

ECONOMIC CONTRIBUTIONS OF ARIZONA'S GREEN INDUSTRY -- 2018

Compiled by:
Arizona Field office
USDA - National Agricultural Statistics Service

An External Project Agreement with:
Arizona Nursery Association
Arizona Landscape Contractors Association

September 2019

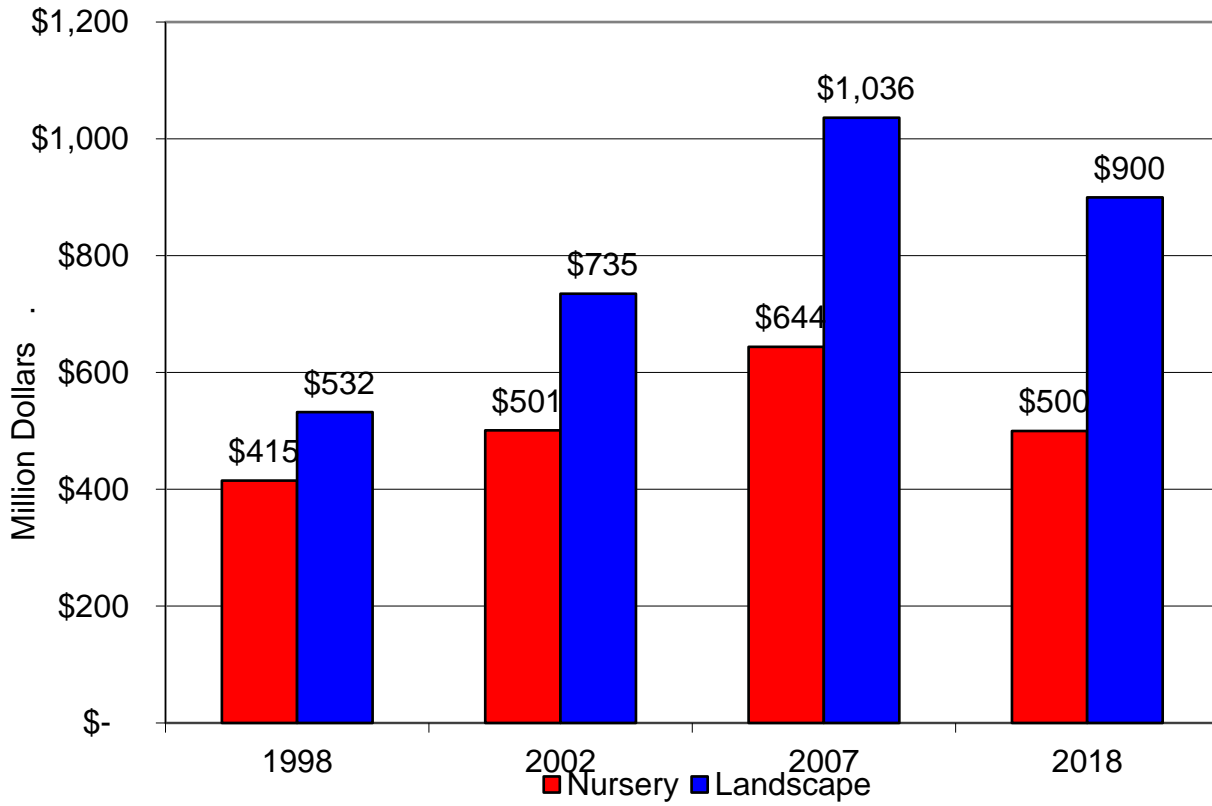
Arizona's Green Industry – 2018 Remains A Billion Dollar Industry

AZ Green Industry sales were estimated at \$1.40 billion in 2018, a decline of 17 percent from the previous estimates from 2007. Nursery sales totaled \$500 million in 2018, a decline of 22 percent from 2007. Landscape service firms had sales of \$900 million, a decrease of 13 percent.

Green Industry Total Sales

| Sector | 1998 | 2002 | 2007 | 2018 | 2018 As % of 2007 |
|-----------------------------|------------------------|--------------|--------------|--------------|----------------------------------|
| | Million Dollars | | | | Percent |
| Nursery | 415 | 501 | 644 | 500 | 78 |
| Landscape Services | 532 | 735 | 1,036 | 900 | 87 |
| Total Green Industry | 947 | 1,236 | 1,680 | 1,400 | 83 |

Green Industry Sales 1998, 2002, 2007, and 2018



Total Nursery Sales: \$500 Million

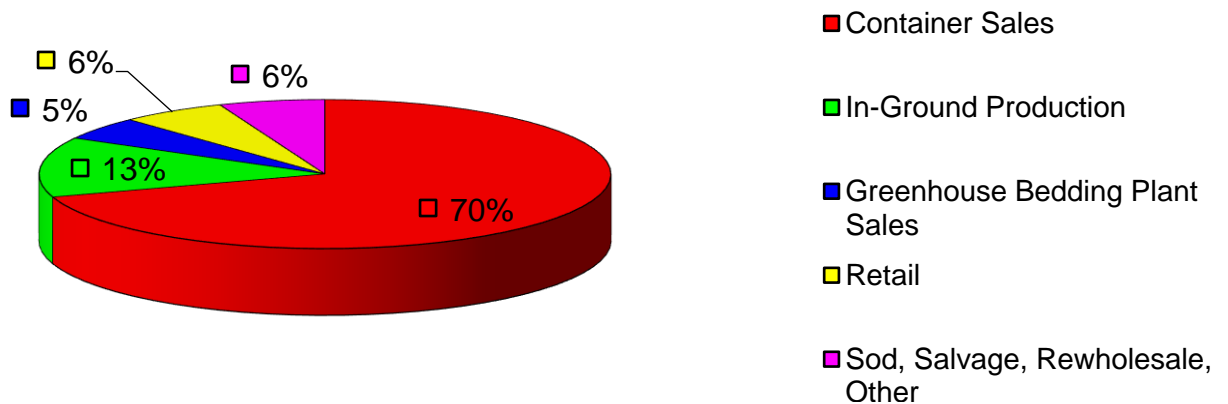
Container Plant Sales: \$350 million

All other sales: \$150 million

Container Sales accounted for 70 percent of all nursery plant sales in 2018 compared to 51 percent in 2007.

Sales of greenhouse bedding plants and in-ground production accounted for an additional 18 percent compared to 22 percent in 2007.

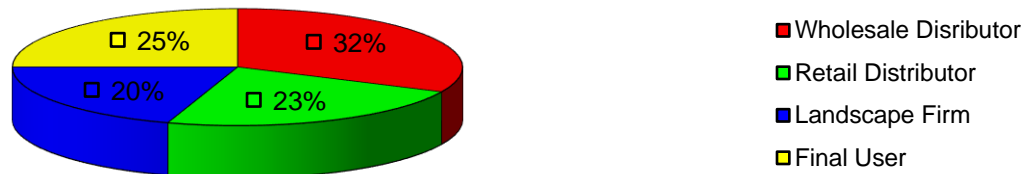
Nursery Sales by Category 2018



Total Nursery Sales: \$500 Million
Sales to Wholesale Distributors: \$160 Million
Sales to Retail & Landscape Firms: \$215 Million
Sales to Final User: \$125 Million

Retail Distributors, Retail Establishments and Landscape Service Firms accounted for 68 percent of the Nursery Production purchased in 2018 compared to 70 percent in 2007. Sales to wholesale distributors had nearly a third of total nursery sales at \$160 million or 32 percent.

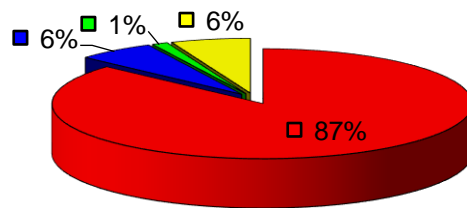
Nursery Sales By Type of Buyer 2018



Total Nursery Sales: \$500 Million
Nursery Sales to Arizona Buyers: \$433 Million
Sales to Nevada and California Buyers: \$36 Million

Eighty-seven percent of all nursery sales in 2018 involved Arizona buyers compared to 89 percent in 2007. The second largest market for Arizona nursery production was California.

Nursery Sales By State 2018

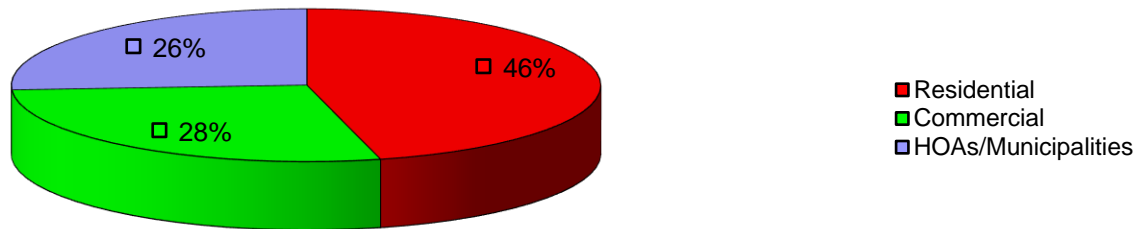


■ AZ Buyers ■ CA Buyers ■ NV Buyers ■ Rest of U.S., Mexico, & Canada

Landscape Service Firm Sales: \$900 Million

Gross revenues of landscape service firms were 46 percent from residential customers, 28 percent from commercial entities, and 26 percent from HOAs/Municipalities. In 2007, 53 percent of landscape revenues were from residential customers.

Landscape Sales By Customer 2018



Landscape Service Firm Sales: \$900 MILLION

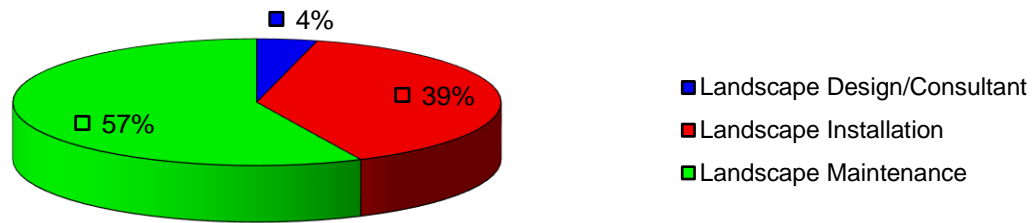
Landscape Service Maintenance Sales: \$513 Million

Landscape Service Installation Sales: \$351 Million

Landscape Service Design Sales: \$36 Million

Maintenance sales accounted for 57 percent of landscape service firm sales compared to 31 percent in 2007. Installation sales dropped 3 percentage points to 39 percent in 2018.

Landscape Sales By Category 2018



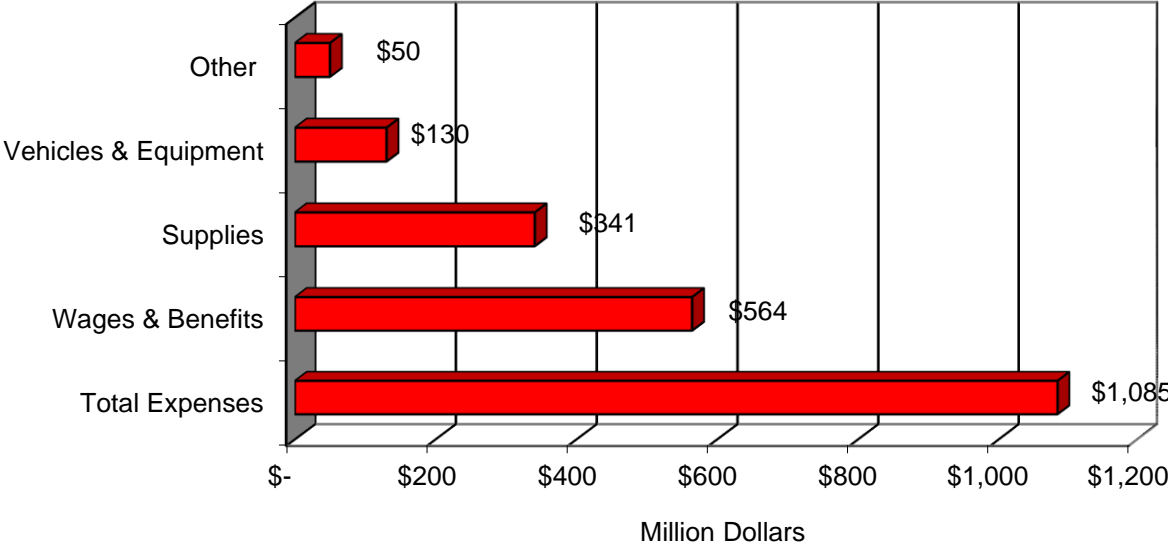
Total Gross Sales by Activity and Type of Customer - 2018

| Activity | Type of customer | | |
|-----------------------------|------------------------|------------|---------------------|
| | Residential | Commercial | HOAs/Municipalities |
| | <i>Million Dollars</i> | | |
| Landscape Design/Consulting | 26 | 6 | 4 |
| Landscape Installation | 193 | 95 | 63 |
| Landscape Maintenance | 196 | 154 | 163 |
| Total | 415 | 255 | 230 |

Green Industry Expenditures: \$1,085 Million

In 2018, the green industry spent \$1,085 million on labor, supplies, vehicles and equipment, and other business expenses. This compares to \$1,404 million in 2007.

Green Industry Expenditures



Green Industry Expenditures

| Expense Item | Total |
|--|------------------------|
| | <i>Million Dollars</i> |
| Wages and benefits | 564 |
| Plant materials | 170 |
| Rock and soil amendments | 51 |
| Container and greenhouse supplies | 30 |
| Fertilizer and chemicals | 19 |
| Irrigation and other supply expenses | 71 |
| Total supply expenses | 341 |
| Vehicle lease/purchase | 63 |
| Fuel, motor oil, and all other vehicle or equipment expenses | 67 |
| Total vehicle and equipment expenses | 130 |
| All other business expenses | 50 |
| Total expenses (all categories) | 1,085 |

**Total Green Industry Expenses
1998, 2002, 2007 and 2018**

| Expense item | 1998 | 2002 | 2007 | 2018 | 2018 as % of 2007 |
|--|------------------------|--------------|--------------|--------------|-------------------------|
| | <i>Million Dollars</i> | | | | <i>Percent</i> |
| Wages and benefits | 307 | 487 | 710 | 564 | 79 |
| Supplies | 225 | 359 | 482 | 341 | 71 |
| Vehicles and equipment | 60 | 106 | 140 | 130 | 93 |
| Other | 33 | 58 | 72 | 50 | 69 |
| Total expenses (all categories) | 625 | 1,010 | 1,404 | 1,085 | 77 |

Arizona's Green Industry Employment

The Green Industry provided direct employment to 26,000 hired workers in 2018, a decrease of 14 percent from 2007.

| Green Industry Employment | | | | | |
|-----------------------------|----------------------|---------------|---------------|---------------|-------------------|
| Sector | 1998 | 2002 | 2007 | 2018 | 2018 as % of 2007 |
| | <i>Hired Workers</i> | | | | <i>Percent</i> |
| Nursery | 8,827 | 8,900 | 10,700 | 8,200 | 77 |
| Landscape Services | 10,618 | 15,200 | 19,600 | 17,800 | 91 |
| Total Green Industry | 19,445 | 24,100 | 30,300 | 26,000 | 86 |

2007 & 2018 26,000 hired workers

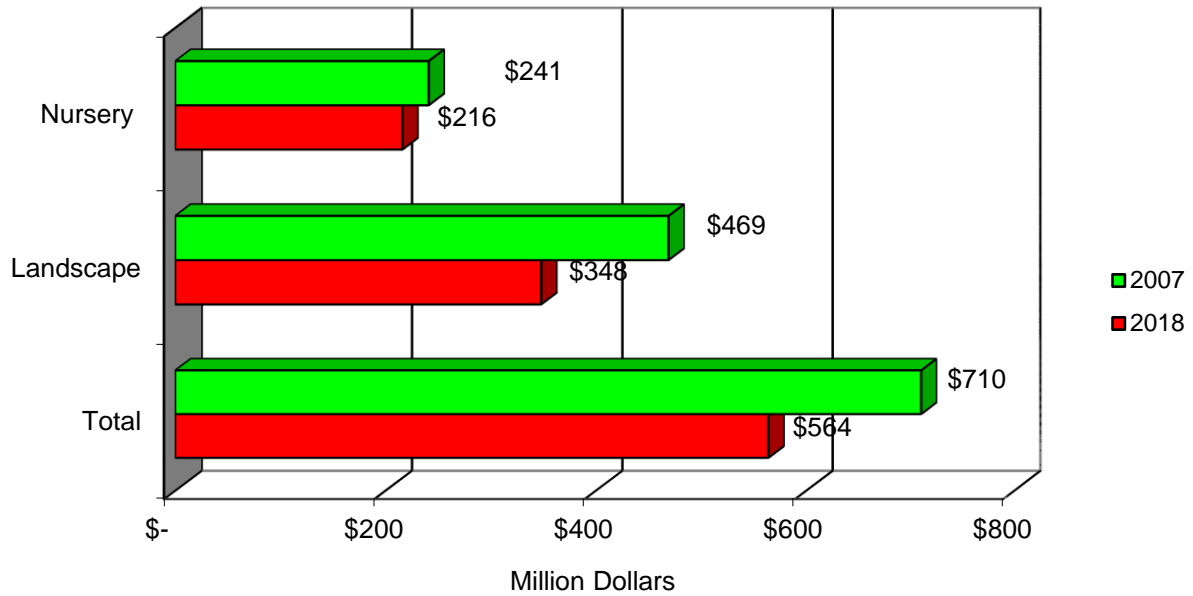


Green Industry Wages: \$564 Million

Wages, benefits, and payroll taxes were estimated at \$564 million, 52 percent of the total expenses in 2018. In 2007, almost 51 percent of expenditures were spent on wages, benefits, and payroll taxes.

Landscape firms accounted for 62 percent of total wage package and nursery operations paid the other 38 percent.

Green Industry Wages 2007 & 2018



Arizona's Green Industry Employment

Full time workers, those that were employed 150 or more days in 2018, accounted for 87 percent of the Green Industry workforce.

Laborers accounted for nearly 2/3 of Arizona's Green Industry workforce in 2018. Supervisors, crew leaders, and managers accounted for another 24 percent. The remaining 10 percent of Green Industry employees included designers, architects, arborists, and administrative or office staff.

Almost 10 percent of the Green Industry's available positions were left unfilled due to employers unable to find personnel who would accept the position. Availability of hourly workers was the leading factor preventing Green Industry establishments from expanding.

Nursery laborer annual salaries were estimated at \$26,900 in 2018, an increase of 50 percent from 2007. Landscape laborer annual salaries were estimated at \$28,300, a 26 percent increase from 2007.

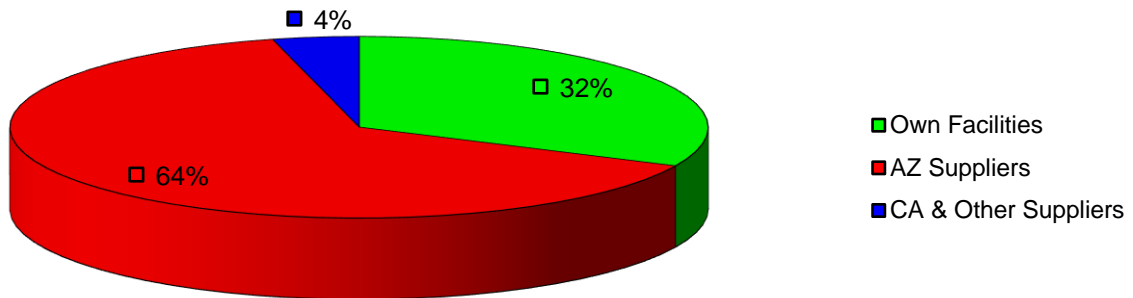
Other 2018 salaries were not as directly comparable to 2007 and are shown in the table below.

| Green Industry Annual Salaries | |
|---------------------------------------|-----------|
| Nurseries | |
| Laborer | \$ 26,900 |
| Field Supervisor/Foreman | \$ 40,000 |
| Landscapers | |
| Laborer | \$ 28,300 |
| Supervisor/Foreman | \$ 37,800 |
| Tree Worker/Arborist | \$ 38,700 |
| Green Industry | |
| Sales Representative | \$ 64,800 |
| Administrative/Office Support | \$ 38,400 |
| Managerial | \$ 63,900 |

Total Green Industry Sales by Supplier

Nearly two-thirds of all Green Industry sales of plants and planting materials came from Arizona suppliers compared to 54 percent in 2007. Thirty-two percent came from their own fields, nurseries, or greenhouses, compared to 39 percent in 2007.

Total Sales by Supplier 2018



Factors That Affect the Ability of a Green Industry Establishment to Expand in Arizona – 2018

The Green Industry’s ability to expand was limited primarily by ability to find hourly laborers. Other leading factors included lack of water, ability to hire managers, and government regulations. Land availability and market demand were the least limiting factors.

| Factors Limiting Ability to Expand | | | |
|---|---------------------|--------------------------|----------------------|
| | Least Effect | Somewhat Effected | Most Effected |
| Factor | 1 | 2 | 3 |
| | <i>Percent</i> | | |
| Water supply | 45 | 19 | 36 |
| Hourly labor availability | 14 | 10 | 76 |
| Ability to hire managers | 31 | 35 | 34 |
| Land availability | 78 | 12 | 10 |
| Competition | 36 | 45 | 19 |
| Government regulations | 32 | 37 | 31 |
| Market demand | 74 | 15 | 11 |
| Availability of capital | 55 | 23 | 22 |

Other Green Industry Statistics

Total area used to produce Green Industry crops was estimated at 9,200 acres, a decrease of 2,000 acres from 2007.

As in 2007, 98 percent of Green Industry business was conducted in Arizona.

Only 14 percent of the Green Industry businesses were sole proprietorships, 5 percentage points less than in 2007. Just over a third of the Green Industry businesses were LLCs compared to 24 percent in 2007.

| Number of Acres in Production, Arizona – 2018 | |
|--|--------------|
| Total Acres | 9,200 |

| Percent of Gross Sales Earned From Business Conducted in Arizona - 2018 | |
|--|------------|
| Gross Sales in Arizona | 98% |
| Gross Sales in Other States | 2% |

Percent of Green Industry Establishments

By Business Structure – 2007 and 2018

| | 2007 | 2018 |
|----------------------------|------------|------------|
| Sole Proprietorship | 19% | 14% |
| Partnership | 2% | 2% |
| Corporation | 55% | 46% |
| LLC | 24% | 36% |
| Other | --- | 2% |

Only 18 percent of the Green Industry businesses were less than 10 years old compared to 30 percent in 2007. Over half have been in business for 20 or more years.

Phoenix continues to have the highest percentage of Green Industry businesses as its headquarters location, followed by Tucson.

Percent of Green Industry Establishments

by Year Started – 2007 and 2018

| | 20+ years | 20-10 years | Less than 10 years | Percent Est. since 1999. |
|---------------------------------|------------|-------------|--------------------|--------------------------|
| Year Company Established | | | | |
| 2007 | 42% | 28% | 30% | 58% |
| 2018 | 54% | 28% | 18% | 46% |

**Percent of Green Industry Establishment
by City 2018**

| Headquarter City | Percent |
|-------------------|------------|
| Phoenix | 30 |
| Tucson | 14 |
| Mesa | 7 |
| Gilbert | 5 |
| Peoria | 5 |
| Scottsdale | 4 |
| Other | 35 |
| Total | 100 |
| | |