

THE ORNAMENTAL PRICKLY PEAR INDUSTRY IN THE SOUTHWESTERN UNITED STATES

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ABSTRACT

Several species of prickly pear cacti are grown as ornamental plants in public, private, residential, and commercial landscapes throughout the more arid areas of Arizona, California, Nevada, New Mexico, and Texas. Several commercial nurseries, ranging in size from small family-owned specialty operations to large diversified wholesale nurseries, produce and sell prickly pear cacti. The greatest nursery production occurs in Arizona, followed by southern California. In Arizona, there are over 40 small commercial operations in the Phoenix area alone. A survey of Arizona nurseries revealed an inventory of 550,000 prickly pear plants on hand with wholesale and retail values of \$4.5 million and \$9.5 million, respectively. If prickly pear cacti were lost as a viable nursery crop, small specialized nursery operations would be more likely to suffer than large diversified nurseries.

Key Words: *Opuntia*, economics, nursery industry, landscaping

RESUMEN

Varias especies de cactus del género *Opuntia* se usan como plantas ornamentales en la jardinería de áreas públicas, privadas, residenciales y comerciales en áreas de clima seco en los estados de Arizona, California, Nevada, Nuevo Méjico y Tejas. Varios viveros comerciales, que varían en tamaño desde pequeños y especializados en Cactaceae a operaciones de tamaño y diversidad vegetal vasta, producen y venden cactus pertenecientes a este género. Los viveros de mayor tamaño se encuentran en el estado de Arizona y en el sur de California. En Arizona en áreas cercanas a la ciudad de Phoenix, existen aproximadamente 40 viveros comerciales pequeños. Datos colectados en Arizona indican que hay alrededor de 550,000 plantas de cactus a la venta en viveros con un valor de venta al mayoreo de \$4.5 millones y de venta al público de \$9.5 millones de dólares. Cualquier amenaza a esta industria hortícola de cactus resultaría no solo en pérdidas grandes para el sector comercial sino también en la reposición de plantas que se usan corrientemente en áreas jardinizadas. Si la venta de plantas de cactus se viera severamente restringida, los viveros pequeños y especializados en estas plantas serían afectados más severamente que los viveros comerciales.

Many species of prickly pear cacti (*Opuntia*: Cactaceae) are used as ornamental plants in the southwestern United States (Mielke 1993; Irish 2000; Jones and Sacamano 2000). These plants are prominent parts of the ornamental flora of Arizona and Nevada and are found in varying degrees in California, New Mexico and Texas. Prickly pear cacti are commonly used landscaping plants on both residential and commercial properties. The common ornamental species are desert prickly pear (*Opuntia phaeacantha* Engelm. and *O. engelmannii* Salm-Dyck), purple prickly pear (*O. violacea* Engelm.), beavertail prickly pear (*O. basilaris* Engelm. & Bigelow) and Indian fig prickly pear (*O. ficus-indica* (L.) Miller). Less abundant, but widely available are bunny-ear prickly pear (*O. microdasys* (Lehmann) Lehmann) and chenille prickly pear (*O. aciculata* Griffiths). In addition, there are numerous hybrids, varieties, and unnamed forms of these species and others grown throughout the region.

Because prickly pears are relatively easy to grow, they are produced in Arizona by a variety of nursery operations. Large wholesale growers with

a diverse inventory, small specialty growers, and one-person backyard operations all provide these plants to the public. Only large growers or recognized specialty growers have inventories that are included in published economic surveys. From my experience with the landscape industry, I estimate that there are 40-50 small-scale nurseries producing prickly pear plants in the Phoenix area alone.

MATERIALS AND METHODS

I used two methods to estimate the economic impact of prickly pears on the nursery industry in the southwestern states. The first was an informal telephone survey conducted in fall 2000, among growers in the Phoenix and Tucson areas. The second method was to summarize published economic surveys of the agriculture/horticulture industries for the relevant states.

RESULTS AND DISCUSSION

The telephone survey of Arizona growers revealed that on-hand nursery inventory of landscape prickly pear cacti was approximately

550,000 plants, with wholesale and retail values of \$4.5 million and \$9.5 million respectively.

In 1998, the entire ornamental landscape industry in Arizona generated sales of \$415 million, of which \$158 million consisted of plants specifically for arid environments (xeriscape plants) (Payne 1999).

In California, the 1999 total value of all landscape plant production was \$2.6 billion wholesale; in 1998, retail plant sales amounted to \$5.6 billion (J. A. Wick, Executive Director, California Association of Nurserymen, pers. comm.). Although data specific to cacti are not kept in California, there are approximately 30 specialized growers of cacti (Wick, pers. comm.). Whereas there is a substantial prickly pear nursery industry producing landscaping plants in Arizona, many of the California cactus growers produce potted plants for the gift industry and for cactus and succulent plant enthusiasts; the landscaping component of the California cactus industry is thought to be smaller than that in Arizona.

The total 1998 value of the Texas nursery industry was \$144 million wholesale and \$3.7 billion retail (Anon. 1998). There are no specific data for cactus production, but there are several commercial nurseries in the state. There were no data available for the New Mexico and Nevada nursery industries. There are retailers in both states that sell prickly pears for landscaping purposes, but most material is wholesaled from Arizona and California.

As an ornamental plant, prickly pears have more impact on the public and nursery owners than just their immediate monetary value. Many, if not most, cactus growers are small operations, typically with only a few employees. The loss of prickly pear sales would dramatically and adversely impact such businesses, especially in Arizona. While larger growers with a more diverse inventory would also be impacted by a loss of

prickly pears, recovery would be more easily absorbed. But the specialty growers of southern Arizona and southern California would undoubtedly be unable to shift crops quickly enough to sustain such as a loss. If prickly pears were lost as viable landscape material, I expect that many of these small businesses would fail.

There is also the danger of the loss of confidence in a plant by the public. Once plants are seen to be problematic, such as being high-maintenance or prone to pests or disease, they quickly lose favor with the public. Unfortunately, most of the public would be content to just quit having cacti in the landscape, rather than maintain any kind of pest control monitoring or management. This reluctance, and the perception of difficulty associated with the affected prickly pears, could impact the industry just as severely as the actual loss of plants.

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