



# Oregon's Bounty of Horticultural Crops & Landscapes

regon has a rich history in the production of fruits, berries, vegetables, and ornamental crops; the state's national and international reputation for delivering high-quality products is well-established and well-deserved. In the past, agriculture and forestry were the foundation of Oregon's economy. Although other activities now are equal in size to these land-based enterprises, agriculture continues to make a significant contribution to Oregon's economic well-being.

Oregon agriculture has not been immune to the impacts of economic globalization. Production, processing, marketing technologies, and the American palate are changing rapidly. More than ever before, producers, processors, and marketers link their success in agriculture to creativity and entrepreneurism.

## Oregon's Bounty of Horticultural Crops

regon's soils, micro-climates, and rainfall distribution have made it ideal for the production of horticultural food crops, including fruits and nuts, berries, winegrapes, vegetables, vegetable seed, and ornamental plants such as nursery crops and Christmas trees. Common to these crops is a high value of production per acre, high risk of loss due to weather, pests and market variability, and the labor required for production, harvest, and processing. In Oregon, many horticultural crops are produced on smaller, more diversified farms than

field crops like wheat, grass seed, or forages like alfalfa.

Orchard fruits, vegetables, strawberries, and greenhouse production are labor-intensive enterprises. Access to sufficient skilled labor increasingly is a challenge for growers, in Oregon and throughout the United States. Paying some of the highest minimum wages in the nation, Oregon agricultural producers are further pressed to compete effectively against U.S. and international competitors.

Farmers received an estimated \$4.7 billion in 2007 for the crops and

livestock they sent to the market. About 40% of that total came from the crops featured in this publication. Table 1 shows the acreage, farm receipts, value added, and value delivered to market of Oregon agricultural commodity groups for 2007. Value delivered to market—wholesale value—was estimated to be almost \$7.9 billion. Oregon's entire economy has been valued at \$257 billion.

The historic investment in infrastructure such as roads, railroads, packing houses, canneries, and mills promoted the production of horticultural crops in Oregon's major agricultural areas: the Willamette Valley, the Rogue Valley, the Hood River Valley, and the Columbia Basin. Processing is a critical resource for any agricultural area. In contrast to wheat and other field crops, Oregon-grown horticultural crops are processed locally. Processing adds value to raw agricultural products and demands higher-paid labor. In-state processing provides jobs, stabilizes communities, and circulates wages within the state's economy. Lack of access to processing facilities shapes what farmers grow, and how they sell it. The loss of a major Washington asparagus processor has reduced the acreage harvested and has caused growers to invest in other enterprises. Acreage within Oregon is about half what it had been before the closure.

Here, we estimate approximately \$3.1 billion in value added to all agricultural production by processing, handling, and delivery. More than half of that is added to the horticultural crops. For the horticultural food crops, processors add value at a rate of about \$0.66 for every dollar of value delivered to the market (see table 1). That value represents labor, packaging, shipping, storage, taxes, profit, and much more. Much of the processing for berries and vegetables is done within Oregon, and local economies, especially, benefit from the jobs, purchasing, and capital investments that support processing operations, and from the wages processing facility workers spend in their communities.

The field crops—grains, grass seed, dry beans, and sugar beets—and the forage crops have relatively little value added to them within Oregon. The grains and grass seed are cleaned and perhaps bagged, but milling and baking operations by and large take place elsewhere. The same largely is true of conventionally produced beef; Oregon no longer has a large-scale beef processing plant. Sugar beets have been an important crop in some east-side counties,



but all the refining activity takes place in Idaho. Over the years, sugar beet production has become clustered closer to the Idaho border than it previously was.

When comparing data between years, it is important to remember that the yield and value of an agricultural commodity over time is highly variable. The weather, market conditions, and other regional, national, and international conditions impact what is planted, what is produced, and the price paid for agricultural commodities. An in-depth understanding of agricultural trends is enhanced by a longer view.

# Oregon's Bounty of Ornamental Crops and Landscapes

ationally, the green industry is one of the strongest sectors of the agricultural economy, growing even during periods of economic downturn. Here, the economic consequences of Oregon's green industry will be discussed as these general areas of activity: ornamental plant production; horticultural services, including landscape architecture services, landscape contractor services, and lawn care services; and wholesale and retail sales of green industry products, equipment, and supplies.

Green industry activities are highly significant to Oregon's economy. Oregon ranked first in 2002 for the percent of total gross state product (1.7%) resulting from green industry activities. States with larger gross state products may spend more dollars (absolute value) on green industry activities than Oregon, but because our economy is relatively small, this activity in Oregon represents a larger proportion of the state economy. This also is an indicator of the value Oregonians place on managed landscapes and horticultural activities.

Although services are consumed locally, ornamental crops are widely sold throughout the world, bringing outside dollars into Oregon's economy. Oregon-grown woody nursery stock and specialty greenhouse items are sold throughout the nation, while Christmas trees and Easter lily bulbs are distributed internationally. Almost 80% of the income from Oregon's green industry in 2002 came from sales outside the state, and the bulk of that from states east of the Rocky Mountains.

As a rule, value is added to the ornamental crops at a much lower rate than to the food crops. Notice in table 1 that the rate of value added to the ornamental crops is about \$0.17 for every dollar in value delivered to the market. Although the value of ornamental crops delivered to market is a bit more than half the value of horticultural food crops, the food crops have seven times more value added to them than the ornamental crops. Nursery stock and Christmas trees are important export crops for Oregon.

Agricultural production has enjoyed a specific agricultural census for more than 150 years. The service, retail, and wholesale sectors lack routine, centralized historic data collection. For that reason, they may be described by economic input-output modeling, as they have been here. In 2005, the National Urban and Community Forestry Advisory Council released an IMPLAN-based report on the value of the green industry to the national economy.† That report was based on 2002 Census of Agriculture data, the most recent data available at the national level.

†Hall, C.R., A.W. Hodges, and J.J. Haydu. 2005. *Economic Impacts of the Green Industry in the United States: Final Report to the National Urban and Community Forestry Council.* 



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Commodity group	Harvested acres	Farm receipts (\$000)	Value added (\$000)	Market value (\$000)	% value added
Horticultural crops					
Horticultural food crops	293,146	\$789,648	\$1,506,515	\$2,296,163	65.6%
Ornamental crops	59,402	\$1,023,341	\$212,770	\$1,236,111	17.2%
Field crops	1,543,200	\$957,266	\$259,143	\$1,216,409	21.3%
Farm forestry	_	\$226,026	\$167,852	\$393,878	42.6%
Animal products	_	\$1,372,316	\$820,660	\$2,192,976	37.4%
Forage	1,078,290	\$370,673	\$179,662	\$550,335	32.6%
Total	2,974,038	\$4,739,270	\$3,146,602	\$7,885,872	





### What is featured in this publication?

- Oregon's horticultural food crops
- · Oregon's horticultural ornamental crops and services
- "At a glance" feature for each crop including basic Oregon data
- · Easy-to-read economic detail
- · Social and environmental benefits
- Maps showing counties in which the featured crop is produced

#### Where do the data come from?

- USDA's Oregon Agricultural Statistics Office: http:// www.nass.usda.gov/Statistics\_by\_State/Oregon/ index.asp
- The Oregon State University Extension Service Agricultural Information Network database: http://oain.oregonstate.edu/SignIn.asp
- Oregon Invests! http://oregoninvests.oregonstate.edu/ ORIN/ (Oregon Invests!, a public database maintained by the Oregon State College of Agricultural Sciences, is the source of many economic, social and environmental benefits featured. These benefits highlight research and outreach efforts by College of Agricultural Sciences

faculty, in cooperation with growers, processors, agri-business leaders, stakeholders, agricultural professionals, and other agencies and institutions.)

#### Key to symbols used in the text

**\$** 1

Indicates economic benefit



Indicates environmental benefit



Indicates social benefit

We dedicate this publication to the Oregonians living along the densely-populated I-5 corridor who seek a fuller understanding of the relevance of Oregon agriculture in the 21st century. We offer it as a resource to inform strategic thinking as we are asked to choose among the economic, social, and environmental options that will impact our future.

#### Produced by the Department of Horticulture and Extension Service, Oregon State University.

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#### Glossary

**Confidential or proprietary financial information** is not disclosed in this document. In accordance with National Agricultural Statistics Service rules, financial information is considered confidential when it summarizes the activity of fewer than three growers or processors, or when any one grower or processor controls 60% or more of a crop.

**Economic effects** are changes in an economy as the result of spending. They can be direct effects—those felt immediately within the sector studied (e.g., greenhouse and nursery), indirect effects—those felt within the sectors that provide services to the sector (e.g., companies that sell supplies to the greenhouse and nursery industry), or induced effects—those felt over an entire region as a result of wages paid within the sector studied. Here, induced effects are economic effects resulting from workers in the greenhouse and nursery industry spending their wages for rent, groceries, and consumer products and services.

**Integrated pest management (IPM)/integrated fruit management** is an ecologically based pest-control strategy. It relies on natural mortality factors such as natural enemies and weather, and seeks out control tactics that disrupt the ecological order as little as possible. IPM uses pesticides, but only after systematic monitoring indicates a need. Ideally, an IPM program considers all available pest control actions, including no action, and evaluates the potential interaction among various control tactics, cultural practices, weather, other pests, and the crop to be protected.

**Value of sales** are payments made to farmers for the sale of agricultural commodities. No handling, processing, or other marketing charges are included in farm receipts, unless those are usually included. From these receipts, farmers pay all of their operating expenses, management charges, overhead, family living expenses, and any other expenses or profit returns associated with the production of an agricultural commodity. Off-farm income often contributes to farm and ranch expenses.

#### Contributors

Many individuals contributed to the compilation of information presented here about the bounty of Oregon's high value horticultural crops. Principal contributor: Linda J. Brewer. This publication would not have been possible without the guidance of Larry Burt, Extension Economist. It is based in part on research work completed for Burt's Oregon Agricultural commodities: 2005 Farmgate values and first handler value added. (2007, Oregon State University Extension Service, Corvallis, OR. EC 1612-E). This publication also benefitted from the contributions and reviews of these OSU Extension specialists and faculty: Linda White, David Sugar, Bernadine Strik, Patty Skinkis, Clark Seavert, Richard Regan, Jeff Olsen, Bob McReynolds, Clive Kaiser, Rick Fletcher, Tom Cook, Steve Castagnoli, Mike Bondi, Anita Azarenko, Nick Andrews. Further advice and assistance was provided by Chris Mertz, USDA Oregon Agricultural Statistics Service and his staff, and by Mike Chilton, Agricultural Alternatives. Thanks to Extension and Experiment Station Communications, especially the designer of this publication, Tom Weeks.