



# APPENDICES

## Overview of Central Oregon’s Agriculture Sector

SEASON A short growing season with cool nights characterizes the 70-110 day growing season in central Oregon. Other agriculture areas have much longer seasons such as Hermiston with 180-day season, or the Willamette Valley with a 140-day season. Central Oregon season is dominated by the shadow of the Cascade Mountains and elevation. Moving from North to south Warm Springs to LaPine the growing season becomes increasingly shorter.

Central Oregon Elevation/Growing Season		
Location	Elevation (feet)	Growing Season (days)
Warm Springs	1000	100-110
Madras	2230	90-100
Prineville	2840	80-90
Redmond	3060	80-90
Sisters	3180	75-85
Bend	3650	80-90
Sunriver	4156	70-80
LaPine	4200	70-80

Median Frost Dates a Measure of Growing Season				
Location	Last occurrence in spring of 24 F	Last occurrence in spring of 32 F	Last occurrence in fall of 32 F	Last occurrence in fall of 24 F
Madras	May 2	June 7	Sept 10	Oct 16
Redmond	May 8	June 8	Sept 9	Oct 13
Sisters	May 23	July 14	Aug 17	Sept 18
Bend	May 13	July 6	Sept 4	Oct 4
Data Collected 1961-1990 (2)				

Because of the short season there are limits to crops that can be grown commercially. With these limits, the region’s relative isolation (from other agricultural production areas) and short season there is opportunity for growing excellent seed crops.

**TOTAL AGRICULTURE ACRES** Central region has a total of 3.2 million acres within the three county boundaries. Fifty six percent of this total or 1.8 million acres farmed. Crook county has 48% of .9 million acres farmed; Deschutes county has 6% of 123,917 acres farmed; and, Jefferson county has 69% of 789,854 acres farmed.

**CROPS** Central Oregon’s high value crops including grass, vegetable, and flower seed depend on a short growing season. Cool nights force flowering and excellent seed production. Seed production has been in the areas since

1940-50's when Ladino clover seed was grown extensively in the region. While the total acreage of seed crops is relatively small, around 12,000 acres per year, these crops have provided a stabilizing force within a volatile agriculture market, which are contracted with seed companies.

A number of flower and vegetable seed crops require a one to two mile isolation to prevent cross pollination with different varieties. Coupled with the need for "new or clean" ground (out of production for that crop for a number of years), the total number of acres that can be grown has an upper limit in any one year. Preparing "clean" ground for seed crops brings into play the importance of crop rotations with open-market crops such as wheat, potatoes, and alfalfa. In some years these crops do not pay their production expenses but are important rotational crops.

**LIVESTOCK** Central Oregon's livestock sector and its associated rangeland, irrigated pasture, rangelands, irrigated alfalfa, and grass hay/grass seed straw is the largest agriculture sector in the regions agriculture economy. In 2002, the livestock sector represented about 60% of all agriculture sales. Of 160,000 irrigated acres, alfalfa and grass hay commands 22% of the acreage, and permanent irrigated pasture commands 34% for a combined total of 89,000 acres.

Alfalfa and grass hay is produced for regional markets and other areas. Livestock sales account for about 40% of annual agriculture sales including 50% of all farm sales in Crook and Deschutes counties. Jefferson county annual livestock sale is less than 20% while irrigated crops representing a larger share of sales.

- **CATTLE** Beef cows, yearlings, calves and bulls have increased from 86,700 in 1990 to over 107,000 in 2002. While total head sold has increased the total dollar received by producers, the value has decreased from \$36 million in 1990 to \$27 million in 2002 (dollars kept in constant 1996 values). Generally, market value has declined over time. Regionally, Crook county continues to lead in total number of cattle at 61,000 head in 2002. Deschutes and Jefferson counties have about one-third of the total or 23,000 head each.

- **SHEEP** The total number of sheep have dwindled in the region from a high in 1910 of over 100,000 to currently 7,800. Retailers are importing more lamb products and U.S.. producers face stiff global competition.

- **HORSE** The total number of horses in the region is 8,600 with Deschutes county having 4,600, Crook county 2,500 and Jefferson county 1,500. Deschutes county has a larger number of higher priced horses related to racing, working, and show horses.

- **OTHER** Llamas and alpacas commanded high prices from 1983-1992 followed by a sharp decline. During 1983-92 these animals greatly influenced Deschutes county gross farm sales representing 60% of the total agriculture sales from exotic animals. These prices are driven by consumer ownership trends. Game farms raising elk and mountain sheep provide economic value, however sales have not been estimated.
- **DAIRY** The number of dairy cattle have shifted from 59 farms in 1978 to 14 in 1997. Today, these farms are small compared to single 5,000 cow operations elsewhere. Size and scale are important to profitability in the dairy industry. Currently, Central Oregon is a net milk importer.

**GRAINS** Sale of cereal grains such as wheat, barley, and oats has dropped from a 1983 high of \$17 million to 2002 low of \$4 million with 8,200 acres in production. Cereals are sold in Portland at open air wheat markets where prices fluctuate widely.

At the time of planting, producers plan on selling prices covering production costs. Some price stability is received through forward contracting. In the past ten years, profits from wheat have been marginal. Often cereal, particularly wheat, is used a rotational crops to prepare land for higher value crops.

**POTATOES** Production of potatoes has dropped from a high in 1940-50's of 10,000 acres to 1,155 acres in 2002. New production areas in the pacific northwest with longer growing seasons have been developed. These areas can double the yield raised in Central Oregon, however the region is noted for high quality seed potatoes which are marketed to the new areas. Of the current acres in production, 54% produce seed potatoes with the remainder sold fresh or processed for chips. Market prices for potatoes are characterized by large swings between years.

**FARMS** The number of farms in the region has increased 29% (2,155 farms total) from 1982-97. With the exception of 180-499 acre farms, increase in farm sizes occurred, particularly 1-9 acre farms representing 89%. 180-499 acre farms decreased by 12%.

Increased farm numbers is an indicator larger parcels are being divided. While the number of farms increased in the three counties, Jefferson county recorded a slower growth rate. Stricter interpretations of Oregon land use laws in Jefferson County may account for this rate.

Farm increases from 1982 - 97 by county include:

**CROOK** Increase 22% to a total of 521 farms. Increases occurred in all sizes except 190-499 acre size which decreased by 32%. One acre to nine acre farms increased 89% with the largest occurring at 500-999 acre.

**DESCHUTES** Increase 41% to a total of 1,235 farms. Increases occurred in all sizes except 190-499 acres, reduced by 7% and 1000 acres by 12%. The greatest increase occurred in 1-9 acre size, a 90% increase.

**JEFFERSON** Increase 8% to a total of 399 farms. Increases occurred in sizes except 50-179 acre size which decreased by 9%. the largest increase occurred in one to nine acre size, a 79% increase.

### **FARM OPERATORS**

Of 2,155 farm operators, 902 (17% of total) indicated they worked four or more hours per day with 1,253 operators indicating they worked four or more hours per day in other occupations in 1997. This is a 40% increase from 1982.

Farming is increasingly competitive. Operators are more often working with small acres and seek outside income to maintain family income. The increase in the total number of farms corresponds to the number of operators, however the number of operators seeking other employment is increased.

**CROOK** With a total of 521 farms in 1997, 233 (13% increase from 1987) operators reported working on the farm four or more hours per day while 288 (30% increase from 1987) operators work at other occupations four or more hours per day.

**DESCHUTES** With a total of 1,235 farms in 1997, 438 (35% increase from 1987) operators reported working on the farm four or more hours per day while 797 (44% increase from 1987) operators work at other occupations four or more hours per day.

**JEFFERSON** With a total of 399 farms in 1997, 231 (5% decrease from 1987) operators reported working on the farm four or more hours per day while 168 (34% increase from 1987) operators work at other occupations four or more hours per day.

### **LABOR**

In 1997, 2,155 Central Oregon farms hired 3,645 laborers, a 14% decrease from 1982. Farms are reducing outside labor by mechanization. Shifts in crops call for less labor.

While total hired labor decreased, payroll increased from \$6 million to over \$10 million, an increase of 74%. Increase wages and payroll connected costs have increased individual farm operation costs. This downward trend of reduced labor is expected to continue.

**CROOK** Labor reduced by 12% to a total of 666 in 1997.

**DESCHUTES** Labor increased by 2% to a total of 922 in 1997.

**JEFFERSON** Labor reduced by 20% to a total of 2,057 in 1997.

### **TAXES**

Overall, agriculture taxes have decreased in the region by 23% between 1987 and 1997 as reported in the USDA Agriculture Census. Individual counties report vary as a result of land use laws and tax assessment of agriculture land.

**CROOK** Increase of 40%.

**DESCHUTES** Increase of 53%

**JEFFERSON** Decrease of 73%

### **SALES**

Generally, farm sales in current dollars have increased over time. This is somewhat misleading as inflationary pressures have weakened dollar value over time. When dollars are converted to constant dollars (1996 dollars), there is a decline in gross farm sales from 1978 through 2000. This decline represents \$140 million to under \$100 million.

Central Oregon is no different than other areas where commodity prices have remained constant or declined after inflation factor have been included. Most crops are sold on the open market, which means sellers are price takers. Adding value through product branding or developing niche markets allows farmers to reverse this trend and to some extent become price makers.

Not all farmers have survived in this market, however some have become very skilled at understanding their income and expenses and diversified to spread out production costs over more acres and more crops. It is common for Jefferson County growers to produce five to seven different crops.

County gross crop summaries in 1996 dollars include:

**CROOK** \$42 million in 1976 and \$33 million in 2000

**DESCHUTES** \$23 million in 1976 and \$20 million in 2000

**JEFFERSON** \$78 million in 1976 and \$45 million in 2000

## VALUE ADDED

Agricultures economic impact can be measured by gross sales plus the value added by first handlers. First handlers are various agriculture companies that receive crops from the farm. They process the commodity before shipping out to markets. First handlers (3) increase crop value by 65.6% and livestock by 10.2%. When combined with gross farm sales, agricultures contribution to the region is \$140 million in 2000 using 1996 dollars.

## RESEARCH

Bruce Sorte, Research Assistant at Oregon State University, is currently identifying of various county economic sectors in the region. He is using the IMPLAN model, a model using more than 30 data bases verified by employers, to define economic sectors by county. The results of this study in an input/output matrix for determining export expansion.

Early reports indicate the following:

**CROOK** Of a total of 9,147 jobs, 958 (10.5%) relate to agriculture with Oregon location quotients of 2.4 and U.S. location quotients of 3.6.

**JEFFERSON** Of a total of 8,880 jobs, 1,019 (11.5%) relate to agriculture with Oregon location quotients of 2.68 and U.S. location quotients of 3.99.

The model is used to predict county impact in Jefferson County of 150 processing jobs. Processing jobs were assumed to use an unidentified agriculture product and move it to the next level of production. These 150 processing jobs rippled through the economy by creating 82 direct jobs (supply jobs related to servicing process efforts) and 38 induced jobs in other sectors such as retail, education, health and construction. The 150 processing jobs resulted in a total of 120 other jobs or a total impact to the county of 269 jobs created.

## TRANSFER PAYMENTS

Government transfer payments have been an important part of U.S. agriculture policy. These payments have been a minor portion of farm income in the region.

In the past, government programs have been used to shore up the prices of major commodities such as corn, soybeans, cotton, and wheat. As wheat acreage declines in the region, most transfer payments are directed at disasters and stewardship of riparian and upland areas. Stewardship payments are often cost shared with landowners and becoming more important in federal government farm policy.

<b>Government Transfer Payments (\$000)</b>		
<b>County</b>	<b>1992</b>	<b>1997</b>
<b>Crook</b>	<b>\$348</b>	<b>\$244</b>
<b>Deschutes</b>	<b>59</b>	<b>128</b>
<b>Jefferson</b>	<b>1,733</b>	<b>1,575</b>
<b>TOTAL</b>	<b>\$2,140</b>	<b>\$1,947</b>

Footnotes:

1. "Central Oregon Climate and How It Relates to Gardening," Horticulture Resource Note #1, Amy Jo Waldo
2. Oregon Climate Service, Corvallis, Oregon
3. Agriculture's Contribution to Central Oregon's Economy, 1990, unpublished data by Dr. Fred Obermiller, Oregon State University, Economic and Resource Policy Extension Specialist.