EXECUTIVE SUMMARY

OREGON'S AGRICULTURAL ROOTS

Agriculture, along with timber production, is the historical backbone that provided early economic development of Oregon. The connection to agriculture is still evident in all 36 counties of the state, benefiting Oregon's economy, environment, and social fabric. More than 1,000 family farms and ranches in Oregon are designated as "century farms," having ownership in the same family for over 100 years. No other segment of Oregon's economy can claim such a feat.

AGRICULTURAL SECURITY

Agricultural security, like energy security and other national security interests, deserves high priority attention at all levels of government. Food and other critical items that originate on farms and forests rely on protection of farmland and water resources dedicated to natural resource uses. These resources are also imperative in protecting against agro-terrorism threats.

STATE OF THE INDUSTRY

2004 was a banner year, with value of agricultural production farm gate value) breaking the \$4 billion mark. Net farm income was estimated at over \$1.3 billion,

also a record high point for Oregon. Higher demand and higher prices for many of Oregon's top commodities led to record sales for nursery products, cattle, dairy products, some grass seed, hazelnuts, cherries, blueberries, Dungeness crab landings, and others. A declining dollar value and overseas demand for Oregon agricultural products pushed exports higher.

2005 brought a moderation of crop prices to producers coupled with record increase in costs for fuels, fertilizers, chemicals, and other inputs. An extremely dry winter, followed by a very wet spring brought about an explosion in the population of voles and field mice (estimated loss of \$35 million to grass seed growers), rust, and other pests and diseases. Tree fruit and grass seed production was the hardest hit. While overall statewide output value remained fairly constant, net farm income suffered a reduction, particularly in specific sectors affected by weather or input costs. Many sectors struggled, particularly wheat and other cash grain crops, along with some vegetables and other row crops. The cost of fuels and fertilizers rose from 10 percent of total production cost to more than 25 percent. Shipping costs rose dramatically, affecting the nursery industry and others exporting product out of state. In short,





all agriculture felt the impact of petroleum price surges. Yet there were some bright notes in Oregon agriculture—hazelnut growers received the highest payment, per pound, in the history of the crop, at more than one dollar per pound. Overall net farm income, at \$1 billion, was the second highest in history.

2006 started out very wet, which delayed fieldwork, planting, and crop development. Heavy rains and late freezing weather cut production of some caneberries in Marion County by 50 percent. Some grass seed fields experienced significant losses, as well. However, the mountain snowpack and abundant spring rains guaranteed an adequate supply of irrigation water through the summer. Wheat and barley plantings were at near record low acreages due to low prices and high input costs. However, wheat prices rebounded later in the year. Wholesale milk prices paid to dairy producers plummeted. Lower milk prices and higher feed and energy prices hit dairy farmers hard. A record heat surge in June scorched berry crops and a shortage of field workers made it difficult to harvest salvageable berries. Prices for inputs remain at all-time highs. On the positive side, blueberry growers had a decent harvest and received good prices. Growers of tree fruit also had good yields and moderate prices, however, labor shortages left some fields and orchards unharvested. On the whole, a moderately good year for the industry.

AGRICULTURE DIVERSITY

From early statehood, many different agricultural crops and animals have been grown in Oregon. Today more than 220 different commodities are produced commercially. Oregon leads the nation in blackberries, Loganberries, hazelnuts, grass seed, Dungeness crab, Christmas trees, dried herbs, and potted florist azaleas. The diversity of production presents both opportunities and challenges for growers. On one hand finding equipment suppliers, crop protection materials and markets for niche crops is very difficult and can be expensive; however, the diversity of Oregon agriculture broadens grower options and balances farm income, overall.

OREGON'S FARM STRUCTURE

Roughly 40,000 business entities in Oregon claim over \$1,000 per year in agricultural sales—the definition of a farm according to the US Department of Agriculture. Over 88 percent of these are sole proprietor farms or ranches. Another 5 percent to 6 percent are family partnerships, with an equal amount organized as family corporations. That leaves approximately 1 percent or less of Oregon's farms as non-family corporate operations. Oregon agriculture is dominated by family farm operations!

The number of small operations (less than \$10,000 in annual sales) are increasing. Approximately 70 percent of Oregon's farms and ranches fall into the category of life-style, hobby, or retirement

operation. This group of producers generates less than 2 percent of total agricultural output/sales for the state; yet they own 13 percent of agricultural lands. Most of these producers work off the farm or are retired. For them, agriculture is more of a lifestyle, not a primary occupation. But this group is visible; they participate in farmers' markets, operate roadside stands, are involved in community supported agriculture, and sell directly to restaurants. This group may not generate a large amount of agricultural production, however, it wields a large impact due to its direct contact with the urban consumer.

The middle group of growers, who generate between \$10,000 and \$250,000 in annual sales, is shrinking in number, now less than 25 percent of all farms. A decade earlier they comprised 32 percent of all farms. They are faced with increasing costs, fewer market outlets, and not enough economy of scale to keep up with the competition of imports and larger producers. There appear to be trends toward off-farm employment and downsizing. The output from this group decreased from 27 percent to 19 percent of total farm production value, and acreage decreased from 51 percent to 45 percent over the past decade.

Full-time larger commercial family operations number about 2,250, or less than 6 percent of all farms in Oregon. Yet this group of operators produces nearly 80 percent of total output (up from 71 percent in 1992) on 42 percent of the land in farm use. The operational efficiencies, adoption of technology,

and economies of scale required to stay competitive in a global market are evident in this category of growers. Even so, margins are tight and high volumes of production are now required.

CONTRIBUTION TO OREGON'S ECONOMY

- More than 150,000 jobs in Oregon—one in 12—have a connection to agriculture.
- Farmers purchase over \$3.2 billion in goods and inputs to grow their crops and livestock—a huge stimulus to Oregon's economy.
- Value-added processing contributes another \$2.1 billion to the state's economy.
- Nearly \$2.5 billion in salaries and wages are tied to agriculture.
- Agriculture is a key traded sector, ranking first in volume of exported products and third in value of exported products, bringing new dollars to the state economy.
- Total agriculture-related activity accounts for 10 percent of Oregon's gross state product.

CONTRIBUTION TO OREGON'S ENVIRONMENT

- Oregon farmers and ranchers provide food and habitat to over 70 percent of the state's wildlife.
- Erosion on cropland and rangeland has been reduced by more than 35 percent, in the past decade, due to changes in practices by Oregon's farmers and ranchers.
- Oregon has earned a reputation for being a national leader in





natural resource management. Oregon has implemented agricultural water quality management plans statewide that address such issues as waste handling on livestock operations and irrigation water containment and recycling on nursery operations.

- Oregon farmers and ranchers have enrolled nearly 600,000 acres in conservation programs.
- Oregon leads the nation in the number of water transfers and the amount of water used for conservation and wildlife.
- Agriculture will play a critical role in the future development of renewable energy through biofuels, micro-hydro power, geothermal, solar, and other biobased products. Oregon is already a leader in wind energy development (located on ag lands). Anaerobic methane digesters on dairies are gaining more interest by the industry.
- Oregon is nationally known for integrated pest management (IPM) practices and the use of biological control agents to combat invasive plant pests.
- An increasing number of Oregon farmers are documenting their good management practices through certification programs, such as ODA's Good Agricultural Practices/Good Handling Practices (GAP/GHP), Food Alliance, Oregon Tilth (organic), and Salmon Safe. Approximately 15 percent of Oregon's ag lands are enrolled in some sort of certification program.

CHANGE HAS BEEN DRAMATIC

Technology

Over the past century, technology, mechanization, high yielding seeds, commercial fertilizers, and plant pest and weed control products have multiplied output, reduced labor needs, and allowed 99 percent of the US public to spend their time and resources in pursuits other than food production.

Consolidation and global trade

Consolidation in the food processing and retail distribution sectors has left growers with fewer outlets for their crops and livestock. International companies control large segments of the food market. As a result of global trade agreements and improvements in transportation and communication, these companies now source food and fiber products from all over the world.

Global trade presents challenges and opportunities for Oregon agriculture. One challenge is the movement of plant and animal pests and diseases around the globe. This raises control costs and the need for biosecurity at the farm and processing levels, in Oregon and throughout the US, as well as the need for programs to monitor and eradicate exotic pests and plants. World movement of goods also presents disparity in labor costs, regulatory regimes, infrastructure, and other competitive factors. The rise in oil prices presents additional cost increases in many farm inputs,

including fuels, fertilizers, and other products.

On the opportunity side, 95 percent of the world's population resides outside the US, including areas that are fast developing a middle-class with purchasing power for many of the specialty crops produced in Oregon. More than 80 percent of Oregon agriculture production leaves the state, with over half of this going overseas, primarily to Japan and other Pacific Rim nations. Cherries, blueberries, processed foods, grains, grass straw, and many other products are shipped to these countries, bringing traded-sector dollars to Oregon. Indeed, agricultural products are the largest Oregon export by volume, and third largest by value.

Consumer trends

Consumer trends are increasingly dynamic and segmented, creating new markets that are rapidly changing and demanding more specialty products. A growing segment of the population makes food purchases based on health claims, function characteristics (such as "heart healthy"), or other nutriceutical benefits. Others make choices based on specific production or processing traits, —organic, kosher, sustainable, location of production, or "freefrom foods" such as wheat-free, dairy/lactose-free, or GMO-free.

Population growth

Population growth continues to create competition for natural resources—land and water—the

primary inputs of agricultural production. Will the US and Oregon "outsource" food production in order to build houses on the best lands?

As land prices escalate and production costs increase, an aging farm population finds it challenging to attract new growers or children back to the farm.

Marketplace dynamics and niche opportunities are showing trends that are segmenting the farm population in Oregon, resulting in

- an increased number of small farms that are lifestyle/hobby operations.
- a reduced number of mediumsized family operations, due to the cost-price squeeze.
- a stable number, but increased size of large family and nonfamily operations, taking advantage of economies of scale.

INFRASTRUCTURE

Oregon moves more than 80 percent of agricultural production out of state, with half of that going overseas. This illustrates the critical importance of a reliable and affordable transportation infrastructure and energy/fuel resources to move products from here to there. Port, rail, truck, inter-modal, and air transportation all play a part. The deepening of the Columbia River is imperative for larger carriers to call on Portland for delivery and exports. There are significant opportunities to relieve pressure on roads and railways by moving more products through the Columbia River System, via barge.





AGRICULTURAL LABOR AVAILABILITY AND COST

Oregon's agricultural diversity lends itself to many specialty crops that are labor intensive. Tree fruits, berries, nursery, vineyards, and many other Oregon crops require labor rates much higher than traditional field crops grown in other areas. Consider that Oregon ranks 26th in total agricultural output among states, but ranks fifth of all states in overall employee compensation paid to farm workers. Adequate labor is critical for Oregon's crop mix.

Federal legislation addressing illegal immigration is of significant interest to Oregon growers. A large portion of the workforce may face sanctions, deportation, or other actions that might affect labor availability and worker status. In 2006, some growers experienced labor shortages.

While compensation in Oregon, averaging near 10 dollars per hour, is among the highest in the nation, it is pushed higher every year due to the initiative measure that ties the minimum wage to the consumer price index (CPI) for inflation in Portland. For laborintensive sectors of the industry this is a major concern, especially since many of the products they produce compete against imports from Mexico, China, Chile, Brazil and other places where wages range from 25 cents to three dollars per hour.

Growers concerns about labor availability and rising costs may lead to increased mechanization and loss of some of Oregon's specialty crops. This could limit grower options for crop production and consumer access to locally produced fresh fruits and vegetables. In response, growers are moving toward mechanization of harvest equipment for asparagus, wine grapes, apples, berries and other crops. Strawberries, broccoli, and cauliflower are examples of crops that have nearly disappeared from Oregon and Washington, only to become more established in California and Mexico.

LAND RESOURCES AND ISSUES

Roughly 28 percent of Oregon land (17.1 million acres) is in agricultural use. About 14.7 million acres are in commercial agriculture use (farms with over \$10,000 in annual sales).

Oregon's land use laws, enacted in the 1970s, established exclusive farm use zones with the intent of protecting farm operations from urbanization pressures and speculative buying. While this system has slowed farmland loss in Oregon, it has not been without controversy. The passage of Ballot Measure 37 in 2005 set back the clock on farmland use to all development allowed prior to the land use laws taking effect. More than two-thirds of the 2,000 plus Measure 37 claims filed with state and local government entities are for development on farmland

Members of the agriculture industry have differing opinions on Measure 37. Those subject to urbanization pressures, primarily in the Willamette Valley and other urban areas, have generally supported strong land use laws to

protect farmland from conversion. Growers in Eastern Oregon, with little pressure from urbanization and marginal farm income returns, are looking for alternative uses of their property, or at least some flexibility that would allow other income-generating prospects.

WATER ISSUES—QUALITY AND QUANTITY

Landowners are making great strides incorporating water quality protection into their operations. They are supported by a network of local, state, and federal agencies that provide information, technical assistance, and financial incentives. Traditional agricultural operations are better positioned to learn about and incorporate water quality improvements because they are familiar with agency programs. It is a bigger challenge to inform and engage non-commercial or "lifestyle," small acreage landowners in water quality protection efforts. Locally based demonstration projects, workshops, brochures and other activities, sponsored by Soil and Water Conservation Districts (SWCDs), inform landowners of agricultural water quality issues and opportunities.

Nearly 45 percent of Oregon's farmers irrigate some or all of their land, totaling 1.9 million acres. Oregon ranks third of all states for the number of farms that use irrigation, and ninth of all states for number of acres irrigated. Indeed, 62 percent of harvested cropland relies on irrigation, and irrigated farms produce 77 percent of the total value of harvested crops.

Water storage, delivery, and efficiency are key to future agricultural development and viability in Oregon. Some scientists predict that global warming will result in less snowfall and earlier snow melt, emphasizing the need to develop water storage for agricultural and non-agricultural uses. Multiple options are available, such as aquifer recharge (groundwater injection), expanded use of farm storage ponds, offstream diverted storage, and desalinization of seawater. These options take time to develop and require urgent attention.



High-tech farming techniques include the use of GIS and GPS guided-tractors, laser land leveling, sophisticated center-pivot irrigation, radio controlled weather monitoring and soil testing, field mapping that directs spot application of soil nutrients and chemicals, high-tech harvesters and sorting equipment, biotechnology, and seeds adapted to resist plant pests.

NEW REGULATORY ISSUES

Air quality issues are now looming over the agriculture industry—from dust control to air emissions caused by animal waste. Discussions are underway at the state and national levels regarding large-scale operations and potential impacts on air and water quality.

The 2002 US Census of Agriculture indicates that 18,500 Oregon farms report using some form of chemical products to



control insects, weeds, plant diseases, animal health, or related functions. Approximately \$130 million was spent in 2004 on plant and animal chemical products.

The Pesticide Use Reporting System (PURS) has had an "on again, off again" existence as funding and implementation issues have lurched back and forth. Presently, the system is online and functional. The system requires all pesticide users to annually report use and type of application, by water basin in non-urban areas, and by ZIP code in urban areas.

Regulatory challenges that present uncertainty for growers include the Clean Water Act, the Endangered Species Act, the Wild and Scenic Rivers System, the National Environmental Policy Act, and the Federal Power Act. The complexity and rigidity of these laws often result in frustration about regulatory options that growers feel are inappropriate, unrealistic, difficult to understand and implement, and may even conflict with state law. Permitting processes are lengthy and costly. Projects may be stalled, due to ongoing study and analysis.

However, farmers are adaptive, most are meeting regulatory requirements, and many exceed them. Documenting the innovative and sustainable efforts of many Oregon growers has led to an increase interest in certification programs.

Even so, the added pressure and cost of regulatory programs may be viewed as one additional cause for the reduction in the number of medium-sized operations. Whereas, larger operations have the resources and employees to oversee compliance with regulatory requirements, smaller operations don't. The medium sized operation is forced to become larger or smaller—hence, we see more consolidation into larger farms or downsizing into "microfarms" that fall under the radar of regulatory requirements, due to their limited size and small number of employees.