PlantRight: Partnering to Stop the Sale of Invasive Plants

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A bit about me....

Glen Helen
OUTDOOR EDUCATION CENTER

sca.

Point Blue Conservation Science

Sustainable Conservation

PLANT RiIGHT.
Nursery Survey → Plant List → Retail Nursery Partners

Plant Risk Evaluator (PRE) → Suggested Alternatives for MGMT. Invasive Garden Plants → Continuing Education → Other Outreach
Sustainable Conservation helps California thrive by uniting people to solve the toughest challenges facing our land, air, and water.
Invasive Plant Pathways (California)

- Horticultural: 48%
- Seed/other contaminant: 37%
- Dye, medicinal, forage: 13%
- Aquarium trade: 2%

(Bell et al., 2003)
Annual Nursery Survey
2016 Spring Nursery Survey

Purpose:

- Track retail market
- Update plant list
- Inform strategy
2016 Spring Nursery Survey

- 7th year
- 175 volunteers
- 302 stores!
- 46 counties

Legend:
- No invasives present
- One or more invasives present
- Incomplete data (5)
Cohort 1 (Listed since 2006)

Highway iceplant

*Carpobrotus edulis*

Periwinkle

*Vinca major*

Green fountain grass

*Pennisetum setaceum*

Pampas grass

*Cortaderia selloana*
Cohort 2 (Added in 2014)

Mexican feathergrass
Stipa/Nassella tenuissima

Water hyacinth
Eichhornia crassipes

Yellow water iris
Iris pseudacorus
Overall | % of Stores Selling Invasives

- **COHORT 1** (on Plantright list since 2006)
- **COHORT 2** (added to Plantright list in 2014)
- **ALL PLANTS** (cohort 1 & 2)

Year | COHORT 1 | COHORT 2 | ALL PLANTS
--- | --- | --- | ---
2011 | 27% | - | -
2012 | 30% | - | -
2013 | 25% | - | -
2014 | - | 40% | 44%
2015 | - | 35% | 31%
2016 | - | 30% | 27%

Surveyed stores:
- 2011: 224
- 2012: 230
- 2013: 223
- 2014: 226
- 2015: 265
- 2016: 302
2014-2016: Presence of All Plants at Retail

- **S. tenuissima** (Mexican feathergrass) 2014: 25.2%, 2015: 22.5%, 2016: 22.5%
- **C. selloana** (Pampas grass) 2014: 6.2%, 2015: 4%, 2016: 6.2%
- **E. crassipes** (Water hyacinth) 2014: 6.4%, 2015: 5%, 2016: 6.0%
- **P. setaceum** (Green fountain grass) 2014: 6.4%, 2015: 4.1%, 2016: 3.7%
- **C. edulisc** (Highway iceplant) 2014: 2.7%, 2015: 0.7%, 2016: 3.5%
- **V. major** (Periwinkle) 2014: 9.1%, 2015: 5.3%, 2016: 2.5%

Periwinkle (Vinca major) decreased from 5.3% to 2.5%.
Store Types

- Big box stores
- Small Chain
- Independent

Logos of various stores including The Home Depot, Lowe's, Orchard Supply Hardware, Green Acres Nursery & Supply, Roger's Gardens, McShane's Nursery & Landscape Supply, Sloat Garden Center, Armstrong Garden Centers, and Yamagami's Garden Center.
PlantRight works with California’s nursery industry to promote the sale of exclusively non-invasive plants throughout the state. To do so, we recommend commercially viable and environmentally safe alternatives to the most commonly sold horticultural invasive plants. With the annual Spring Nursery Survey, we track the retail market for invasive garden plants in California. The data collected from this survey informs PlantRight’s strategy and allows us to monitor the effectiveness of our work over time. This fact sheet highlights the collective understandings and major findings of the 2016 Spring Nursery Survey.

**Background**

**Methodology**

Each year, PlantRight randomly selects a sample of retail nurseries to survey from a total pool of over 1,500 stores operating across California. This year, over 120 trained volunteers, many of whom are UC Master Gardeners, surveyed 302 independent, small chain, and big-box retailers in 44 counties.

The plants surveyed change slightly from year to year, and always include invaders on PlantRight’s plant list, plus candidate plants being evaluated for potential addition to the list (see box above). Graphs in this fact sheet only show results for the seven plants currently on the PlantRight Invasive plant list. Results reflect only the plants that were found in climate zones where they are determined to be invasive based on the Sunset climate zones for each plant found in the Sunset Western Garden Book and guidance from our Plant List Committee.

**Results**

The rate of nurseries selling locally invasive plants continues to decline. In 2014, 44% of nurseries surveyed were selling locally invasive plants; this rate dropped to 33% in 2015, and then continued its downward trend in 2016, to 31%.

Much of the overall decline from 2014 to 2016 may be due to Cohort 2 plants’ downward trend: 45% in 2014, to 36% in 2015, to 27% in 2016. Meanwhile, Cohort 1 plants were found at 131 of stores in 2015 and 2016 (after dropping from 17% in 2014).

Of the nurseries selling any locally invasive plants in 2016, 10% had more than one species of invasive plant for sale. This is a slight increase from 2015, when 8% of stores (that sold any invasives) had more than one invasive for sale.
# 2016 Plant List

**Suggested Alternatives for Invasive Garden Plants**

PlanRight's 2016 list of horticultural invasive plants identifies the highest priority invasive plants available for sale in California. If one of these plants is invasive in your climate zone, they should not be used in gardens or landscaping. Instead, consider one of the beautiful, non-invasive alternatives below. Thank you for joining us in protecting California's environment by Planting Right!

## Invasive Grasses

**Invasive in climate zones:**

<table>
<thead>
<tr>
<th>Grass</th>
<th>Suggested Non-invasive Alternatives</th>
<th>Featured Information</th>
<th>Suitable Climates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green fountain grass (Pennisetum setaceum)</td>
<td>Oriental fountain grass (Pennisetum orientale)</td>
<td>Compact, floriferous, cold hardy, very similar aesthetic and habit</td>
<td><img src="image" alt="Suitable Climates" /></td>
</tr>
<tr>
<td>Mexican feathergrass (Stipa/nessella tenuissima)</td>
<td>Blue grama grass (Bouteloua gracilis 'Blonde Ambition')</td>
<td>Attractive flowerheads, best when cut back in winter, cultivar of CA native robust yet slower growing, does well in a range of soils</td>
<td><img src="image" alt="Suitable Climates" /></td>
</tr>
<tr>
<td>Pampas grass (Cortaderia selloana)</td>
<td>Foerster's reed grass (Calamagrostis x acutiflora 'Karl Foerster')</td>
<td>Stately white plumes from summer until frost, curable and showy</td>
<td><img src="image" alt="Suitable Climates" /></td>
</tr>
<tr>
<td>Water hyacinth (Eichhornia crassipes)</td>
<td>King of Siam water lily (Nymphaea 'King of Siam')</td>
<td>Large, double purple flowers, floating leaves, roots in bottom soil</td>
<td><img src="image" alt="Suitable Climates" /></td>
</tr>
<tr>
<td>Yellow water iris (Iris pseudacorus)</td>
<td>Cannna species (Canna hybrids)</td>
<td>Many colors and sizes available, robust in ponds, needs to be wintered indoors</td>
<td><img src="image" alt="Suitable Climates" /></td>
</tr>
</tbody>
</table>

## Invasive Water Plants

**Invasive in climate zones:**

<table>
<thead>
<tr>
<th>Grass</th>
<th>Suggested Non-invasive Alternatives</th>
<th>Featured Information</th>
<th>Suitable Climates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desert</td>
<td>Desert</td>
<td>Desert</td>
<td>Desert</td>
</tr>
<tr>
<td>Central Valley</td>
<td>Central Valley</td>
<td>Central Valley</td>
<td>Central Valley</td>
</tr>
<tr>
<td>Sierra &amp; Coastal Mountains</td>
<td>Sierra &amp; Coastal Mountains</td>
<td>Sierra &amp; Coastal Mountains</td>
<td>Sierra &amp; Coastal Mountains</td>
</tr>
<tr>
<td>North &amp; Central Coast and Delta</td>
<td>North &amp; Central Coast and Delta</td>
<td>North &amp; Central Coast and Delta</td>
<td>North &amp; Central Coast and Delta</td>
</tr>
</tbody>
</table>

# 2016 Plant List

Why using non-invasive plants matters:

When invasive plants spread into natural areas, they push out native plants and wildlife. This impairs waterways, increases fire severity, harms ecosystems, and reduces biodiversity. It also creates financial burden on taxpayers. In California, over $80 million and countless hours of painstaking labor is spent each year addressing invasive plants. This does not include financial losses from reduced agricultural yields, land values, and recreational opportunities.

By Planting Right, you are protecting our natural resources, local ecosystems and our economy.

<table>
<thead>
<tr>
<th>Invasive Groundcovers</th>
<th>Suggested Non-invasive Alternatives</th>
<th>Featured Information</th>
<th>Suitable Climates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway iceplant (Carpobrotus edulis)</td>
<td>Trailing iceplant (Delosperma cooperi)</td>
<td>Showy pink flowers, low maintenance, cold-hardy</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Wild strawberry (Fragaria chiloensis, f. californica)</td>
<td>Edible, best in sandy or well-drained soil, tolerates drought or moderate water</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>White trailing iceplant (Delosperma 'Alba')</td>
<td>White flowers, attracts bee pollinators, small-leaved</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Rosea iceplant (Drosanthemum flabiflorum)</td>
<td>Good for erosion control, tough, moderate to minimal water, can be weedy on coast</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Prostrate coyote bush (bachemaria pilutasa 'Twin Peaks' or 'Pigeon Point')</td>
<td>Easy care, habitat plant, drought tolerant on coast, reliably deer-proof, good for slope stabilization</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Prostrata grevillea (Grevillea x gaudichaudii)</td>
<td>Colorful, easy-care, best in part shade, spreads to 15 ft. wide, moderate water</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td>Periwinkle (Vinca major)</td>
<td>Dwarf periwinkle (vinca minor)</td>
<td>Nice in containers or groundcover in a wide range of soils, long-blooming, blue flowers</td>
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</tr>
<tr>
<td></td>
<td>Hardy geranium (Geranium 'rozanne')</td>
<td>Reliable spring to early summer blooms, medium water, hardy, 2 ft. tall x 3 ft. wide</td>
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</tr>
<tr>
<td></td>
<td>Siberian belflower (Campanula poscharskyana)</td>
<td>Similar flowers in spring to early summer, low water, fast growth, 8&quot; tall, spreading</td>
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</tr>
<tr>
<td></td>
<td>Star / Asian jasmine (Trachelospermum jasminoides/ Trachelospermum asiaticum)</td>
<td>Fragrant and abundant flowers, shrub-like, grows as mat or on trellises, 2 ft. x 10 ft.</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Ceanothus groundcovers (Ceanothus spp.)</td>
<td>Blue flowers, low water, slow growing, native w/ many varieties; ask for local options</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
<tr>
<td></td>
<td>Hummingbird sage (Salvia splendens)</td>
<td>Habitat plant, showy flowers and foliage, great for dry shade under oaks</td>
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</tr>
<tr>
<td></td>
<td>Taiwan raspberry (Rubus pentalobus)</td>
<td>Dense, mild autumn color, creeps over rocks, tough groundcover, slower growing</td>
<td>🟢 🟣 🟤 🟥 🟦 🟧</td>
</tr>
</tbody>
</table>


PlantRight has “retired” the following invasive plants from this list as retailers have largely phased them out of California’s nursery trade. These should not be used in gardens or landscaping. For information on these retirees, visit [www.PlantRight.org](http://www.PlantRight.org).

### Do Not Use
- Capeweed (Arctotheca calendula)
- Arundo, giant reed (Arundo donax)
- Jubata grass (Cortaderia jubata)
- Scotch broom (Cytisus scoparius)
- Portuguese broom (Cytisus striatus)
- Russian olive (Elaeagnus angustifolia)
- Blue gum eucalyptus (Eucalyptus globulus)
- French broom (Genista monspessulana)
- Crystalline iceplant (Mesembryanthemum crystallinum)
- Myoporum (Myoporum laetum)
- Bridal veil broom (Retama monspersperma)
- Scarlet wisteria (Sesbania punicea)
- Spanish broom (Sporratium junceum)
- Saltcedar (Tamarix ramosissima)
- Chinese tallow tree (Triadica sebifera)

Got feedback? Contact us at [PlantRight@suscon.org](mailto:PlantRight@suscon.org)

Photo credits [top to bottom](http://www.natureconservancy.org): [Karteen Barry A Rice](http://www.natureconservancy.org)
Criteria for Retirement

Found at <1% of retail nurseries for 3 years in a row

Retired
Criteria for Addition

1. Known to be invasive somewhere in CA or is evaluated (PRE) as a high risk.

2. Sold at >3% of retail nurseries.

3. Invasive range is large enough to be significant to CA gardeners / landscape pros.
We need to choose our battles carefully.
Want to know more?

medium.com/@plantright

Where invasive plants are sold in California — and how we know

This past spring, they were all over California. With clipboards, cameras, and data sheets in hand, they were searching at a nursery or garden center near you—for invasive plants.

The nursery survey is how we measure what is happening in California’s retail nursery industry, and none of it would happen without our survey volunteers. This year 175 volunteers (many of them UC Master Gardeners) were trained by PlantRight to survey for invasive plants at retail locations throughout the state.

Helping with the survey gives the UC Master Gardeners not only a chance to further their knowledge of invasive plants, but the opportunity to work with wonderful people at PlantRight. We find most nursery managers want to know more about the PlantRight program and are eager to get the helpful information on alternative plants which we are able to leave with them to help them educate their customers about growing choices.

— Linda Haque, Ventura County Master Gardener and survey volunteer
Retail Nursery Partnership
Retail Nursery Partnership

STORES COMMIT TO:

- PlantRight pledge
- Phase out invasives
- Graduate buyers through PlantRight’s online training
Retail Nursery Partnership

STORES RECEIVE:

- Invasive plant expertise
- Educational resources
- Added to our online directory
- Recognition as leaders
RNP Today

★ 22 partners
★ 455 store fronts

Roger’s Gardens
City Farmers Nursery
McShane’s Nursery
Continuing Education

- Nursery and landscape trade
- Video and study guide
- Pledge
What's next for PlantRight?

- New website
- E-newsletter
- Plants of Concern/Plants of Interest
- Evaluating and adding more alternatives
Want to get involved?
Nursery Survey → Plant List → Retail Nursery Partners → Continuing Education

Plant Risk Evaluator (PRE) → Plant List → Other Outreach
Let’s be social!

@_plantright

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facebook.com/PlantRight

Add #plantright to get your photo shared on our Instagram page
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