

# Economics of Agricultural Overtime Pay in Oregon: Executive Summary

Potential Effects on Farms and Farmworkers

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## EXECUTIVE SUMMARY

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Legislation recently introduced in Oregon, House Bill 2358 A, proposed to change the standards for overtime pay for Oregon farmworkers. The bill would phase in requirements for overtime pay, with overtime pay of one and one-half time regular pay required for hours worked in excess of 55 per week in the year 2022, in excess of 48 hours per week in the year 2023, and in excess of 40 hours per week in 2024. The bill would set up a fund to compensate eligible agricultural employers for overtime pay paid during the transition period of 2022 to 2024.

This report presents an overview of current economic conditions for farms and farmworkers in Oregon, the challenges facing Oregon agriculture, and an analysis of the potential effects in Oregon of agricultural worker overtime pay. Specifically, the report discusses how overtime pay may affect agricultural worker income, jobs and health; farm production costs and overall farm economic viability; and agricultural land use and land conversion in the State of Oregon.

## APPROACH, SCOPE, & REPORT CONTENTS

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The analysis approach was shaped to use all available sources of information that could shed light on the potential effects of Oregon's proposed agricultural overtime pay requirement. Key data sources include:

- Published data from local, state, and government agencies;
- Published social and economic studies on agricultural production, worker pay, and agricultural worker conditions, many of which were published by Oregon universities;
- Economic literature on the effects of overtime pay on worker compensation, worker hours, and total employment levels;
- Interviews with farm labor contractors in Oregon; and with farm industry experts and farm labor representatives in California where an agricultural overtime law has been implemented; and
- A survey designed, administered online, and analyzed for the purposes of this study.

As there are significant gaps in existing data sources regarding agricultural labor and the effects of agricultural overtime on producers and farmworkers, this study included designing and implementing a survey of Oregon agricultural producers. Two surveys<sup>1</sup> were designed and implemented for this study, one for Oregon crop producers and one for Oregon livestock producers. While not designed to be statistically representative, surveyed operators are estimated to produce at least 10% of nearly all of the top value agricultural commodities in the State. As such, the survey is thus expected to provide good insight into the likely effects on, and responses to, agricultural overtime by Oregon producers.

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<sup>1</sup> These surveys are attached in Appendix A and Appendix B.

Based on detailed analysis of these data sources, the study aims to provide an indication of the types and magnitudes of effects on Oregon farms, Oregon farmworkers, and Oregon agricultural lands.

This report has seven sections. Following an introduction in **Section 1**, the next three sections (**Sections 2, 3, and 4**) provide summary information on the following three topics, respectively: Oregon agriculture, challenges facing Oregon agriculture, and agricultural labor in Oregon (including challenges specific to farmworkers). **Section 5** presents information from a wide range of data sources regarding farm producer responses and effects on agricultural workers of agricultural overtime, including: the survey of Oregon farm operators conducted for this study, interviews with Oregon farm labor contractors, available information on the effects of agricultural overtime pay in California, and information from the economic literature on the effects on overtime across industries. Finally, **Section 6** draws on the data and sources presented throughout the document to conclude with an overview of the range of the potential economic impacts on farmworkers and farm producers of agricultural overtime pay. This section also presents highlights potential impacts on agricultural land consolidation and conversion. **Section 7** presents the report bibliography while two appendices provides the survey questions for each of the two surveys conducted for this study.

## OREGON AGRICULTURAL COMMODITIES ARE VALUABLE & LABOR-INTENSIVE

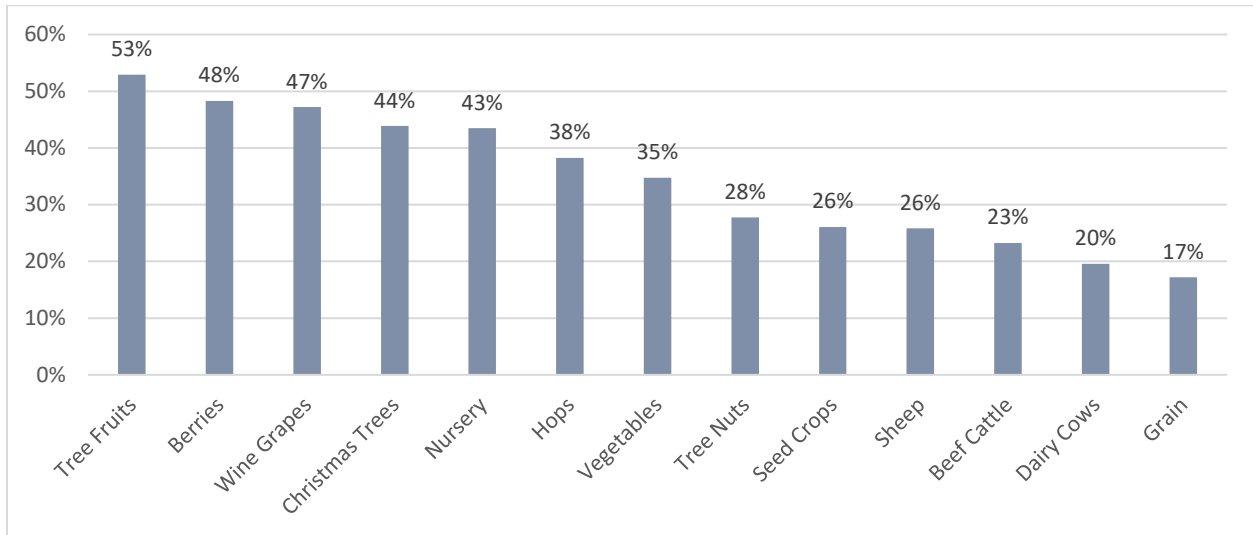
The vast majority of the economic value of crop production in the State of Oregon are from specialty crops.<sup>2</sup> There are more than 220 agricultural products produced in Oregon. With the exception of wheat, hay, and grain corn, all of Oregon's top agricultural crops by value are specialty crops: greenhouse and nursery, grass seed, potatoes, wine grapes, cherries, hazelnuts, blueberries, onions, Christmas trees, pears, hops, sweet corn, and apples (Oregon Department of Agriculture, 2021). In fact, specialty crops account for nearly 70% of all Oregon crop production value. Other top agricultural commodities by value include cattle and calves and milk production.

This is particularly relevant as specialty crop production relies on farm labor more than other types of crop production. Nationwide, in 2018, hired farm labor expenses (including employees and contract labor) on specialty crop farms accounted for 39% of total cash expenses compared to the average of 13% for all farms, or 3 times higher than the average for all farms (Economic Research Service, US Department of Agriculture, 2020). Compared to other farm types, dairy farms nationally had the next highest hired farm labor expenses after specialty crops at 14% of all cash expenses (in our survey of Oregon producers, dairy farmers indicated that labor as a percentage of their costs was higher, at 20%).

**The bottom line is that because of the share of labor-intensive specialty crops grown and the size of our dairy sector, Oregon agricultural production is more labor-intensive than typical agricultural production elsewhere in the United States. Figure ES-1 summarizes labor as a proportion of cash costs for Oregon farm producers responding to the survey. Tree fruits, berries, wine grapes, Christmas trees, nursery, hops, and vegetables (together representing nearly 70% of total crop value in Oregon) all have labor costs accounting for 35% or more of total cash costs.**

<sup>2</sup> Section 101 of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note), amended under section 10010 of the Agricultural Act of 2014, Public Law 113-79 (the Farm Bill), defines specialty crops as, "Fruits and vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture). Eligible plants must be cultivated or managed and used by people for food, medicinal purposes, and/or aesthetic gratification to be considered specialty crops" (Agricultural Marketing Service, US Department of Agriculture, n.d.).

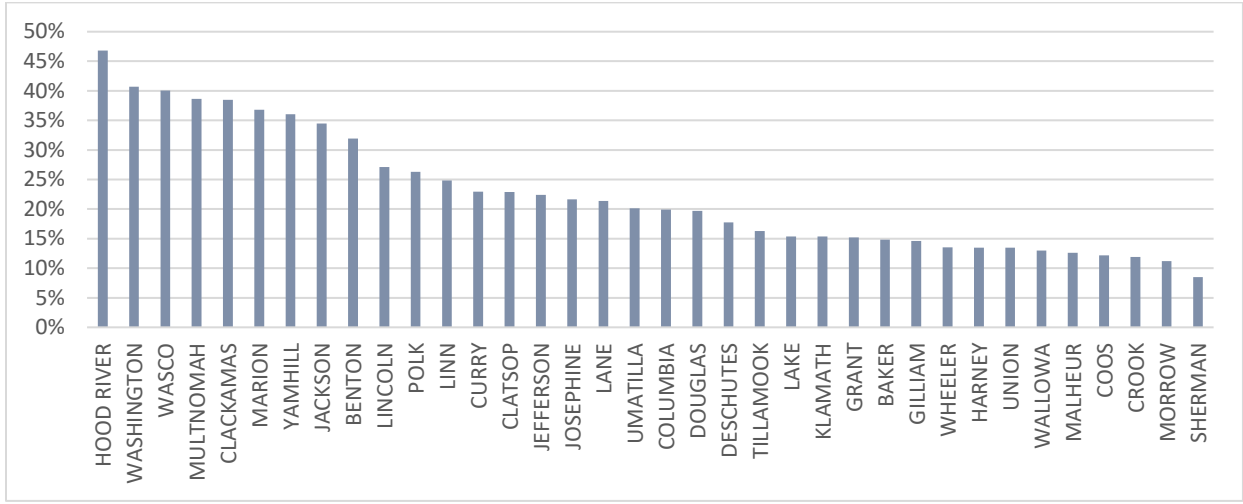
Figure ES-1: Labor as a % Of Cash Costs for Oregon Producers



Source: Highland Economics survey of Oregon farm operators conducted for this study.

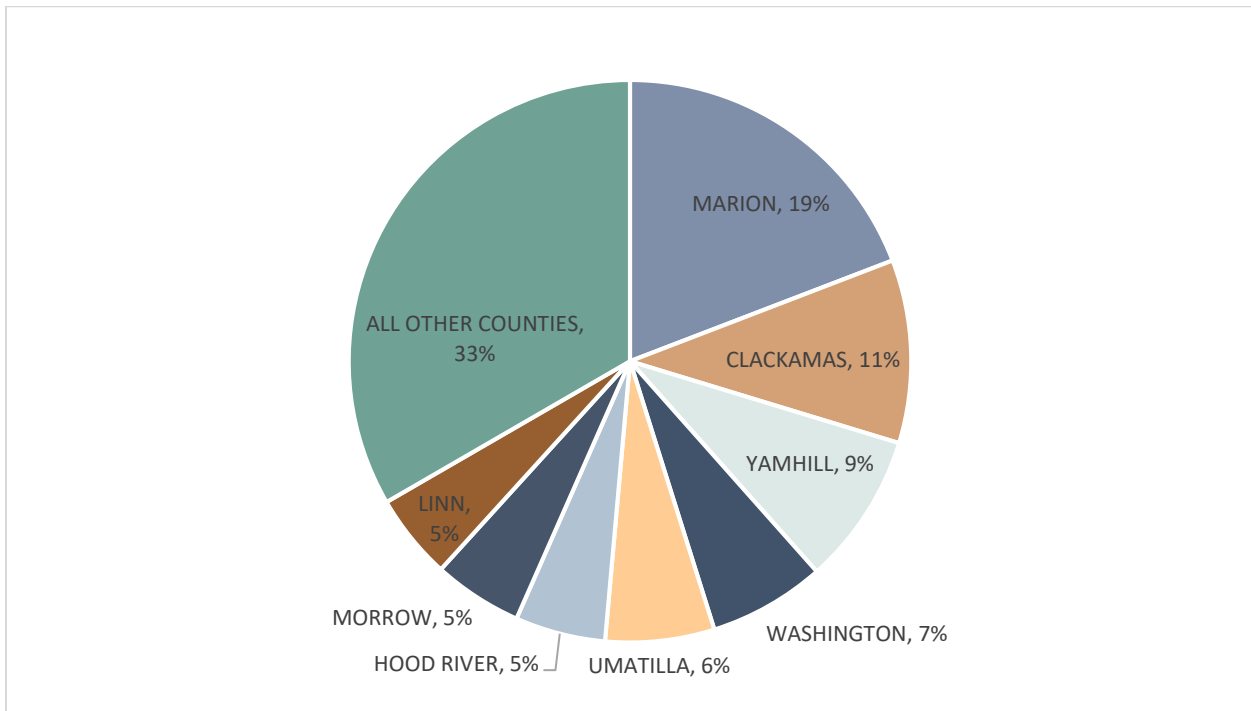
**Due to the predominance of specialty crops in the Columbia Plateau and the Willamette Valley, these regions of the state generally have high labor costs as a proportion of total expenses, and may be most affected by changes in labor costs (see Figure ES-2).** These are also the regions of the state with the highest number of farm laborers and that produce the vast majority of the agricultural value in the state. **In 2017 two-thirds (67%) of all farm labor expenses (for contract labor and hired labor) in the State of Oregon were paid by farms in eight out of the 36 Oregon counties (see Figure ES-3): Marion, Clackamas, Yamhill, Washington, Umatilla, Hood River, Morrow, and Linn (Census of Agriculture, 2017).** In sum, these are the regions that would be most affected by an agricultural overtime requirement.

Figure ES-2: 2017 Hired & Contract Labor as a Percent of All Farm Expenses, by County



Source: Highland Economics analysis of Census of Agriculture data

Figure ES-3: 2017 Hired & Contract Labor Costs, Percent of State Total by County



Source: Highland Economics analysis of Census of Agriculture data

### OREGON AGRICULTURE IS FACING MANY CHALLENGES

Challenges facing Oregon agriculture include drought and severe weather conditions, market access (affected by trade relations and the COVID-19 pandemic), shortages of skilled agricultural labor, agricultural land use and conversion of Oregon farmland, and farm succession as farm operators age and

farms will need to transition to the next generation. Effects of these challenges on agriculture are summarized here.

As shown in **Figure ES-4, cumulatively, these challenges over the last 18 months have affected nearly all Oregon livestock and crop operations.** Aside from Christmas tree operators, at least 25% of surveyed operators in all commodity sectors suffered lost profits in excess of 10% over the last 18 months due to these challenges. **Half to two-thirds of vegetable, berry, tree fruit, and wine grape farms responding to the survey reported profit losses of over 10% in the last 18 months due to these factors. Severe losses (over 20% or more of profits) were particularly high in the tree fruit, vegetables, and seed crop industries.** As expected in any industry with wide diversity in operating conditions and products, some growers also experienced increased profits in the last year and a half.

Figure ES-4: Cumulative Adverse Effects on Oregon Farm Profits Over Last 18 Months from Severe Weather, COVID-19, Regulations, Trade Relations, & Labor Shortages



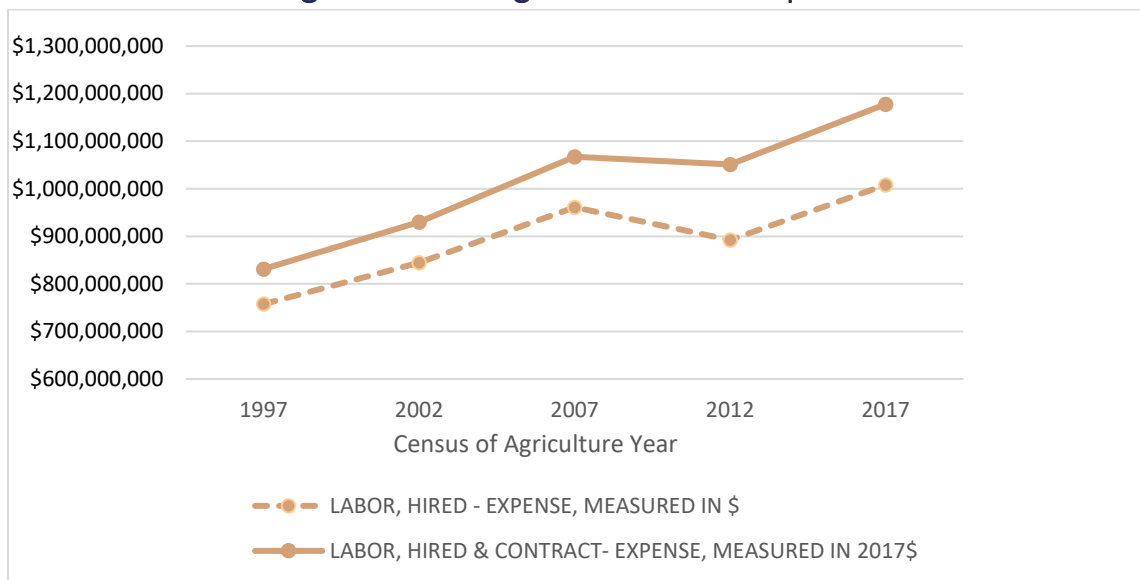
Source: Highland Economics survey of Oregon farm operators conducted for this study.

### RISING LABOR COSTS AND LABOR SHORTAGES ARE REDUCING FARM PROFITS

On top of these recent challenges, nationwide the prices of agricultural inputs (i.e., farm costs) are rising faster than the prices received for farm products (US Department of Agriculture, National Agricultural Statistics Service, 2021). **Overall, in the period 2011 to 2021, prices received by farmers have increased by approximately 9%, while prices paid by farmers have increased by 16%, cutting into farm profit margins.** Of all the farm expense categories (including feed, seeds, fertilizer, chemicals, machinery, services, rent, etc.), labor wage rates have increased the most in the last 10 years. From 2011 to October 2021, farm wages paid nationally have increased 41.5%.

Farm labor costs in Oregon are following the national trend: according to data from the US Census of Agriculture, reported hired farm labor workers in Oregon have been decreasing over the last several decades while farm labor expenses have been increasing. **Even adjusting for inflation, farm labor expenses in Oregon (including hired and contract labor) increased by 42% from 1997 to 2017 (see Figure ES-5).**<sup>3</sup>

Figure ES-5: Oregon Farm Labor Expenses

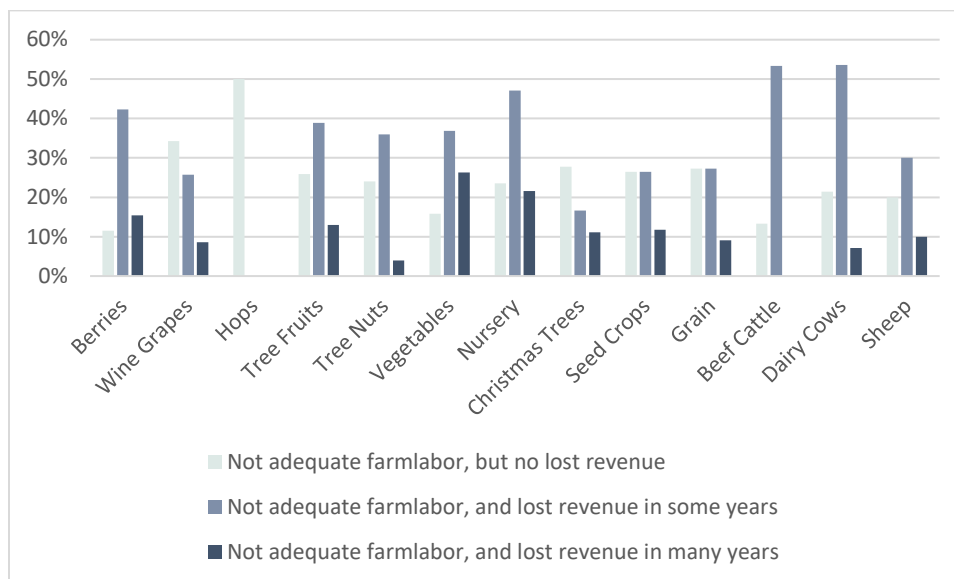


Source: US Census of Agriculture 1997, 2002, 2007, 2012, 2017

Farm labor shortages are adding to the labor-related challenges for farmers. Across all operations responding to the survey for this study, only approximately one-quarter (26% of crop operations and 27% of livestock operations) responded that they had adequate farm labor to complete tasks during peak periods. **Across all surveyed operations, approximately 50% (47% of crop operations and 54% of livestock operations) reported reduced revenues due to inadequate labor supply**, with some operations reporting reduced revenues in many years. Lost revenue due to farm labor shortages is particularly high in the vegetables, nursery, tree fruits, berries, dairy and beef cattle sectors, with over 50% of farms in these sectors reporting lost revenue in at least some years due to labor shortages.

<sup>3</sup> Note that this is adjusted for inflation while the national labor cost increases from NASS of 41% over the last ten years are not adjusted for inflation.

Figure ES-6: Oregon Operator Survey: Effects of Farm Labor Shortages on Farm Revenue



Source: Highland Economics survey of Oregon farm operators conducted for this study.

### OREGON FARMWORKERS ALSO FACING CHALLENGES: SEASONAL WORK, LOW ANNUAL PAY, HEALTH DISPARITIES, BUT COMPETITIVE HOURLY PAY

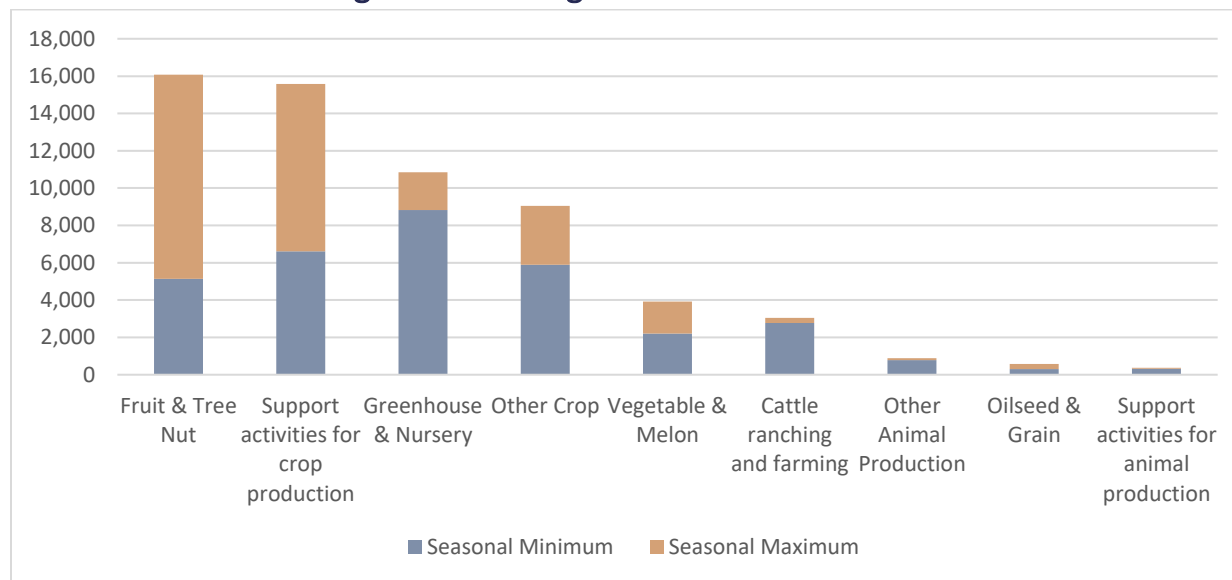
Farmworkers in Oregon are predominantly Hispanic, comprised nearly equally of men and women, and approximately half or more have children under 18. Due to the seasonality of farmwork, the number of farmworkers employed throughout the year varies widely, as shown in **Figure ES-7**. In July of 2020 (July is the peak agricultural season statewide) there were 59,300 farmworkers in crop and animal production and support services (as estimated by the Bureau of Labor Statistics Quarterly Census of Employment and Wages, or QCEW).<sup>4</sup> Based on the survey conducted for this study of Oregon farm operators, over 70% of workers are seasonal in the fruit (tree fruits, berries, and wine grapes), nuts, Christmas trees, and hops crop sectors. Livestock farms had the fewest seasonal workers, but even on surveyed sheep and

<sup>4</sup> Farmworkers estimated by the QCEW are those covered by state unemployment insurance laws, which is a requirement for nearly all farmworkers.



beef cattle operations over one-third of employment is seasonal. Surveyed dairy operations had the least proportion of seasonal workers, with just 7% seasonal.

Figure ES-7: Oregon Farmworkers in 2020



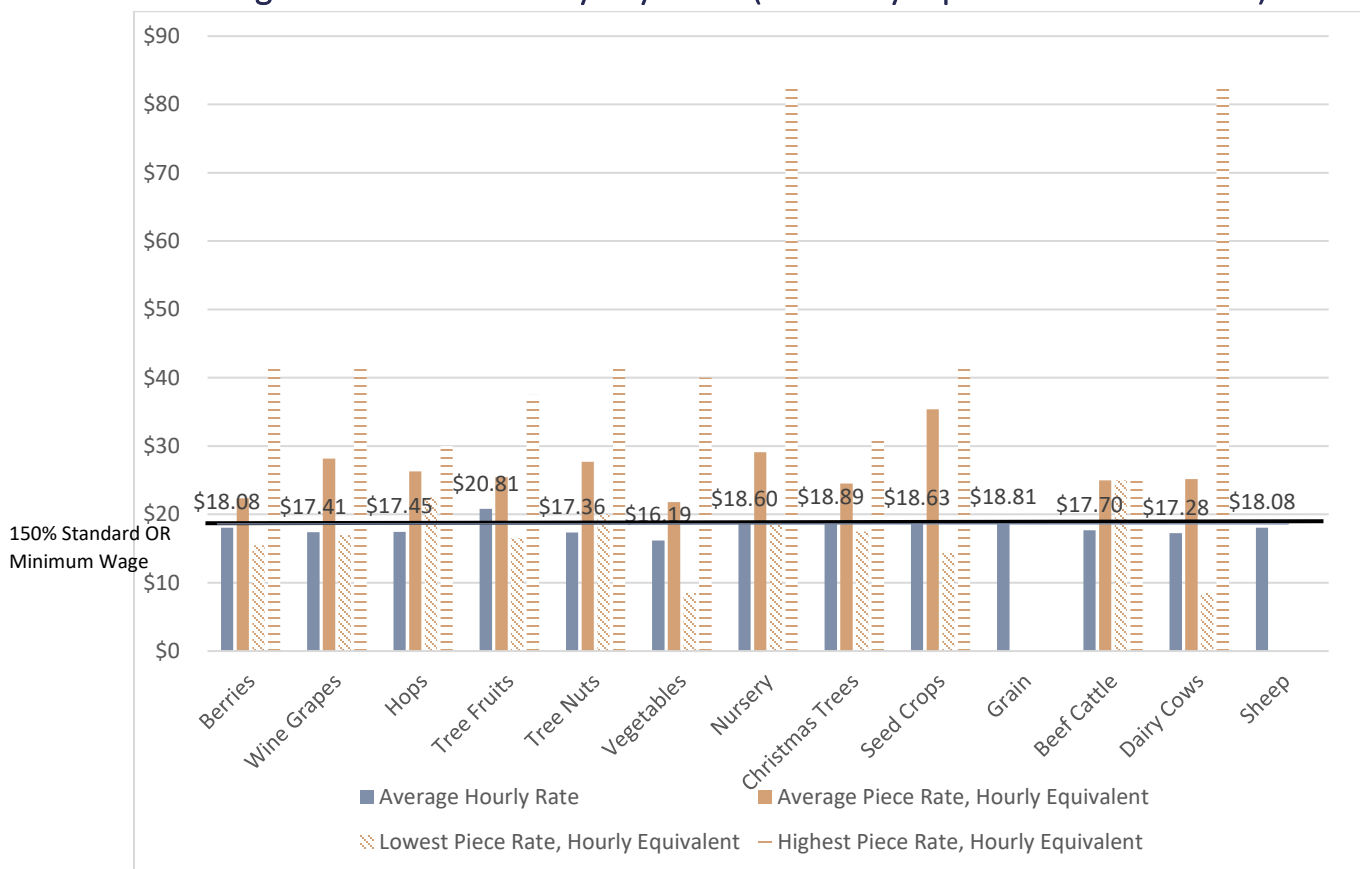
Source: Bureau of Labor Statistics, Quarterly Census of Wages and Employment (QCEW)

Oregon farmworkers, including contract and hired workers, earned over \$1.5 billion in 2020 (QCEW, 2021), employed on approximately 10,300 farms across the State of Oregon (USDA Census of Agriculture, 2017). In terms of current average hourly wage rates, data from the 2020 and 2021 Farm Labor Survey for the Pacific Region (Oregon and Washington) indicate that average hourly wage rates across all hired farmworkers in January of 2021 were \$17.44, in April of 2021 were \$16.90, and in July of 2020 were \$16.87 (US Department of Agriculture, 2021). The survey of Oregon producers conducted for this study found a similar but slightly higher average pay rate for agricultural workers of approximately \$18 per hour across specialty crop and livestock farms. For comparison, across all occupations in Oregon in May 2020, the median hourly wage was \$21.04.

These multiple data sources indicate that average hourly wages in agriculture are competitive with average hourly wages in alternative employment sectors. However, the seasonality of farmwork translates into low overall annual income for many farmworkers. While data on annual income for farmworkers are limited, data from the QCEW indicate that the average annual farm wages per farmworker (averaged across all commodity types) may be in the range of \$26,000 to \$36,000, on average, with the seasonality of farmwork reducing the total farm wages earned by many farmworkers. These wage estimates only include farm wages and do not include any income earned by farmworkers in other industries at other times of the year. These Oregon-specific wage estimates based on QCEW data are higher than the average annual wages in 2017-2018 reported by the National Agricultural Worker Survey for farmworkers in the eight-state Northwest region of \$20,000 to \$24,999. In addition to the effects of rising wages in the intervening four years, the disparity may reflect differences in agricultural employment in this broader region relative to Oregon.

The Oregon minimum wage outside the Portland metro area urban growth boundary is either \$12.75 or \$12.00 per hour, depending on the county. At the minimum wage rate, the overtime pay level at 150% of base pay would be \$18/hour to \$19.13/hour. As shown in **Figure ES-8**, this wage rate is near the reported current average wage rate paid to agricultural workers in the surveyed farm sectors (which, as shown in Figure ES-6 may vary from approximately \$16.19 to \$20.81 per hour). In other words, pay of 150% of the standard minimum wage is already received by many farmworkers (see the bars exceeding the 150% of standard minimum wage horizontal black line in Figure ES-8). However, at an \$18 average base pay rate, pay at 150% of current base pay would equate to \$27 per hour, at pay rate at which only productive piece rate workers are generally paid currently. For many specialty crop farm sectors where piece rate work is important, an overtime rule could result in very high pay rates that may exceed the economic means of growers (i.e., may be financially infeasible for growers).

**Figure ES-8: 2021 Hourly Pay Rates (Or Hourly Equivalent if Piece Rate)\***



Source: Highland Economics survey of Oregon farm operators conducted for this study.

\*Average across farmworkers represented in survey, not average across operations (said differently, this is a weighted average, weighted by the number of farmworkers at the operation).

As noted above, farms and farmworkers have had to face challenges related to COVID-19, wildfires, smoke, and extreme weather. A 2020 study found that over two-thirds of surveyed Oregon farmworkers faced a significant loss of work and income during the COVID-19 pandemic, with over half of surveyed farmworkers losing weeks or even months of work (COVID-19 Farmworker Study, 2020) (Martinez, et al.,

2021). The loss of wages and work created significant challenges for farmworkers with almost 60% of respondents having difficulties paying for food, rent, or gas/electricity (Martinez, et al., 2021) and 54% of respondents using food banks to supplement lost wages. Oregon farmworkers are especially vulnerable to harm from excessive heat, wildfires, and COVID-19; and the Centers for Disease Control and Prevention ranks agriculture among the most hazardous industries with a high risk of occupational injuries.

### EVIDENCE OF EFFECTS ON FARMS & FARMWORKERS OF AGRICULTURAL OVERTIME PAY

Among other sources of data, this study looked to the evidence from other states on the effects of agricultural overtime. Several other states have passed agricultural overtime pay requirements; however, most of these laws are either limited in scope or have only been recently passed so provide limited insight into the effects of the proposed Oregon legislation. Agricultural overtime pay is limited to the following states:

- Minnesota requires overtime after 48 hours a week for most hourly agricultural employees;
- New York and Maryland require overtime compensation for hours worked over 60 hours in any calendar week;
- Colorado recently passed legislation for agricultural overtime, with overtime thresholds after a phase-in period of 48 hours to 56 hours per week, depending on the seasonality of the farm workforce and the operation size, as well as a paid 30-minute rest period for hours worked over 12 and an additional hour of pay for a workday of more than 15 hours of work;
- Washington State recently passed legislation that by 2024, the overtime threshold for all agricultural workers will be 40 hours per week; and
- California passed legislation in 2016 that will ultimately require overtime pay for agricultural workers working more than 8 per day or 40 hours per week; this law is still being phased into effect.

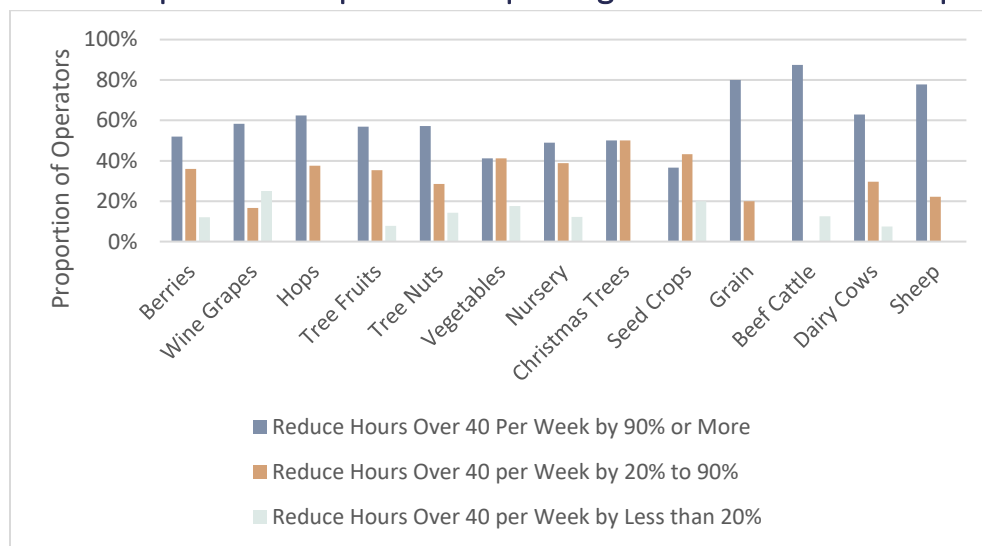
The state with the most relevant data is California. **To date, the experience in California indicates that the overtime law is contributing to changes in the industry that were underway prior to the law's implementation**, which include farm consolidation, a switch from high-labor to low-labor crops, increased mechanization, increased use of farm labor contractors and H-2A guest workers, and reduced agricultural production. According to interviews conducted with representatives from both farmworker advocacy organizations and farm advocacy organizations (the California Farm Bureau, California Farmworker Foundation, the California Association of Winegrape Growers) and a UC Davis survey of 115 California farmworkers, the effect of the overtime mandate on farmworkers has been mixed and mostly negative. **All sources indicate that farmworker hours have been reduced.** However, there is not a consensus on how total worker income has been affected, particularly as there are higher wages in the state due to increased minimum wage and labor shortages. Workers who have lost hours are also finding ways to adapt and retain their total amount of desired work time through working for multiple employers, both in the agricultural industry and outside it. An unexpected adverse effect on some workers whose wages have risen is that they no longer qualify for income-based public assistance programs, such as affordable (Section 8) housing and public health insurance (Medi-Cal). So, despite their incomes increasing, these workers are financially worse off. **In general, across California farmworkers, the law appears to have had disparate and mixed effects: for some, it likely resulted in**

increased total income, for others it resulted in similar income with fewer hours worked, while for others it decreased income or added difficulty to their work life by necessitating multiple jobs to attain the same amount of work, or decreased the level of social assistance received.

Farm labor contractors in Oregon interviewed for this study expected the same types of responses by Oregon producers and the same types of impacts on Oregon farmworkers. The economic literature in general on agricultural overtime pay also supports the preliminary evidence from California. Data from economic studies of overtime pay across disparate industries also suggest that employers respond to overtime in various ways to reduce total labor costs. These include: lowering standard hourly wage rates in order to minimize changes in total labor compensation, reducing hours worked, reducing the number of low-wage jobs, and increasing pay for workers who are near the federal salary threshold to be exempt from overtime pay (currently at \$684 per week or \$35,568 annually). However, despite these employer responses to minimize the effects overtime pay, many studies have found that across industries *some workers' pay does rise with overtime pay requirements.*

Also similar to the experience so far in California, Oregon farm operators surveyed for this study overwhelmingly indicated that they would reduce employee hours, many indicated that they would mechanize/automate (with some facing increased total costs of over 20%, but others indicating mechanization would decrease total costs), and a sizable portion indicated that they would possibly need to reduce the size of their operation or cease farming (which would lead to farm consolidation and possibly development of agricultural land). Regarding hours worked, two-thirds of all crop respondents and 80% of all livestock respondents reported that they would continue employing/paying fewer than 25% of current hours worked over 40 with an overtime rule; in other words, the majority of workers may face a 75% or greater reduction in overtime hours (see **Figure ES-9**). The actual ability of producers to reduce farm hours to this extent will vary depending on their ability to spread work over a longer period of time, automate/mechanize, switch crops, and make other adjustments.

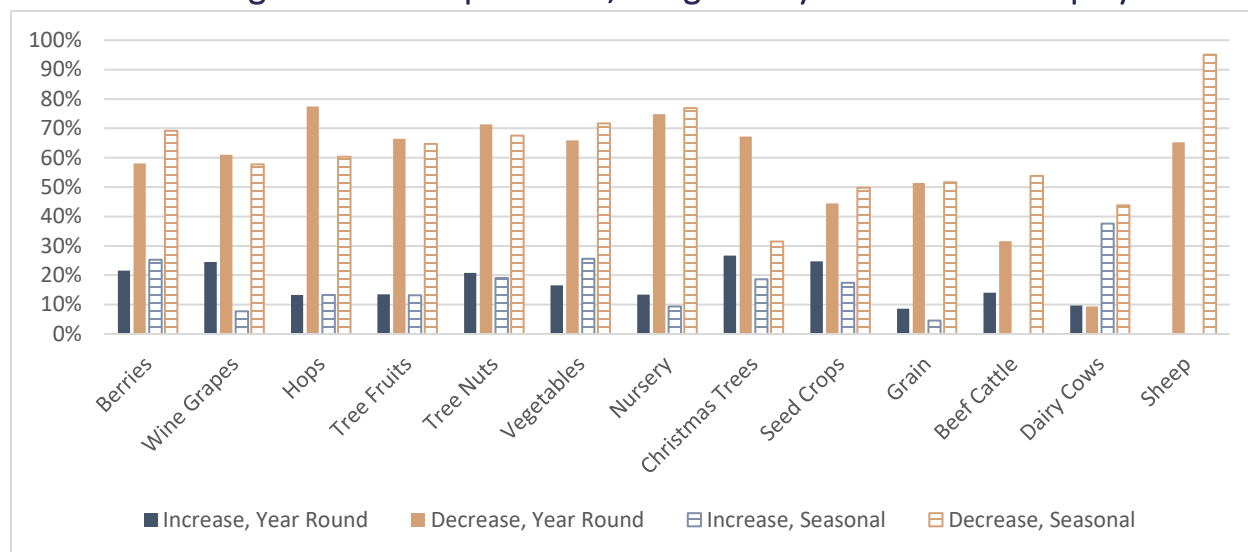
**Figure ES-9: Proportion of Operators Expecting to Reduce Hours >40 per Week**



Source: Highland Economics survey of Oregon farm operators conducted for this study.

Also similar to the evidence from other sources, in terms of total farmworker compensation, farm operators indicated that the effects on total compensation for both year-round and seasonal workers would be mixed, but with many more farmworkers likely facing reduced total compensation (tan bars in Figure ES-10) relative to those that would likely receive higher compensation (navy bars).

Figure ES-10: Operator Expectations on Changes to Total Worker Compensation\* with Change with OT Requirement, Weighted by Farmworkers Employed



Source: Highland Economics survey of Oregon farm operators conducted for this study.  
\*Including bonuses, housing, etc.

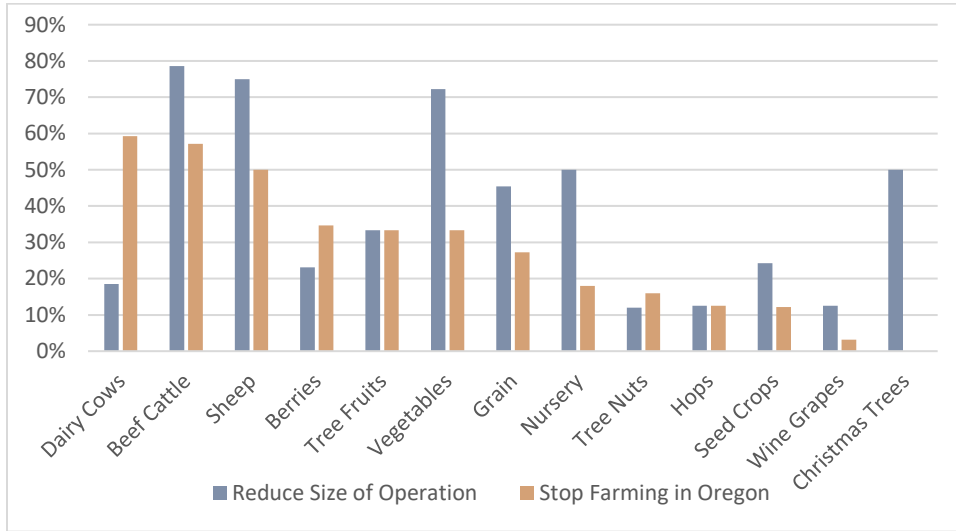
### POTENTIAL LAND USE AND FARM CONSOLIDATION CONSEQUENCES

Changes in farm costs and profits can affect overall farm viability, farm consolidation, and agricultural land use. Figure ES-11 summarizes operator expectations regarding the influence of agricultural overtime on whether they will reduce their operation size or stop farming in Oregon. As shown in the diagram, livestock operators were most likely to respond that they might stop farming in Oregon, while up to a third of berry, tree fruit, and vegetable growers also responded that it might lead them to stop farming. For producers who responded that they might cease farming or reduce operation size, Figure ES-12 highlights those producers’ expectations regarding future use of those lands, including farm consolidation, development of lands, and fallowing of lands.

As shown in Figure ES-12, with the exception of sheep farm and Christmas tree producers, operators expected that some farm consolidation was likely to occur. Certain commodity groups in particular expected consolidation within their sector: tree nuts, wine grapes, dairy cows, berries, seed crops, tree fruits, grain, and nursery. Overtime could increase consolidation for several reasons, including: 1) increased mechanization/automation may increase the farm acres required to be profitable so that farmers can spread fixed costs of farm machinery and mechanization costs over more acres (i.e., economies of scale); 2) higher costs of starting out (such as purchasing of machinery, paying of wages, etc.) can be a barrier to entry for the next generation of farmers, which is particularly pertinent given that the average age of Oregon farmers is 57.9 years old, indicating that soon many farms will transition

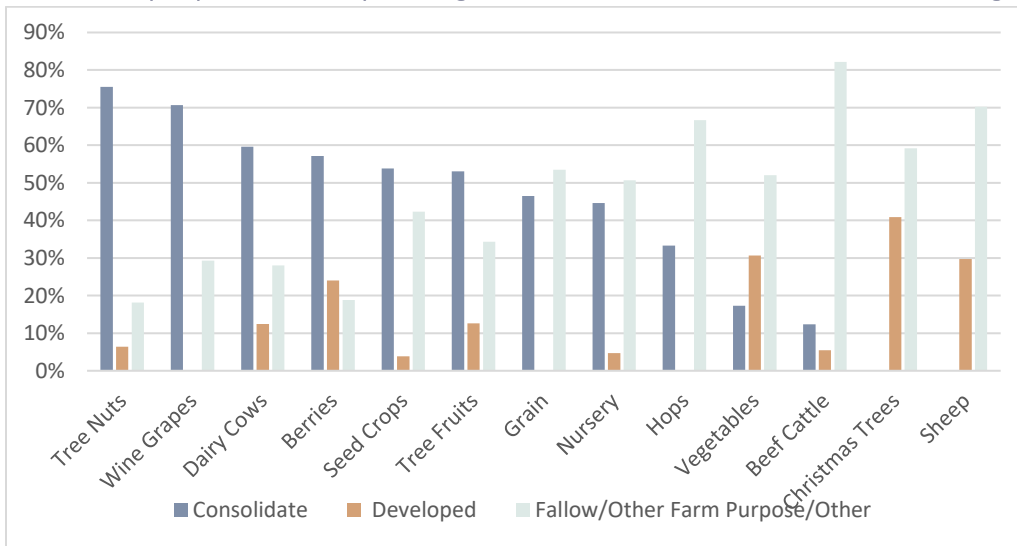
to the next generation; and 3) rising costs may make vertical integration of farming, packing, and even processing operations under one corporate umbrella more likely as vertical integration increases a single entity’s ability to control prices and costs. While most farmland in farms where operators cease farming or reduce their operation size would likely remain in farms (consolidated with other farms, lie fallow, or used for some other farm purpose), some land may be developed. Surveyed farm operators indicated that development may be particularly likely for Christmas tree growers, vegetable growers, sheep producers, and berry growers.

Figure ES-11: % Operations Expecting to Reduce Size/Stop Farming in Oregon



Source: Highland Economics survey of Oregon farm operators conducted for this study.

Figure ES-12: Operator Expected Effects on Farm Consolidation and Land Use, Lands Owned by Operators Expecting to Reduce Farm Size/Cease Farming\*



Source: Highland Economics survey of Oregon farm operators conducted for this study.

\*Weighted by acreage of producer.

## CONCLUSIONS

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In conclusion, numerous sources provide evidence and information on how farm producers will likely respond to agricultural overtime pay: our Oregon producer survey, interviews with Oregon labor contractors, interviews with agricultural industry and farm labor representatives in California which passed an agricultural overtime law in 2016, and the available economic literature on the effects of overtime on employment and compensation. In general, all sources indicate that we can expect:

- **Employers will reduce farm labor hours** that exceed 40 hours per week to the extent feasible through mechanization, crop switching, and switching to piece rate pay versus hourly to increase productivity with fewer hours.
- **Employers will try to hire additional laborers** to reduce overtime pay, which may not be possible due to labor shortages unless farm laborers decide to work shifts with multiple employers to maintain hours, with potential adverse effects on worker health and safety.
- **Some employers may try to reduce standard wage rates** to at least partially offset increased compensation from overtime pay, however, some employers also expect to raise wage rates for some workers.
- Economic studies of other industries indicate that overtime pay may actually lead to a reduced demand for agricultural workers, with reduced overall farm labor employment, particularly of low wage employees (due to mechanization and other labor-saving adaptations). However, effects on overall farm labor employment may be minor since there is a shortage of farm labor in Oregon, with many producers reporting lost revenue due to insufficient labor.
- **Overall, all evidence and analysis indicate that effects on farmworker compensation will be mixed**, with some workers receiving higher overall pay (the data indicate that the most likely to benefit may be more skilled/higher paid agricultural workers such as equipment operators), some receiving the same pay for fewer hours worked (but potentially with higher pressure for productivity in those hours), and others receiving lower pay due to fewer hours worked or even jobs being eliminated. Some farmworkers may even receive reduced social assistance due to rising wages, which may result in them being financially worse off even with higher wages.
- **In terms of total farm cash costs, on average across farms in each sector total cash costs could rise by up to 6%, with an absolute maximum increase estimated of no more than 12%.** This is based on the proportion of farmworker hours estimated to be in excess of 40 hours per week and labor costs as a proportion of cash costs in each farm commodity sector.
- **Farms will generally not be able to pass on much, or in some sectors any, increased costs to customers.** Many agricultural commodities are traded on national and global markets where producers are price takers not price setters. Producers with differentiable and specialized products, or for which Oregon has notable market share, such as nursery, wines, and Christmas trees, may be able to pass on some costs to consumers, while those with less differentiated products such as dairy milk or grain expect that they will not be able to pass on any costs.

- **Existing challenges and threats to farm viability mean that rising costs from agricultural overtime and subsequent reduced profits will most likely result in some producers going out of business and some reduced overall agricultural production.** Although a 1% to 6% increase in cash costs, or even a 12% increase in cash costs may seem small, this is a sizable increase in cash costs and can make a difference in an operation being profitable or not. Using data on Oregon total net farm income and net farm cash costs for the period 2012 to 2020 from the US Department of Agriculture Economic Research Service, **an increase in 10% of farm cash costs would reduce statewide net farm cash income by 32% to 47%** (USDA Economic Research Service, 2021). In increase in 3% of farm cash costs would reduce net farm cash income by 7% to 14%. In other words, the level of cash cost increase from agricultural overtime could well result in an operation becoming financially infeasible, particularly if it currently has small profit margins and does not have good alternatives to reduce reliance on overtime work. **Figure ES-11** above shows that a sizable proportion of surveyed producers who indicated that an agricultural overtime pay requirement could result in them reducing their operation size or ceasing to farm in Oregon. As shown in the figure, a relatively high share of livestock operations in particular expect they might need to cease farming in Oregon under an overtime pay requirement, followed by the crops with the highest expected increases in overall costs due to agricultural overtime (and relatively low expectations on ability to pass on costs to customers): berries, tree fruits, and vegetables.
- **Consolidation of farms due to farms reducing operation size or ceasing farming is a potential outcome.** Rising costs and decreased profit margins can discourage new operators from entering into farming, and can also result in larger operations that can take advantage of economies of scale (lower costs per unit of agricultural product produced) or that can vertically integrate and operate as one entity, replacing an interlinked network of numerous small businesses to produce a product. Certain commodity groups in particular expected consolidation within their sector: tree nuts, wine grapes, dairy cows, berries, seed crops, tree fruits, grain, and nursery.
- **Finally, with high land values for development in many agricultural regions of the state, particularly the Willamette Valley and the Columbia Plateau, increased costs and decreased profits from farming may lead to increased development of farmlands.** While most farmland in farms where operators cease farming or reduce their operation size would likely remain in farms (consolidated with other farms, lie fallow, or used for some other farm purpose), some land may be developed. Surveyed farm operators indicated that development may be particularly likely for Christmas tree growers, vegetable growers, sheep producers, and berry growers; all sectors highly concentrated in the Willamette Valley, with approximately 2,000 to 3,000 acres potentially affected in each of the following counties: Multnomah, Clackamas, Columbia, and Marion. Growers and livestock producers in Hood River, Baker, Polk, Tillamook, Umatilla, Yamhill and Wasco counties also indicated that their land could be developed due to their reducing their farm size or ceasing to farm in response to an agricultural overtime regulation.