



POLICY BRIEF

Washington state's agricultural labor shortage

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WPC Agriculture Policy Research Director

June 2017

Key Findings

1. *Washington state's agricultural labor shortage was more than eight percent from 2011-2013 in the peak season. The severity of the shortage was at its highest in 2016 across the Western United States.*
2. *The causes of the ongoing and worsening agricultural labor shortage are many, including immigration, welfare, state and federal regulations, bureaucratic slowdowns of guest worker programs, increasing costs, and competition from other industries.*
3. *Before 2000, the agricultural sector benefited from four decades of rapid growth in the size of the Mexican immigration population in the U.S., but in recent years the population has stabilized.*
4. *The type of labor problems farmers experienced in 2016, extended beyond simple labor shortages. The top three labor issues affecting farms were: high labor costs, competition from other operations, and not enough available workers.*
5. *A slight majority of farms reported economic damage resulting from labor problems experienced in 2016. Farms greater than 500 acres and farms between 51 to 100 acres were less likely to experience economic damage due to labor disruptions.*
6. *The type of damage also varied, with quality loss being the most common occurrence.*
7. *To solve the ongoing labor shortage, growers will need to use a combination of guest workers and mechanization to continue producing food. Adopting policies that speed the approval of H-2A visas will benefit these Washington growers, the entire agricultural sector, and Washington's broader state economy.*



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Introduction

Washington state farmers have faced agricultural labor shortages year after year, though the severity of the shortage has fluctuated over time. Economists argue the definition of a labor shortage¹, but in the real world the academic definitions are of little importance when crops fail to be harvested in a timely manner or pruning occurs later than needed.

According to a recent survey we conducted, over 96 percent of farms experience a labor disruption, with 58 percent of farms affected by labor shortages in 2016. There are many causes of the ongoing and worsening agricultural labor shortage, including immigration, welfare, state and federal regulations, bureaucratic slowdowns of guest worker programs, increasing costs, and competition from other industries. However, measuring the true effects of an agricultural labor shortage is important to understanding the situation's complexity.

When the public hears farmers' concerns regarding the labor shortage, the typical image conveyed by media outlets are crops rotting in the fields.² Yet, the actual costs of labor shortages are more complex than simple crop loss. Hearing the concerns from Washington farmers and agricultural businesses prompted Washington Policy Center to conduct a systematic survey, to measure the full effects of not having enough agricultural workers in rural areas.

The survey assessed Washington state's agricultural labor disruptions in 2016, by reaching out to Washington farmers. It measured the magnitude of the labor shortage and the quantifiable and qualitative costs. The survey also examined the varied demographics of the growers affected by the agricultural labor shortage in 2016.

This Policy Brief presents a short background on the historical statistics of the agricultural labor shortage, presents and explains the survey results, and discusses ways of reducing or solving future agricultural labor shortages.

1 "How real is the farm labor shortage?" by Ross Courtney, Article, *Yakima Herald Republic*, July 11, 2015, at http://www.yakimaherald.com/news/local/how-real-is-the-farm-labor-shortage/article_1395de14-2855-11e5-b69f-a3f40e26e59a.html. 1

2 "Crops Rot While Trump-Led Immigration Backlash Idles Farm Work," by Alan Bjerga, *Bloomberg News*, June 6, 2016, at <https://www.bloomberg.com/politics/articles/2016-06-06/crops-rot-while-trump-led-immigration-backlash-idles-farm-lobby>.

Background

On an average year, Washington's Columbia Basin will bring the agricultural labor shortage to the upmost attention of even the most complacent spectator.

- News media outlets highlight various crops' struggles with finding adequate and efficient people who can be reliable through the short and hard season.³
- Delays are lamented by farms reliant on guest worker programs inundated with bureaucratic red-tape only to have agricultural workers finally allowed into the United States weeks or months later than planned.⁴
- Rumors abound of farmers being left in the lurch because workers failed to show up for a shift because of better wages on other farms, or workers leaving mid-shift in order to make 25 cents an hour more picking apples instead of driving a truck.⁵

The broader agricultural labor shortage is about more than anecdotal stories, however. Before 2000, the agricultural sector had benefited from four decades of rapid growth in the Mexican immigration population in the U.S., but in recent years the population has stabilized.⁶ Since 2009, more Mexican immigrants have left the U.S. than have entered the country. This trend began in 2000, with immigration from Mexico peaking that year, followed by a steady decline until 2015, at which point the the number of people who exited outnumbered those who entered.⁷

Several reasons account for this decline in immigration from Mexico, including the slow recovery of the U.S. economy after 2008, stricter enforcement of immigration laws, a decline in Mexico's birth rates, and an improved economy and better jobs available within Mexico.⁸

Experts agree that the agricultural sector is the first to experience a labor shortage due to decreased immigration from Mexico. This is especially true because migrant demographics have shifted from a younger workforce to older, married

3 "Farmers struggle to find enough laborers," by Patricia Martellotti, ABC KAPP-TV KEW-TV, April 14, 2016, at <http://www.yaktrinews.com/news/farmers-struggle-find-enough-laborers/361997535>.

4 "Farm labor shortage reported in 20 states, and visa backlog blamed," by the American Farm Bureau, SouthEast FarmPress, April 28, 2016, at <http://www.southeastfarmpress.com/vegetables/farm-labor-shortage-reported-20-states-and-visa-backlog-blamed>.

5 "How real is the farm labor shortage?" by Ross Courtney, *Yakima Herald Republic*, July 11, 2015, at http://www.yakimaherald.com/news/local/how-real-is-the-farm-labor-shortage/article_1395de14-2855-11e5-b69f-a3f40e26e59a.html.

6 "Mexican Immigrants in the United States," by Jie Zong and Jeanne Batalova, Spotlight, Migration Information Source, Migration Policy Institute, March 17, 2016, at <http://www.migrationpolicy.org/article/mexican-immigrants-united-states>.

7 "More Mexicans Leaving Than Coming to the U.S." by Ana Gonzalez-Barrera, Hispanic Trends, Pew Research Center, November 19, 2015, at <http://www.pewhispanic.org/2015/11/19/more-mexicans-leaving-than-coming-to-the-u-s/>.

8 Ibid.

people who are less likely to be employed on a farm setting.⁹ When Washington state agriculture relied on 96,167 employees in 2015, with over 56 percent of workers considered seasonal (only employed for part of the year), there is an extreme dependence on foreign-born labor to fill these seasonal positions.¹⁰

Washington state agriculture experienced a severe labor shortage from 2011-2013. (Since 2013, an official labor shortage survey is no longer being conducted by the Washington State Employment Security Department.) The severity of the agricultural labor shortage is estimated to have been at its highest in 2016 in the Western United States.¹¹

The high labor shortage is a shocking statistic, when the statewide unemployment rate is seven percent.¹² However, American-born workers are less likely to participate in agricultural labor. The wage rate is unappealing to domestic workers and the difficulty of work is a deterrent to native-born workers. For Mexican-born workers, the wage rate is eight times higher than wages they would receive in Mexico, creating an incentive to migrate to the U.S. for work.¹³

A large portion of the labor need is filled by temporary guest workers, hired under the federal H-2A program. In Washington state, the number of H-2A workers in 2016 reached a high of 13,689 and represented more than 20 percent of the seasonal agricultural work force.¹⁴ Estimates place the value of the H-2A workers at \$922 million worth of production value in Washington in 2014, and \$1.7 billion in total economic impact.¹⁵ The H-2A workers are the new source of young, new

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- 9 “Farm to Table: The Role of Immigrants in U.S. Farm Labor in 2016,” panel discussion, Migrant Policy Institute, at <http://www.migrationpolicy.org/multimedia/farm-table-role-immigrants-us-farm-labor-2016>.
 - 10 “2015 Agricultural Workforce,” by Dale Peinecke, Cynthia Forland, and Adrian Sinkler, Labor Market and Performance Analysis, Washington State Employment Security Department, September 2016, at <https://fortress.wa.gov/esd/employmentdata/docs/industry-reports/2015-agriculture-workforce-report.pdf>.
 - 11 “Another tight year for farm labor,” by Dan Wheat, *Capital Press*, November 3, 2016, at http://www.capitalpress.com/Nation_World/Nation/20161103/another-tight-year-for-farm-labor.
 - 12 “2013 Agricultural Workforce,” by Dale Peinecke, Cynthia Forland, Ernst Stromsdorfer, and John Wines, Labor Market and Performance Analysis, Washington State Employment Security Department, May 2015, at <https://fortress.wa.gov/esd/employmentdata/docs/industry-reports/agricultural-workforce-report-2013.pdf>.
 - 13 “The Farm Labor Problem,” by J. Edward Taylor and Diane Charlton, Study, University of California Davis Agricultural and Resource Economics, at https://arefiles.ucdavis.edu/uploads/filer_public/ad/74/ad7450e7-80ab-4cf7-a147-6b80c2e614a7/chapter_1_the_farm_labor_problem_4-4-17.pdf.
 - 14 “Worried Washington growers: ‘Mob mentality’ around immigration threatens state’s ag industry,” by Hal Bernton, *The Seattle Times*, March 17, 2017, at <http://www.seattletimes.com/seattle-news/northwest/washington-farmers-tell-trump-we-need-more-foreign-workers/>.
 - 15 “Report quantifies value of Washington’s H-2A workers,” by Dan Wheat, *Capital Press*, February 28, 2017, at <http://www.capitalpress.com/Washington/20170228/report-quantifies-value-of-washingtons-h-2a-workers>.

labor, replacing the lower rate of unauthorized labor that used to be the driver of the agricultural work force.¹⁶

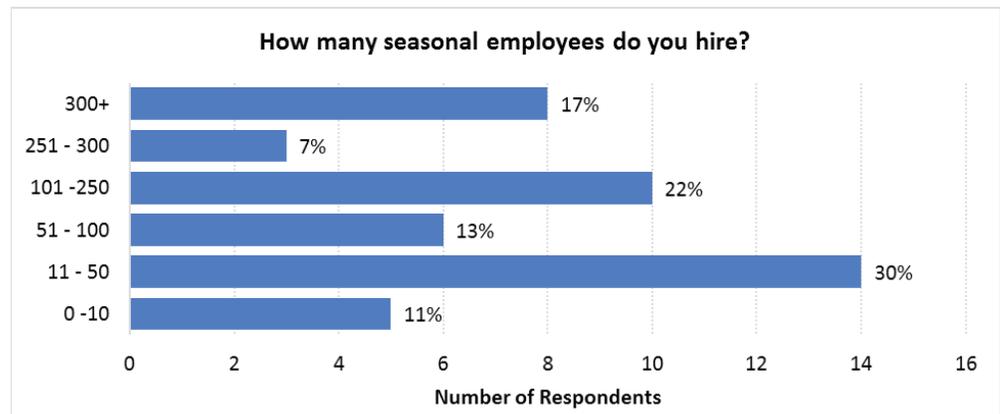
With the tightening labor supply, agriculture has experienced the expected labor cost increases of five percent nationally.¹⁷ In Washington state, averaging across all production sectors and regions, the increase was 3.6 percent.¹⁸

Survey Results

Recognizing that the agricultural labor shortage has more effects than crop loss alone, Washington Policy Center designed a survey to describe the situation. At the end of 2016, we distributed a seven-question survey to growers across Washington state. Forty-eight responses were received representing a range of crops and farm sizes.

Survey Demographics

Demographic questions included number of seasonal employees hired, crops produced, and the size of farm operations. The majority of farms surveyed hired between 11 and 50 workers (30 percent).



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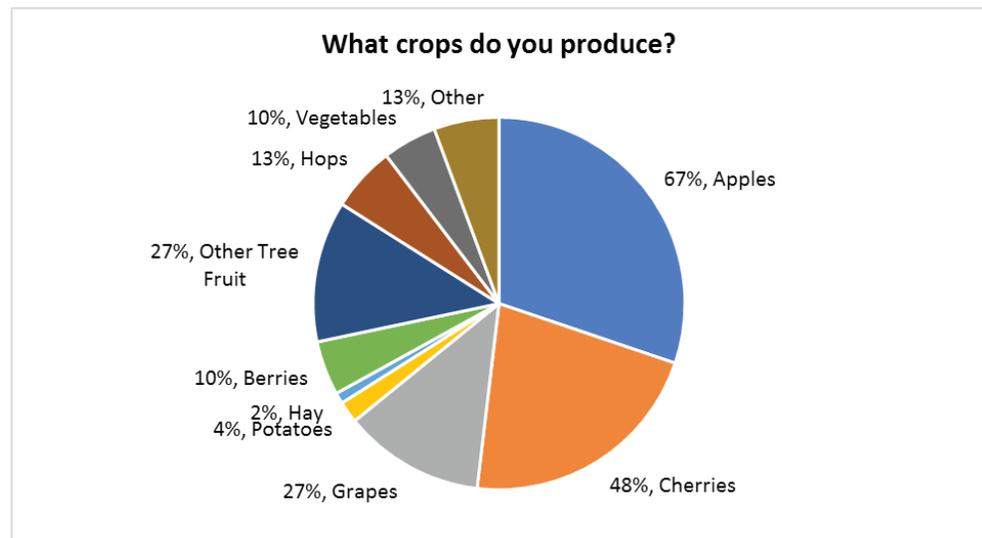
16 “Farm to Table: The Role of Immigrants in U.S. Farm Labor in 2016,” panel discussion, Migrant Policy Institute, at <http://www.migrationpolicy.org/multimedia/farm-table-role-immigrants-us-farm-labor-2016>.

17 “The worker shortage facing America’s farmers,” by Octavio Blanco, CNN Money, September 29, 2016, at <http://money.cnn.com/2016/09/29/news/economy/american-farm-workers/index.html>.

18 “2015 Agricultural Workforce,” by Dale Peinecke, Cynthia Forland, and Adrian Sinkler, Labor Market and Performance Analysis, Washington State Employment Security Department, September 2016, at <https://fortress.wa.gov/esd/employmentdata/docs/industry-reports/2015-agriculture-workforce-report.pdf>.

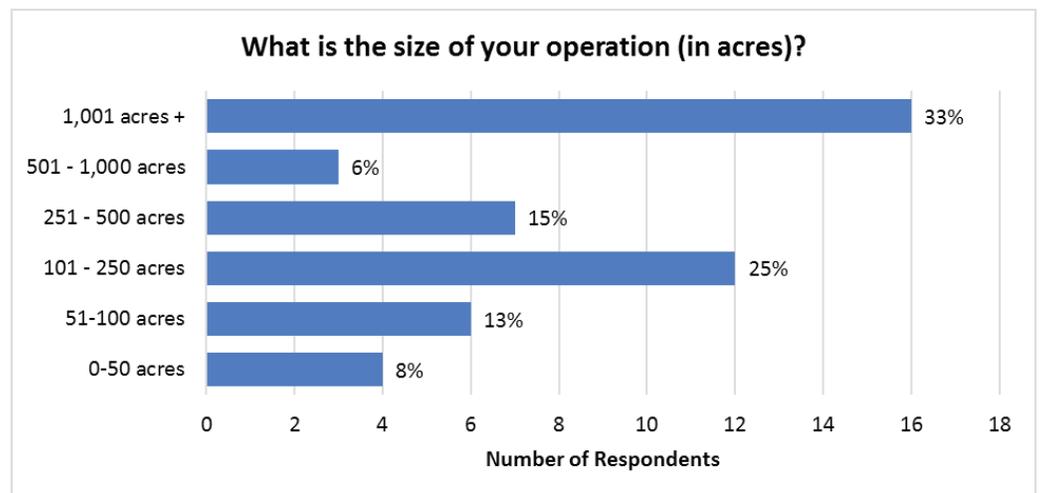
19 Question 5: 46 answered, 2 skipped.

The majority of farms surveyed produced apples, cherries, and grapes with 67 percent, 48 percent, and 27 percent of farms respectively, producing these crops.



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Survey respondents reflected a diverse range of operation sizes with the majority of respondents operating over 1,000 acres (33 percent) and the second highest category of respondents operating 101-250 acres (25 percent).



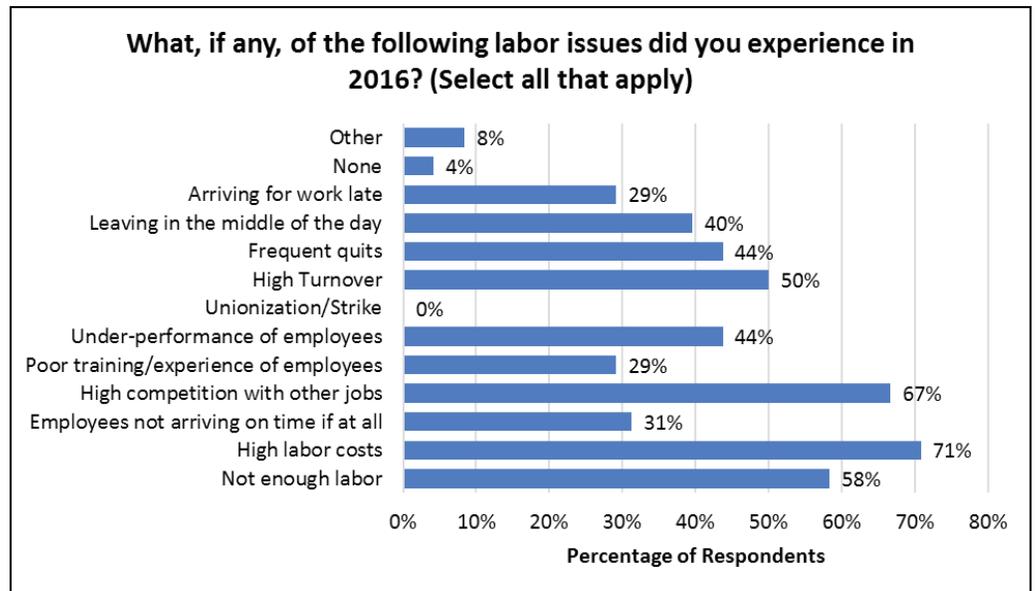
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20 Question 6: 48 answered, 0 skipped.

21 Question 7: 48 answered, 0 skipped.

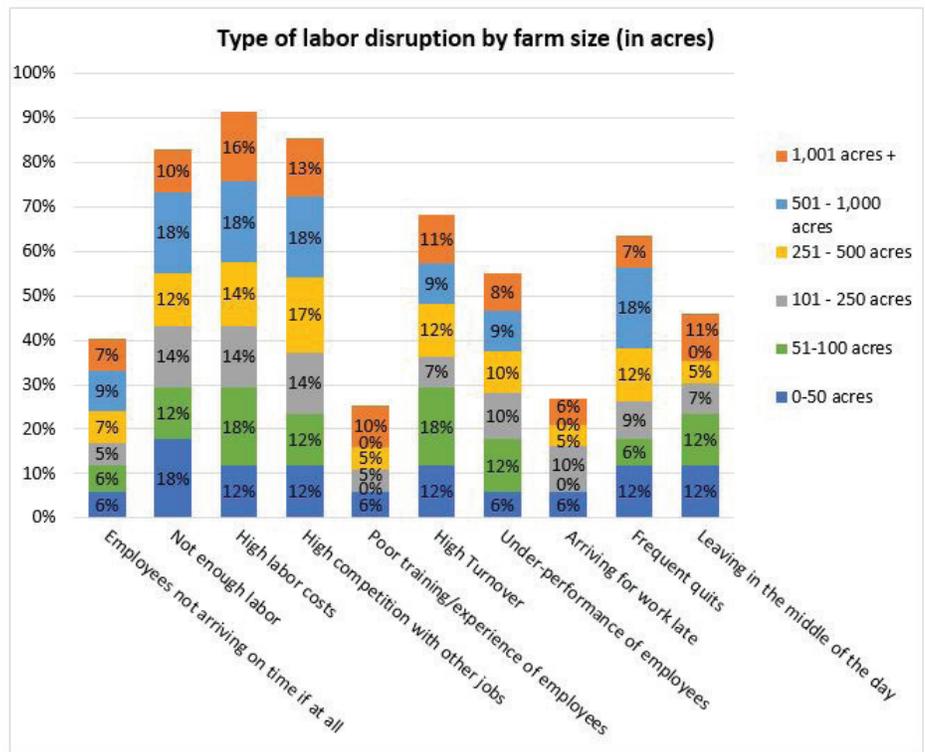
Type of Labor Disruptions

The type of labor challenges farms experienced extended beyond simple labor shortages. The top three labor issues affecting farms were: high labor costs (70.8 percent of farms), high competition with other operations (66.6 percent of farms), and not enough labor (58.3 percent of farms).



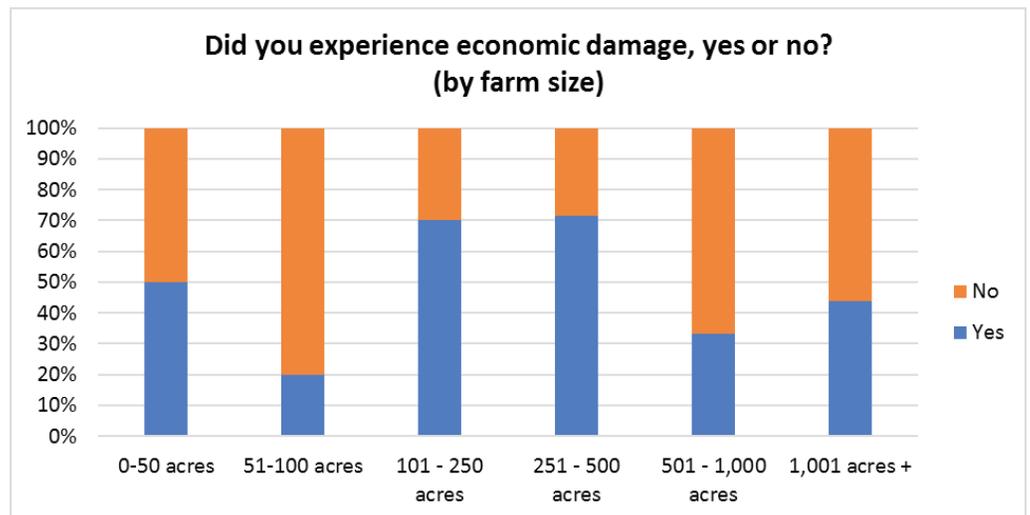
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For small farms of less than 50 acres, not having enough labor is the main concern, impacting 18 percent of small farms, other concerns were less than 12 percent. For larger farms the concern over costs, competition, and not having enough labor were more evenly split, with more emphasis placed on labor cost.



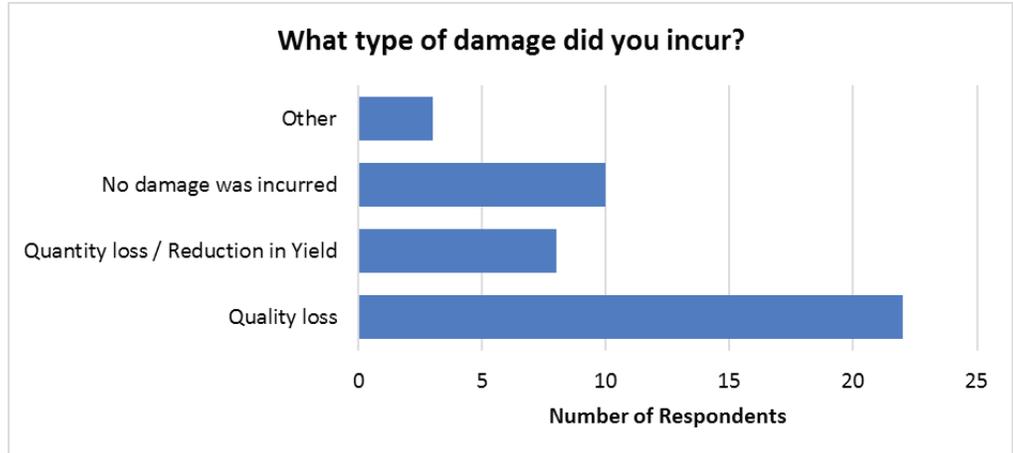
Economic Cost of Labor Disruption

A slight majority of farms (51 percent) reported economic damage resulting from the labor problems experienced in 2016.²³ Large farms greater than 500 acres and farms between 51 to 100 acres were less likely to experience economic damage due to labor disruptions. Farms between 101 to 500 acres were more likely to experience economic damage due to labor disruptions.



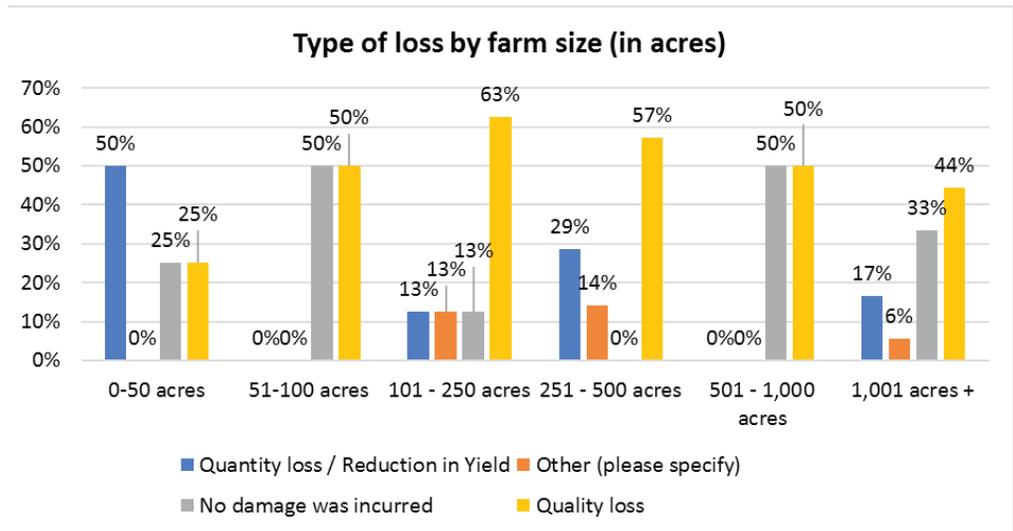
The type of damage also varied, with quality loss being the most common occurrence on 53 percent of farms surveyed. Only 17 percent of farms experienced a quantity loss and reduction in yield. “Other” responses include damages due to high labor costs.

²³ Question 2: 45 Answered, 3 Skipped



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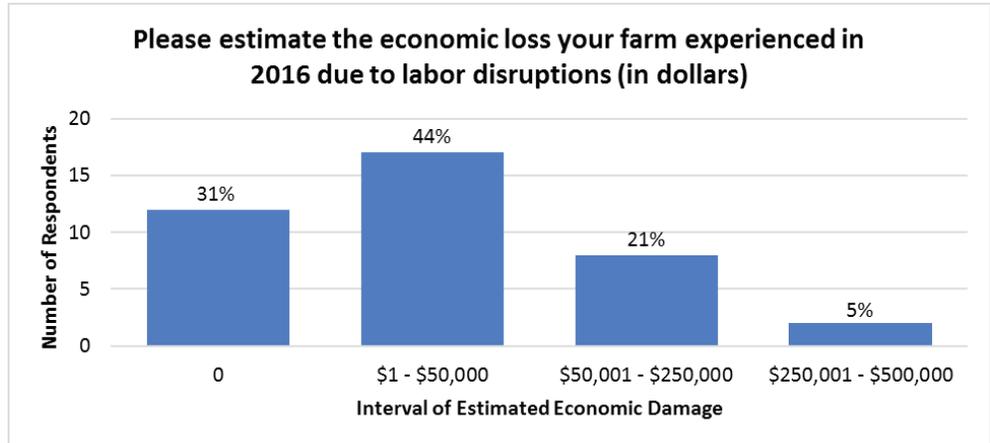
Individual responses indicate that smaller farms are more effected by crop loss and reductions in yield due to labor disruptions, with 50 percent of farms less than 50 acres citing crop loss as a top concern. Farms larger than 50 acres were more effected by damages to quality if a loss was incurred.



Estimated Economic Loss

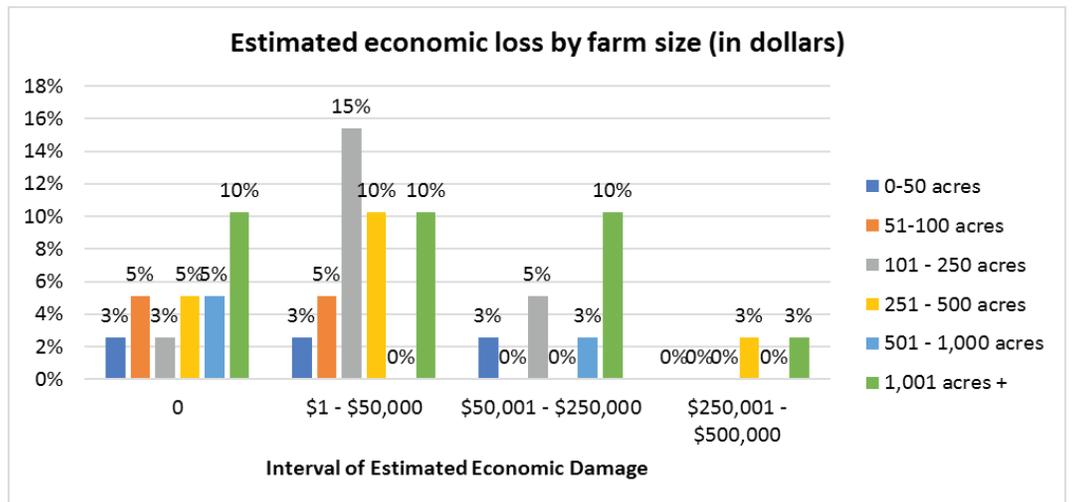
Growers reported the estimated economic loss their operations experienced due to 2016 labor disruptions. The majority of farms (44 percent) experienced a loss of up to \$50,000, and 21 percent experienced a loss between \$50,000 - \$250,000.

24 Question 3: 35 answered, 12 skipped, 1 removed response.



25

Large farms of more than 1,000 acres are the least likely to experience an economic loss due to labor disruptions (see figure “Estimated economic loss by farm size (in dollars)), with 10 percent of large farms citing no economic loss whereas all other farm sizes that did not experience loss ranged from 3 to 5 percent. Farms between 101 - 250 acres appear to experience the largest economic loss in comparison to other farms.



25 Question 4: 39 answered, 9 skipped.

Path Forward

The labor shortage problem is sure to continue, with news agencies in 2017 already covering the topic and with forecasts for the guest worker program topping 15,000 workers.²⁶ The pathway forward is crowded with debates over immigration and welfare reform, labor cost and worker benefit initiatives, worker right lawsuits and regulations, and calls for expedited government processing of guest worker visas.

In the din of competing labor shortage concerns, two main trends will move the agricultural sector forward and allow for continued food production. These trends are mechanization and expansion of the guest worker program.

Historically, the demand for agricultural labor changes among crops due to various influences. A look at California highlights that farm labor is concentrated and changing. Fifty years ago, raisin producers were the most intensive employers of farm workers. Due to rising costs and shortage concerns, raisin growers adopted mechanized ways to harvest their crop, and strawberry growers then became the main employers of farm labor (followed by the vegetable growers.) In fact, within California's immense crop diversity, the growers of just 15 major crops employ 95 percent of the agricultural workforce.²⁷

Agricultural producers will continue to adopt mechanization with cost being the highest consideration.²⁸ Adoption of new technologies is primarily influenced by the direct cost of mechanization, in addition to labor costs and the desire of the farm to attract workers because of better equipment. Mechanized farms with more efficient, less labor-intensive systems are more appealing to farm workers.

Regarding mechanization, Professor Phil Martin of the University of California-Davis said, "That as growers accept that they will be unable to expand the workforce, they have to turn to technology to supplement and improve efficiency of the existing labor force."²⁹

The interest in agricultural mechanization is growing globally, as workers become scarce and labor costs escalate. Multiple companies are trying to solve these problems by inventing robotic apple pickers or other harvesters, in addition to creating technologies that ease labor requirements.³⁰ However, there are many reasons for farmers not to adopt mechanization.

26 "Washington may reach 15,000 H-2A workers this year," by Dan Wheat, *Capital Press*, March 4, 2017, at <http://www.capitalpress.com/Washington/20170304/washington-may-reach-15000-h-2a-workers-this-year>.

27 "Farm to Table: The Role of Immigrants in U.S. Farm Labor in 2016," panel discussion, Migrant Policy Institute, at <http://www.migrationpolicy.org/multimedia/farm-table-role-immigrants-us-farm-labor-2016>.

28 Ibid.

29 Ibid.

30 "Orchard owners look to robots as labor shortage worsens," by Nicholas Geranios, Associated Press, published in *The Spokesman-Review*, April 28, 2017, at <http://www.spokesman.com/stories/2017/apr/28/orchard-owners-look-to-robots-as-labor-shortage-wo/>.

For example, California raisin growers resisted mechanization because their farms were small, they were close to retirement, and the farmers had paid off debt on their farms. The disadvantage of mechanization is that it decreases the flexibility that comes with a hand-picked harvest. Before mechanization, raisin growers could sell their crops to either the wine grape market or the raisin market. Once expensive equipment was adopted for raisin production, harvest costs became fixed and the farmer's marketing flexibility disappeared because grapes picked by harvesters are only fit for the raisin market.³¹

With these many reasons discouraging adoption of new technologies, growers must look at supplementing labor through programs like H-2A.³² On the west coast, specifically in California and Washington, the H-2A is growing at the fastest rate in the country, and it is likely robotic harvesters will not be adopted industry wide for decades. A combination of guest workers and mechanization will be used to allow farmers to address the continued agricultural labor shortage and to allow farmers to continue producing food for our future.

As Washington growers enter another peak season of agricultural labor needs, policymakers should be concerned not just about crop loss, but about quality loss as well. The quality of harvested food is improved by the timely availability of labor, and the government's slow approval of H-2A visas increases the economic losses sustained by growers. Small to mid-size farms are the most affected by labor shortages. Adopting policies that speed the approval of H-2A visas will benefit these Washington growers, the entire agricultural sector, and Washington's broader state economy.

31 "Farm to Table: The Role of Immigrants in U.S. Farm Labor in 2016," panel discussion, Migrant Policy Institute, at <http://www.migrationpolicy.org/multimedia/farm-table-role-immigrants-us-farm-labor-2016>.

32 Ibid.

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An Oregon native, Madilynne brings a lifetime of experience in Agriculture to WPC. Her passion for agriculture grew as she helped her dad on veterinary calls and then became active in FFA.

Before joining WPC, she worked for Ag Association Management in Kennewick as an Account Manager and field rep for the Far West Spearmint Marketing Order. She worked with growers and industry across Washington, Oregon, and Idaho. She also spent two years as an associate of The Context Network. Her time involved working as a business analyst on various agriculture projects in production, wholesale, retail, and policy Ag sectors.

Madilynne holds a Master's Degree in Agricultural and Resource Economics from Colorado State University as well as a B.S. in Environmental Economics, Policy and Management from Oregon State University. When not working for WPC, she enjoys knitting, running, and every minute with her husband, newborn son, and their dog, Parli.