

Invasive Weeds from the Nursery

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Nursery Industry

The California nursery industry is the largest in the United States and represents 21% of the national production. It is estimated to generate over \$13 billion in annual revenue. Of this, about \$3 billion is in production sales and \$10 billion is in retail sales. The farm values from the nursery industry ranks third in California, behind only dairy and grape farm values. San Diego County is the largest nursery plant producer in the state, accounting for 27% of the total production. In total, the nursery industry provides over 160,000 jobs a year in California.

These trends in production and demand are expected to increase in California as the population of the state is projected to increase from 33 million people in 2000 to 50 million in 2025 (Public Policy Institute of California 2002). This will lead to increased housing demands and, concomitantly, greater need for landscaping and gardening products.

In addition, retail sales of nursery plants in California has shifted dramatically in the past 10 years from a garden center and independent nursery market to more of a large retail home center market. This shift is likely to reduce the level of expertise of employees selling ornamental plants. Thus, in addition to being a significant economic entity, the nursery industry is also a complex value driven customer market.

Invasive Plants

Of the 189 species listed on the 2006 California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory (www.cal-ipc.org), about 57% were introduced through the nursery industry. This includes plants on the high, moderate and limited invasive lists. More importantly, 73% of those plants on the highly invasive list are escaped ornamentals. Of the 235 introduced woody plants that have become invasive in the United States, 85% were introduced for landscape purposes (Stanton et al. 2002).

The reason for this close association with ornamental plants and invasive species is not surprising. The qualities of an economically successful nursery plant would include ease of propagation, rapid establishment and growth rates, early maturity, abundant flower production, fitness under a variety of environmental conditions, and the absence of major pathogen or insect pests. These same qualities are present in many of the most invasive plant species of wildland areas. In addition, ornamentals often have the advantage of being widely distributed through the activity of humans, which gives them increased opportunities to escape to wildland areas.

In an unpublished study conducted by Cal-IPC, they surveyed 25 wholesale nurseries throughout the state to determine to what extent 52 invasive ornamental species or varieties were still being sold. Results indicated that 72% of the nurseries carried at least one invasive plant species and 88% carried at least one invasive plant or variety of an invasive plant. Thus, most

nurseries play a role, or have a stake, in the introduction of invasive plants to California landscapes. The average number of invasive plants sold in the surveyed nurseries was 3.2 (5.5 including varieties), with one nursery selling 14 invasive species. Of the total of 52 species surveyed, 32 were still being sold, with 20 no longer available. Of these 32 species, each was sold by an average of 2.5 of the 25 nurseries. Varieties also played an important role. There were 13 varieties being sold from the 32 species and each was sold by an average of 4.5 nurseries. Although some varieties may not be invasive, there are many unresolved questions surrounding their impacts.

Table 1. Most frequently sold invasive species (with ranking) and the percentage of nurseries that provided these plants.

Scientific name	Common name	Cal-IPC ranking	Percentage of nurseries selling plant
<i>Pennisetum setaceum</i> and varieties	crimson fountaingrass	Moderate	48
<i>Hedera helix</i> and varieties	English ivy	High	36
<i>Cortaderia selloana</i> and varieties	pampasgrass	High	28
<i>Vinca major</i> and varieties	big periwinkle	Moderate	28
<i>Cotoneaster lacteus</i>	Parney's cotoneaster	Moderate	20
<i>Schinus molle</i>	Peruvian peppertree	Limited	20

Collaborative Solution

Once a state designates a plant as “noxious”, it has the regulatory authority to prevent interstate movement. In California, there are 144 plant species designated as “noxious”, of which only 34% overlap with the Cal-IPC invasive weed inventory, and only 21 (15%) are ornamental species on both lists. Of these 21, only 12 (8%) are still being sold in any capacity. Thus, there is little regulatory authority for prohibiting the sale of most invasive nursery species in the state. As an alternative solution to prohibiting the sale of all invasive species, Cal-IPC initiated a collaborative effort with the nursery industry to produce brochures that provide alternative native and non-native plants that are not known to be invasive. Collaborating in this effort were experts from the University of California Cooperative Extension, commercial and retail nurseries, growers, botanical gardens, gardeners, state and local agencies, non-profit organizations, and land managers.

The goal of this effort is to provide a positive educational solution that focuses on building awareness and responsible use of ornamental plants. The brochures target either plant growth forms, such as woody species, or geographical regions within the state (i.e., Bay Area, Southern California, Central Coast, etc.).

The design of these “Don’t Plant a Pest” brochures is such that alternative non-invasive species provide the same landscape function, ease of propagation, hardiness, maintenance requirements, availability, and cost as the invasive species they are intended to replace. This

requires that they match the various qualities related to flower or foliage color, growth rate, size and habit, foliage type and texture, season of interest, and disease resistance. The brochures are education tools for Cal-IPC members and others to use in approaching their local nurseries. They are also important educational materials for Master Gardeners, gardeners and consumers, and a template for other organizations that wish to produce similar materials. Each of the brochures includes general information on the invasiveness of 10 to 15 species and briefly describes several native and non-native alternatives. Since the publication of the first San Francisco Bay Area brochure in 2003, over 60,000 copies have been distributed through requests. Future efforts will focus on specific “Don’t Plant a Pest” brochures for most growing regions within the state.

To view or order any of the “Don’t Plant a Pest” brochures see www.cal-ipc.org.

Literature Cited

Public Policy Institute of California. 2002. US Census, California Department of Finance, Construction Industry Research Board

Stanton, A.E., C.E. Bell, and C. Wilen. 2002. Keep it in the Garden: Invasive plants and the nursery trade. *Proc., California Weed Sci. Soc.* 54:145-148.