



# Sustainable Conservation

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## **Partnering to Prevent Invasions of Plants of Horticultural Origin**

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# How Did Sustainable Conservation Get Involved?

- Non-profit organization that uses innovative partnerships to promote voluntary conservation by business
- Became interested based on the potential role that the horticultural industry can play in preventing continuing and new introductions
- Performed exploratory research in Summer 2003 and determined this would be a good match with our approach

# Environmental and Economic Impacts of Invasive Species

- Invasive species present the second most serious threat to biodiversity next to habitat destruction (TNC 2003)
- Invasive species contribute to decline of 46% of imperiled or endangered species (TNC 2003)
- Invasives cost \$137 billion per year nationally (Cornell 2000)
- Estimates do not include fire, flood, erosion, and other costs of ecosystem change

# Invasive Plants and the Horticulture Trade

- 85% of invasive woody plants in US introduced for landscape trade (Reichard 1997)
- 53% of California's most invasive plants have horticultural origins (Stanton 2002)
- Potential exists for introduction of >1000 new invasive plants (Reichard 2001)

# Survey of Wholesale Nurseries

- Sustainable Conservation worked with Cal-IPC
- Selected 25 California wholesale nurseries to obtain a representative cross-section based on:
  - Size
  - Specialty
  - Location
- Selected 52 plants from Cal-IPC list having potential horticultural value
- Reviewed growers' catalogs and availability listings
- Treated horticultural varieties separately

# Findings of Wholesaler Survey

- Of the 25 wholesalers surveyed:
  - 18 carried at least one invasive plant
  - 22 carried at least one invasive plant or a variety
- The average number of invasive plants carried per wholesaler was:
  - 3.2 invasive plants, or
  - 5.5 invasive plants including varieties
- One wholesaler carried 14 invasive plants

# Additional Findings

- Of the 52 Cal-IPC listed plants, 32 were carried by at least one wholesaler
- 13 of the 32 invasive plants had varieties that were sold in at least one of the 25 nurseries
- Of the 13 plants with varieties, each was sold by an average of 4.5 nurseries

# Most Widely Available Wholesale

## Cal-IPC Listed Plants

- *Hedera helix* / English ivy (7 of 25)
- *Cortaderia selloana* / Pampas grass (5 of 25)
- *Cotoneaster lacteus* / Cotoneaster (5 of 25)
- *Schinus molle* / California pepper tree or Peruvian pepper tree (5 of 25)

## Varietals of Cal-IPC Listed Plants

- *Pennisetum setaceum* var. / Fountain grass (12 of 25)
- *Hedera helix* var. / English ivy (9 of 25)
- *Cortaderia selloana* var. / Pampas grass (7 of 25)
- *Vinca major* var. / Periwinkle (7 of 25)



# Retail Nursery Survey

- 2003 Master Gardener survey conducted by U.C. Cooperative Extension (Carl Bell) and the San Diego Master Gardeners
- Visited 23 nurseries
- From a list of 25 invasive plants, found 23 on sale

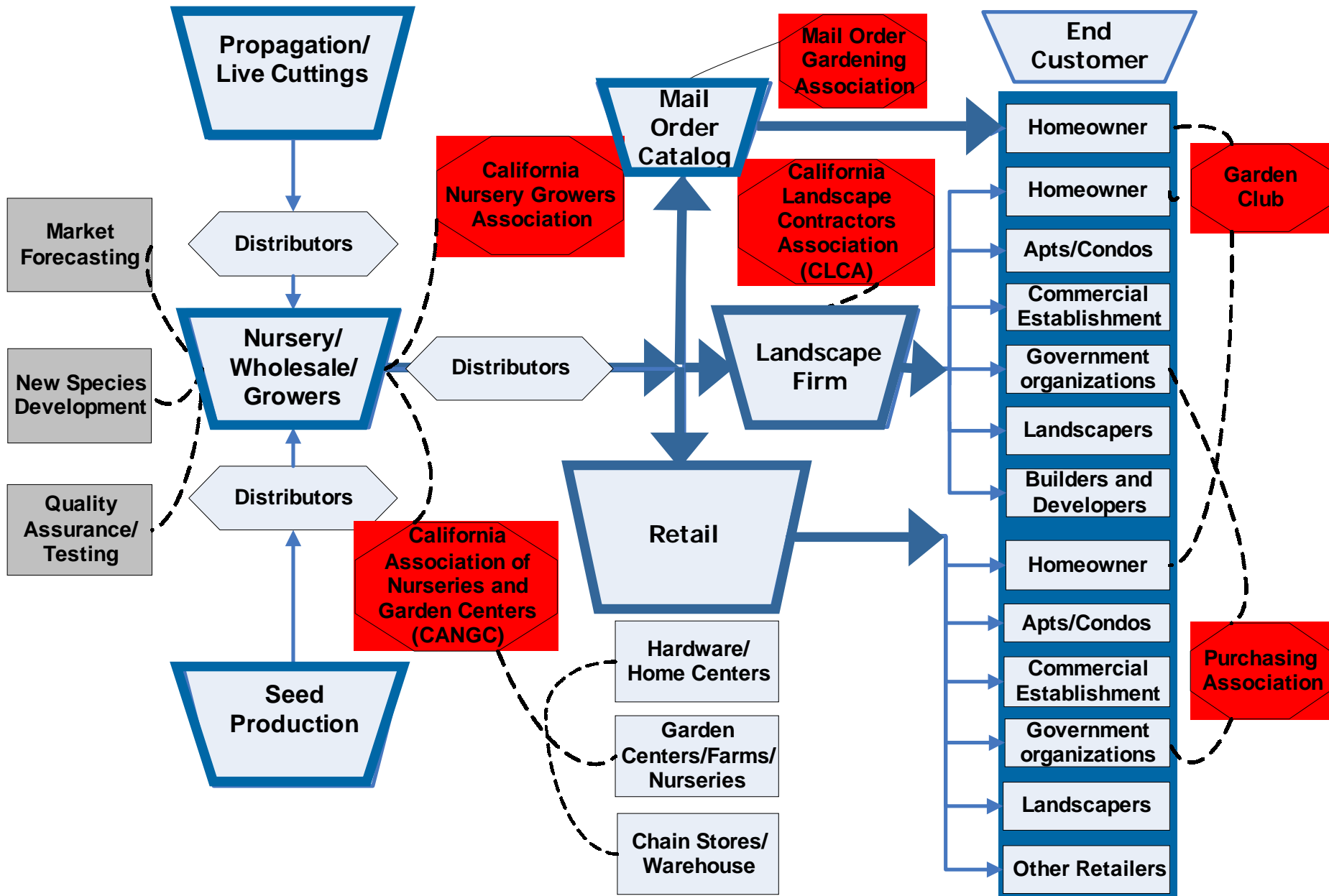
## Top five plants found

- *Hedera helix* / English Ivy (100% of nurseries)
- *Pennisetum setaceum* / Fountain grass (91%)
- *Vinca major* / Periwinkle (91%)
- *Aptenia cordifolia* / Red apple (83%)
- *Helichrysum petiolare* / Licorice plant (74%)

# California's Horticulture Industry

- **Third largest agricultural industry in California next to dairy and grapes**
- **\$13.2 billion per year (2001)**
  - \$3.1 billion in production sales
  - \$10.1 billion in retail sales
- **Produces 21% of nursery plants nationwide**
- **27% of California's nursery production is in San Diego County**
- **Provides a total of ~169,000 jobs in California**
- **California is the largest nursery retailing state in the country, and sales are expected to grow**

# California Horticulture Value Chain



# Nursery/Wholesale/Growers

- \$3.1 billion sales value
- 2,930 producers in California
- Highly fragmented industry with high competitive rivalry
- Low margins
- Continued consolidation, but some sources say it's stabilizing
- Many other pressing issues, including runoff water quality and pathogen control
- Relatively low bargaining power

Source: "Economic Impact California Horticulture Industry," 2003, CDFA Database

# Retailers

- \$10.1 billion sales value
- Many retailers, but volume concentrated in big chains
- The Hardware/Home Center market share is growing rapidly
- Plants are an important product, but one of many types of products for Hardware/Mass Merchandisers
- Relatively high bargaining power for big chains allows these retailers to put pressure on margin and volume

# Landscape Firms

- \$11.2 billion spent annually on landscape construction/ installation nationwide
- \$10.7 billion spent annually on landscape maintenance
- Landscape contractors constitute 7 to 14% of national nursery/grower sales

Sources: FirstResearch Industry Profile: Nurseries, 2003; ANLA phone interview

# Catalog Sales

- \$3.1 billion sales value
- Relatively small in sales, but plays an important role in the invasives issue because of the distributed nature of the business



Source: Mail Order Gardening Association website, 2003

# Federal Regulatory Authority

- Authority is fragmented across many agencies
- No comprehensive framework for regulating all pathways of invasive plants or all types of invasive plants
- Primarily oriented toward adverse impacts on agricultural operations
- States play a significant role in the regulation and management of invasive plants



# California Regulatory Framework

- California Department of Food and Agriculture maintains a list of noxious weeds that are banned from sale
- Listing authority was recently revised to include plants having ecological impacts
- 11 new plants were added in 2003, some of which have horticultural value
- Enforcement responsibility lies with the county agricultural commissions
- Small number of plant-specific local ordinances

# Nonregulatory Efforts

- Invasive plant councils across the country are developing plant lists
- Cal-IPC and others developing and disseminating educational brochures on plant alternatives
- Draft California Noxious and Invasive Weed Action Plan calls for engagement with industry
- St. Louis Declaration established voluntary codes of conduct for nurseries, landscape architects, botanic gardens, and garden clubs

# Saint Louis Declaration

- Industry and other stakeholders developed the St. Louis Declaration in 2001
- 35 organizations have voluntarily signed-on to the St. Louis Declaration Codes of Conduct
- <http://www.centerforplantconservation.org/invasives/>

# Voluntary Codes of Conduct for Nursery Professionals

- Ensure that invasive potential is assessed prior to introducing and marketing plant species new to North America.
  - Invasive potential should be assessed by the introducer or qualified experts using emerging risk assessment methods that consider plant characteristics and prior observations or experience with the plant elsewhere in the world.
  - Additional insights may be gained through extensive monitoring on the nursery site prior to further distribution.
- Work with regional experts and stakeholders to determine which species in your region are either currently invasive or will become invasive.
  - Identify plants that could be suitable alternatives in your region.

# Voluntary Codes of Conduct for Nursery Professionals (continued)

- Develop and promote alternative plant material through plant selection and breeding.
- Where agreement has been reached among nursery associations, government, academia and ecology and conservation organizations,
  - Phase-out existing stocks of those specific invasive species in regions where they are considered to be a threat.
- Follow all laws on importation and quarantine of plant materials across political boundaries.
- Encourage customers to use, and garden writers to promote, non-invasive plants.

# Initial Scoping Meeting

## Industry

- California Association of Nurseries and Garden Centers
- Hines Horticulture
- Mitsuwa Nursery, Inc.
- Monrovia
- American Society of Landscape Architects
- Nursery Growers Association of California
- American Nursery and Landscape Association

## Consumer

- Contra Costa Master Gardeners
- Garden Club of America

## Non Profit

- Sustainable Conservation
- California Invasive Plant Council
- The Nature Conservancy
- Union of Concerned Scientists

## Academic

- UC Cooperative Extension
- University of Washington

## Government

- Glenn County Agricultural Commission
- California Department of Food and Agriculture
- Marin County Open Space District and Bay Area Open Space Council Stewardship Committee

# Key Challenges

- Stakeholder engagement
- Definition and determination of invasiveness
- Consumer preferences
- Diverse target audiences
- Information needs

# Next Steps

- Come up with a good name for the partnership effort
- Investigate in more detail Massachusetts and Florida voluntary efforts to learn from their experience
- Convene a steering committee to:
  - Articulate a purpose statement and goals for the group
  - Develop a workplan using the St. Louis Declaration as a jumping off point
  - Develop operating procedures
- Hold the partnership's first meeting this November



# For Additional Information

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