au/biodiversity/pests/index.html</a>	<a href="http://www.dwlbc.sa.gov.au/biodiversity/pests/weeds/plants_list.html">http://www.dwlbc.sa.gov.au/biodiversity/pests/weeds/plants_list.html</a>
W.A	Agriculture WA	08) 9368 3333	<a href="http://www.agric.wa.gov.au/servlet/page?_pageid=449&amp;_dad=portal30&amp;_schema=PORTAL30">http://www.agric.wa.gov.au/servlet/page?_pageid=449&amp;_dad=portal30&amp;_schema=PORTAL30</a>	<a href="http://www.agric.wa.gov.au/pls/portal30/docs/FOLDER/IKMP/PW/WEED/DECP/20050805_DE-CLARED_PLANTS.PDF">http://www.agric.wa.gov.au/pls/portal30/docs/FOLDER/IKMP/PW/WEED/DECP/20050805_DE-CLARED_PLANTS.PDF</a>
N.T	NRETA	08) 8999 2020	<a href="http://www.nt.gov.au/nreta/naturalresources/weeds/index.html">http://www.nt.gov.au/nreta/naturalresources/weeds/index.html</a>	<a href="http://www.nt.gov.au/nreta/naturalresources/weeds/weedslist.html">http://www.nt.gov.au/nreta/naturalresources/weeds/weedslist.html</a>
QLD	DNRM	07) 3896 3111	<a href="http://www.nrm.qld.gov.au/pests/weeds">www.nrm.qld.gov.au/pests/weeds</a>	<a href="http://www.nrm.qld.gov.au/pests/weeds/a_z_listing.html">http://www.nrm.qld.gov.au/pests/weeds/a_z_listing.html</a>
NSW	Dept of Ag	02) 6391 3100	<a href="http://www.agric.nsw.gov.au/reader/weeds">http://www.agric.nsw.gov.au/reader/weeds</a>	<a href="http://www.dpi.nsw.gov.au/agriculture/noxweed">http://www.dpi.nsw.gov.au/agriculture/noxweed</a>
ACT	Environment ACT	13 22 81	<a href="http://www.environment.act.gov.au/yourenvironmenthwp/pests/managing-pests">http://www.environment.act.gov.au/yourenvironmenthwp/pests/managing-pests</a>	<a href="http://www.legislation.act.gov.au/di/2005-256/current/pdf/2005-256.pdf">http://www.legislation.act.gov.au/di/2005-256/current/pdf/2005-256.pdf</a>
TAS	DPIW	1300 368 550	<a href="http://www.dpiw.tas.gov.au/inter.nsf/ThemeNodes/DREN-4VH82R?open">http://www.dpiw.tas.gov.au/inter.nsf/ThemeNodes/DREN-4VH82R?open</a>	<a href="http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LBUN-5JQ6DX?open">http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LBUN-5JQ6DX?open</a>