Invasive Plants For Sale!
A survey of nursery professionals

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Background and Rationale

Preventing the intentional introduction of invasive plants

Invasion process:
- Arrive
- Survive
- Spread

Strategy:
- Prevention
- Eradication
- Control

Relative cost:
- Low
- Medium
- Very high

Scientific and public attention:
- Low
- High
- High
The horticulture trade and invasive plants

- 82% of 235 naturalized woody plant species in US have been used in horticulture and landscaping (Reichard and White 2001)

- Many invasive plants in California wildlands were introduced for horticulture

- 18 of 25 Bay Area wholesale nurseries carried at least one invasive plant (Cal-IPC 2004)
Some horticultural introductions in California

Genista monspessulana
French broom

Cortaderia selloana
pampas grass

Carpobrotus chilensis
Chilean iceplant

Pennisetum setaceum
fountain grass

Arundo donax
giant reed

Sesbania punicea
scarlet wisteria
Strategies for prevention of horticultural introductions

• Government regulations
• Education
  – Nursery Professionals
  – Consumers/Gardening Public
• Voluntary self-regulation
St. Louis Declaration and Voluntary Codes of Conduct

• Nationwide initiative created by a diverse group of stakeholders in 2001-2002
• Established Codes of Conduct for nursery professionals, government, the gardening public, landscape architects, and botanic gardens
• Since endorsed by many National and State Trade Associations (most recently by CANGC)

Many similar regional efforts
  • e.g., efforts in Florida, North Carolina, Massachusetts, and in California (Cal-HIP partnership and Plant Right campaign)
Factors that may affect participation in preventive measures

- Perception of invasive species problem
- Incentives and Obstacles
- Perception of responsibility of horticulture trade
- Participation in Preventative Behaviors
- Business characteristics
Project Overview

Telephone survey of San Francisco Bay Area nursery professionals (N=54)
- Based on 7 preventive measures from the St. Louis Voluntary Codes of Conduct
What we found (in a nutshell)

- High awareness of invasive plants and acceptance of responsibility as a trade
- Low awareness of St. Louis Codes of Conduct
- Moderate reported participation in preventive measures, high reported willingness
- Incentives and obstacles to prevention
- Factors significantly correlated with participation in prevention
Nursery professionals’ awareness of invasive plants is high

- All surveyed had heard of invasive species
- 93% agreed that “invasive plants are an important environmental concern”
- 89% agreed that “invasive plants have a negative impact on native plants and animals”
Nursery professionals assign high responsibility to the horticulture trade

- 81% agreed that “nurseries sell invasive plants or plants that may become invasive”

- 82% agreed that “the horticulture trade plays a role in the introduction of invasive plants”
Nursery professionals assign high responsibility to the horticulture trade
Awareness of St. Louis Voluntary Codes of Conduct is low

- Only 7% surveyed had heard of Codes
- 52% reported that learning of Codes made them more likely to participate in the preventive measures outlined in the initiative
Participation in preventive measures is moderate, willingness high

- Average respondent reported having participated in 2.4 (of 7) preventive measures
- Average respondent reported willingness to participate in 4.6 (of 7) preventive measures
- Nearly all (98%) respondents reported willingness to engage in at least one preventive measure
Participation and willingness to participate

#7: Encourage customers to use non-invasive plants
Participation and willingness to participate

#5: Breed alternatives to invasive plants
Participation and willingness to participate

#6: Phase out sales of known invasive plants
Factors correlated with participation

- Respondents with higher awareness of invasive plants reported significantly higher participation in preventive measures.

- Respondents reporting greater involvement in trade associations also reported significantly higher participation levels.
Incentives and Obstacles

Top incentives (environmental awareness):
- Concern for the environment (89%)
- Cultivating a “green” business image (74%)
- Consumer demand (69%)

- Top obstacles (practical issues):
  - Lack of information (65%)
  - Limited personnel (59%)
  - Too time-consuming (57%)
Conclusions

• You, too, can help prevent invasive plant introductions!
• Many people working within the trade appear receptive to adopting preventive practices
• Increasing outreach to nursery professionals (regarding prevention) can make a difference
• Scientists, practitioners, and consumers can help by providing clear and accessible information to nursery professionals on alternative plants and voluntary Codes
## Acknowledgements

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<td>Survey participants</td>
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For more information...


St. Louis Voluntary Codes of Conduct
www.centerforplantconservation.org/invasives/codesN.html

Plant Right campaign (Cal-HIP)
www.plantright.org

Cal-IPC Don’t Plant a Pest Information
www.cal-ipc.org/landscaping/dpp/index.php

TNC Global Invasive Species Initiative - Keeping Horticulture Green
http://tncweeds.ucdavis.edu/horticulture.html