

ROGUE VALLEY GROWER SURVEY 2015

ECONOMIC ASSESSMENT REPORT

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Prepared on Behalf of the Rogue Valley Food System Network
and
Meyer Memorial Trust

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Rogue Valley Food System NETWORK
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STUDY OVERVIEW

The Jackson County Community Food Assessment 2013 articulated a series of recommendations for strengthening the Jackson County Food System. Its first recommendation was to "Expand the market for local food." The Rogue Valley Food System Vision and Action Plan 2013 Executive Summary extended the vision of the Jackson County Food Assessment to both Jackson and Josephine Counties and established a vision for the Rogue Valley, "We envision a thriving regional food system that engages the community in attaining local food production, equitable food access, a healthier community, local economic vitality, and continued collaboration and leadership to connect all of the pieces."

Two of the action items listed in the action plan described developing the infrastructure and capacity of local agriculture:

Action Items:

1. Local Food: Build infrastructure and increase local food production
2. Economic Vitality: Promote a thriving local economy

In addition to overall action items, specific goals were developed for long-term assessment. Several of these goals pertain specifically to local food production and consumption.

Goals:

1. Ensure that county and statewide land use regulations support and enhance opportunities for agricultural businesses
2. Develop and use existing infrastructure to transport local food from the farm to the market to extend the seasonal availability of local foods and add value through the production of specialty foods
3. Develop and implement education, training, and business development support for aspiring farmers and ranchers
4. Increase the percentage of food consumed that is produced in Jackson and Josephine County

Measuring the success of any actions intended to meet the above goals requires the collection of data to establish the current and changing state of the agricultural economy in Jackson and Josephine Counties. USDA Agricultural Census Data, collected every five years, provides detailed production information, but does not specifically address the extent to which

food produced is marketed and/or sold locally or regionally. Long-term monitoring and assessment of the Rogue Valley Food System requires a novel study of the state of the local food system. Initial baseline data was first published in the "Rogue Valley Grower Economic Assessment Report 2013." The report that follows summarizes data collected from Jackson and Josephine County growers in 2015 and compares how this data has changed since initial collection in 2013. Data collected assists in assessing the current condition of the food system as it relates to the above action items and goals. The report that follows summarizes data collected from Jackson and Josephine County growers pertaining to the 2013 growing season. Data collected assists in assessing the current condition of the food system as it relates to the above action items and goals.

METHODS

Survey Overview

Although the USDA collects some economic data from farmers and ranchers, specific data regarding distribution of that food is not collected. Furthermore, though the USDA data collection process is titled a census, reported methods for the census indicate that data are estimated based on a smaller sample of reporting farmers.

If Jackson and Josephine County desire to assess specific changes in food produced AND food sold within the region, it will be necessary to develop a method for ongoing data collection. Although the survey conducted here is a second attempt at collecting the necessary data for assessment, it will need to be replicated on a regular basis over many years to improve reliability and response rate.

Though the USDA Agricultural Census is an "estimate" of the agricultural economy, it has been used throughout this study as a baseline for available data. For example, the extent to which the Rogue Valley Grower Economic Survey represents the population of growers as a whole is based on the percent of total farmers reported by the USDA Agricultural Census. In 2012 the USDA reported that there were 617 farmers in Josephine County and 1,722 in Jackson County. Without a reliable method for contacting these growers (Ag Census data contacts are confidential), it became necessary to establish a method for identifying likely growers in the Rogue Valley.

For the 2013 survey, "likely growers" were identified by compiling lists of farmers created by OSU Extension, Rogue Valley Farm to School, Rogue Farm Corps, and Thrive. In addition to established lists, this research generated a list of land owners identifying their property as a farm and/or ranch through county assessor databases for Jackson and Josephine Counties. This method is similar to the method used by the USDA to generate their list of likely farmers for inclusion in the Ag Census.

For the 2015 mailing we began with the mailing list of growers for the 2013 survey. We eliminated any addresses that were returned to us as undeliverable or vacant, and updated addresses that needed to be forwarded from the previous mailing. We also reached out to participating partners for additional growers. After completing the merge and removing duplicates, the 2015 survey was mailed to 2793 recipients (See Table 1).

SURVEY METHODS CONTINUED

The web version of the survey was emailed to a list of 759 farmers and ranchers identified by partnering organizations. Some duplication between the mail list and those who received it electronically exists, however to make the survey as accessible as possible we sent the survey to both email address and physical address when known. At least one recipient replied to both the mailing and online version of the survey. This duplication was identified and removed during analysis. The mailing and the release of the web survey were timed so that they would likely have been exposed to the web survey prior to receiving the physical mailing and would likely not reply to the mailed survey.

Initial surveys were sent out on January 27, 2016. All follow-up and remailings occurred on or before February 22, 2016. All surveys received by April 15, 2016 were included in the data entry and analysis process.

Table 1. Survey Response Rates

Response Rates	
Mailing List	2793
E-mail List	759
Total Surveys	3552
Q1 - Yes	250
Q1 - No	231
Total Response	481
Total Response %	13.5%
Complete Economic	226
Complete Economic Response %	6.4%

In total, 481 recipients responded to this year's survey. Of those responding, 231 reported that they had been incorrectly identified as a farmer and/or rancher with sales. Calculated response rate for the survey as a whole was 13.5%. The percent of respondents correctly identified as farmers was only 7%, and those with a complete economic data was 6.4% (see table 1). The 226 farmers who provided complete economic assessment of their agricultural enterprises in 2015 represent 9.66% of those reporting sales to the USDA in 2012. It is this value that is used to calculate the simple estimate of the population as discussed later.

METHODS CONTINUED

A copy of the survey instrument is available in the appendix. Questions were incorrectly numbered on the printed survey instrument. Reference to question numbers within this report are based on correct numbering. During the process of reviewing and refining methodology for the 2015 study, we identified several data errors associated with the 2013 data set. Some records were found to be duplicates or blank records that diluted the denominator, as such these records have been removed for this analysis. Although these changes were minor, it is important to note that the total sample count is slightly different in this analysis than was reported in the Rogue Valley Grower Economic Survey 2013.

SAMPLE POPULATION

In order to use a sample of growers to estimate the entirety of the direct agricultural economy in Jackson and Josephine Counties, it is important to understand the structure and demographic composition of the sample as well as how this sample compares to the population as a whole. Unfortunately, as previously mentioned, the actual population of farmers is unknown. However, a comparison of sample composition to USDA Agricultural Census data reported in 2012 helps to provide a picture of how the sample may differ from the population.

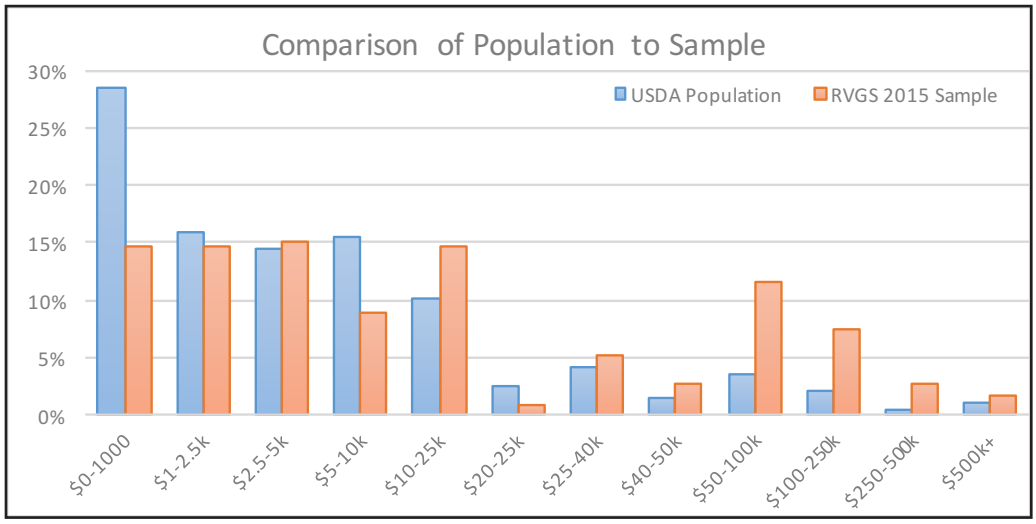

Figure 1: Comparative distribution of Rogue Valley Growers Survey sample, reported 2015 sales and USDA sampled farmers by reported 2012 sales

The differences in farmer distribution between the Rogue Survey and Ag Census are complex. While distributions appear similar, the Rogue Valley survey appears to underestimate in specific demographic categories and overestimate in others. Given that the sample consists of only ~9% of the estimated total number of farmers, this difference is not surprising. Importantly, the data reported here suggest that the sample consists of a range of growers consistent with the general distribution reported by the USDA, with the noted exception that this study does slightly under-samples small farmers, and over-sample the largest producers.

The overall economic data for the sample as reported below also appears consistent with national trends in the agricultural economy. For example, median reported sales are substantially lower than mean reported sales. This difference indicates that a large portion of farmers report very small annual sales. The max sales volume of over $1 million further illustrates the

national trend of a lack of "ag in the middle," meaning the region has a large number of very small farmers, a few large farmers, and very few in the middle.

Table 2: Overall sales of Grower Economic Survey sample including descriptive statistics

2015 RVGS descriptive statistics			n1=226	n2=250
	Sum	Mean	Median	Max
Gross Farm Sales [n1]	$ 11,203,812	$ 50,497	$ 7,450	$ 1,125,000
Rogue Valley Sales	7 - 8.1 M	*Derived from Q4 range*		
Acres Producing [n2]	13,426	56.9	10.0	3500.0

The number of farmers reporting crop by product type in the sample is reported in Figure 2. While largely invisible to the consumer, more than half of the farmers reporting sales in the Rogue Valley grow either hay or animal products or both. Remaining growers report a range of agricultural and/or horticultural products. Growers reporting in the "other" category listed seeds and herbs most commonly, but additionally reported wool, manure, calves, Christmas trees, flowers, animal boarding, honey, and processed foods.

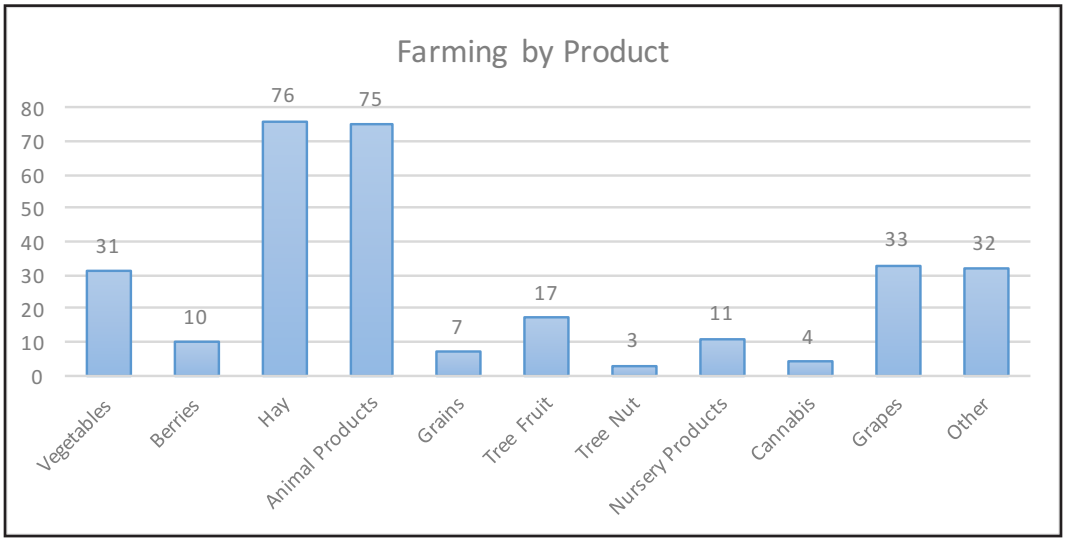

Figure 2: Count of sample reporting sales in each product category. Farmers were asked to report for all categories in which they grew. Many farmers reported in multiple categories.

USDA Agricultural Census data does not address specific farm enterprise composition. The Rogue Valley Grower Survey asked farmers to report participation in one or more farm enterprises, results shown below (Figure 3) by number of farmers identifying with each type. As above, respondents were able to identify with more than one enterprise and list percentage of sales by each category. In addition to those categories listed, growers

SAMPLE POPULATION CONTINUED

wrote in a wide range of additional enterprises including: word of mouth, friends/neighbors, livestock buyer, winery, contract grower, seed company, dispensary, U-pick, yard sale, and many more.

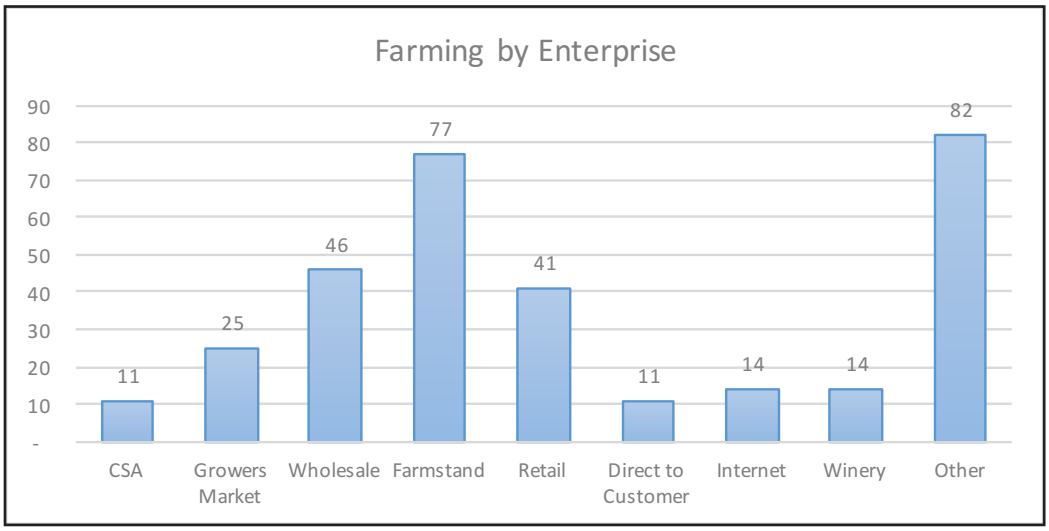

Figure 3: Count of sample reporting participation in each enterprise category. Farmers were asked to report for all categories in which they sold. Many farmers reported multiple categories.

ESTIMATION METHODS

Estimating population characteristics from a non-random sample population is complex and often unreliable. Further complicating estimation is the reality that the present sample data represents only 9.66% of the population. Although population estimates are provided here, they should be used cautiously. Regular improvement of the sample set over time will improve estimations. There are multiple ways to estimate from sample data. The data provided here are estimated in two ways. Two different methods were chosen because of the uncertainty inherent in the population as a whole. Estimation is always based on some standard set of data thought to represent the population. In this case, that standard is set by the USDA Agricultural Census. However, as pointed out above, this data is also a known estimate. As such, estimates are provided here using different assumptions.

Simple Population Estimation

As has been stated, the sample of growers in this study represents 9.66% of the total number of growers reported by the USDA Agricultural Census. IF the sample is perfectly representative of the population then an estimate of population characteristics can be determined by [SUM of SAMPLE] / 0.0966 = [Simple POPULATION estimate].

Stratified Population Estimation

A more commonly used strategy for estimating population characteristics from a sample involves stratifying response rate based on some known demographic. Both the USDA Agricultural Census and the Rogue Grower Survey report grower total sales, providing a standard demographic from which to compare the sample to the population (See Table 3). By estimating the relative response rate from farmers stratified by sales, it is possible to refine all estimates of the population. Although a stratified estimation provides a more reliable depiction of the population, it relies entirely on the standard on which it is based. In this case, this estimation procedure relies more heavily on the reliability of the USDA Agricultural Census in representing population demographics. If the USDA Agriculture Census is underrepresented or overrepresented in any sales category, then this method of estimation may be less reliable than a simple estimate.

Table 3: Response Rate by stratified annual sales

Reletive response rate of given strata			
	2015 Sample	Population	Rate
$0-1000	33	668	4.9%
$1-2.5k	33	372	8.9%
$2.5-5k	34	340	10.0%
$5-10k	20	363	5.5%
$10-25k	33	238	13.9%
$20-25k	2	59	3.4%
$25-40k	12	96	12.5%
$40-50k	6	34	17.6%
$50-100k	26	82	31.7%
$100-250k	17	51	33.3%
$250-500k	6	10	60.0%
$500k+	4	26	15.4%
	226	2,339	

Estimating Percentage of food sold in Rogue Valley (Q3&4)

The extent to which food produced is sold within Jackson and Josephine Counties was measured with two survey items, Q3 which asked for total sales, and Q4 which requested a reported range. The mean reported value was (8.47) a value corresponding to (8) = 71-80% of sales were in Rogue Valley and (9) 81-90% of sales were in Rogue Valley. However, because many larger farmers reported fewer sales within the Rogue Valley the overall percent of products grown and sold in the Rogue Valley is between 62.7 and 72.5%. By applying this range conservatively to the total sales, it is estimated that $7.0 - $8.1 million of agricultural products were grown and sold in the Rogue Valley by this sampled group of farmers. Of 226 growers with complete economic data, 163 growers report selling 100% of their products within the Rogue Valley. Of these 163 reporting all sales in the RV their average sales were $34,700.

Estimating Percentage of food sold in Rogue Valley II (Q5)

In addition to the total amount and range reported in questions 3&4, growers were additionally asked to report the specific percent of sales in the Rogue Valley by listed category. Question 5 asks the grower to report the approximate dollar amount sold by category. As a result, it is possible to calculate a total percent of products grown in the Rogue Valley by calculating a total by category times the percentage reported and then totaling this sum for a total sales in the Rogue Valley. The calculated percent of sales in the Rogue Valley in the study sample using Question 5 is 66.7%, a number that appears consistent with the range reported in question 4.

RESULTS

Direct Economic Value of Rogue Valley Agriculture

Simple Estimate (Population):

The USDA Agricultural Census reports both the total number of farmers as well as the total value of sales in both Jackson and Josephine Counties. The Rogue Valley Grower Survey also reported value of sales. As such, it is possible to test the estimation procedure by comparing the total value of agricultural products produced in Jackson and Josephine Counties to an estimated value taken from the Rogue Grower Survey. The simple estimation technique outlined above suggests that $115 million worth of agricultural products were grown in the Rogue Valley in 2015 (Table 4). By comparison, the estimated economic value of agricultural products produced is 139% of the USDA Reported Sales in 2012.

Stratified Estimate (Population):

Our stratified estimate (Table 4) suggests that $51 million worth of agricultural products were gown in the Rogue Valley in 2015. This is notably less than the simple estimate, and when compared to the overall sales of Jackson and Josephine Counties this estimate reports total sales of 61.6% of that reported by the USDA.

Table 4: Population Estimates

2012 USDA reported sales compared to RVGS estimates		
Total Q3	$	11,203,812
Extrapoation Rate		9.66%
Simp Estimated Population Sales	$	115,954,493
Stratified Estimate	$	51,089,202
USDA Reported Sales	$	82,934,000

Although it is more convenient to report a single standard estimate for the total value of agricultural sales in the Rogue Valley, it is likely more accurate to report that the estimated 2015 value of sales was somewhere between $51.1 and $115.9 million*.

*In 2013 there was considerably less variance between the two estimation techniques

Sales by Product (Population)

Rogue Valley producers generate a range of product types. Growers were given a list of ten categories for product types grown with an option to list "other" products. Most of those reporting "other" did not provide a qualitative description of products grown. Of those that did list a "other" description, dominant products listed were: seeds, herbs, wool, manure, lavender, calves, cattle, and Christmas trees. Products listed in the other category have not been re-coded to listed categories.

A comparative analysis of estimation procedures reveals differences in percent totals in results based on estimation method. Unfortunately, a comparison of these estimates to the USDA Agricultural Census is difficult. The economic value of several product categories is not disclosed in the census. Furthermore, the USDA Agricultural Census does not provide detailed breakdowns of all categories used in the Rogue Valley Grower Economic Survey.

Due to the very small n values in many categories care must be used in evaluating the estimates presented here.

Table 5: Value of sales by product type in both sampled farmers and population estimates

Value of sales by product type in both estimations							
Product Type		Sample	n		Simple Estimate		Stratified Estimate
Vegetables	$	1,339,761	36	$	13,865,934	$	4,642,366
Berries	$	223,300	11	$	2,311,056	$	853,910
Hay	$	976,208	85	$	10,103,321	$	6,241,723
Animal Products	$	1,616,543	83	$	16,730,505	$	8,192,420
Grains	$	302,207	8	$	3,127,709	$	1,689,870
Tree Fruit	$	339,036	21	$	3,508,873	$	1,523,819
Tree Nut	$	675	3	$	6,986	$	6,376
Nursery Products	$	604,274	11	$	6,253,969	$	1,884,795
Cannabis	$	62,500	4	$	646,847	$	212,662
Grapes	$	3,055,563	36	$	31,623,725	$	11,971,108
Other	$	2,289,723	35	$	23,697,615	$	13,015,050

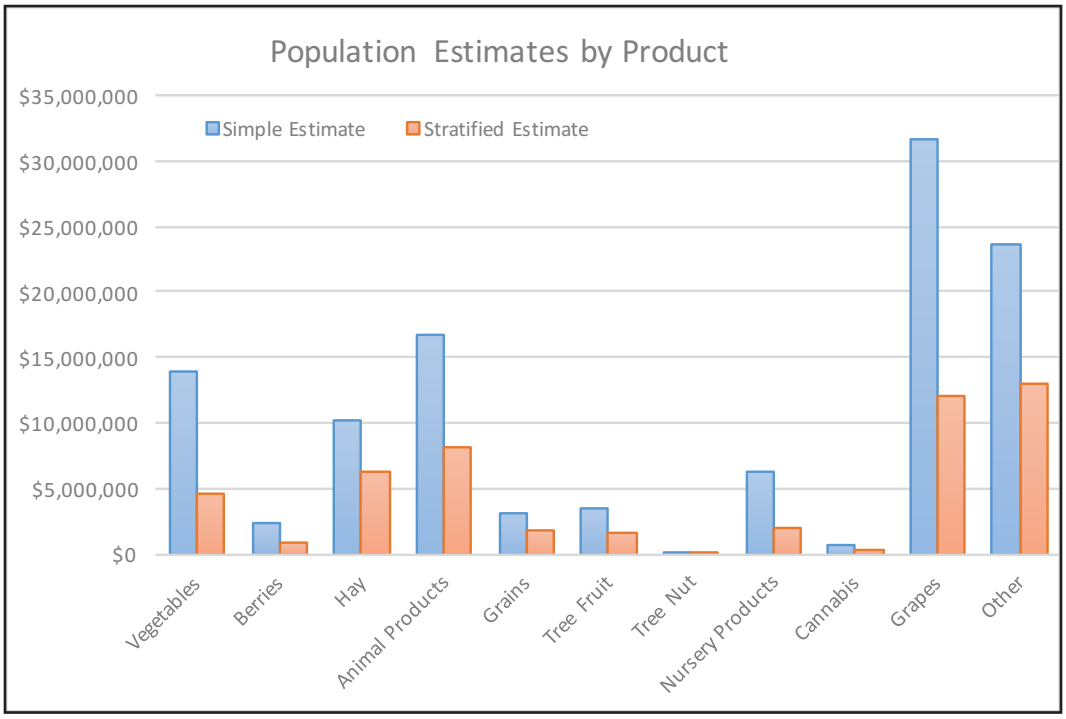

Figure 4: Estimated sales by product for both simple and stratified estimates of population

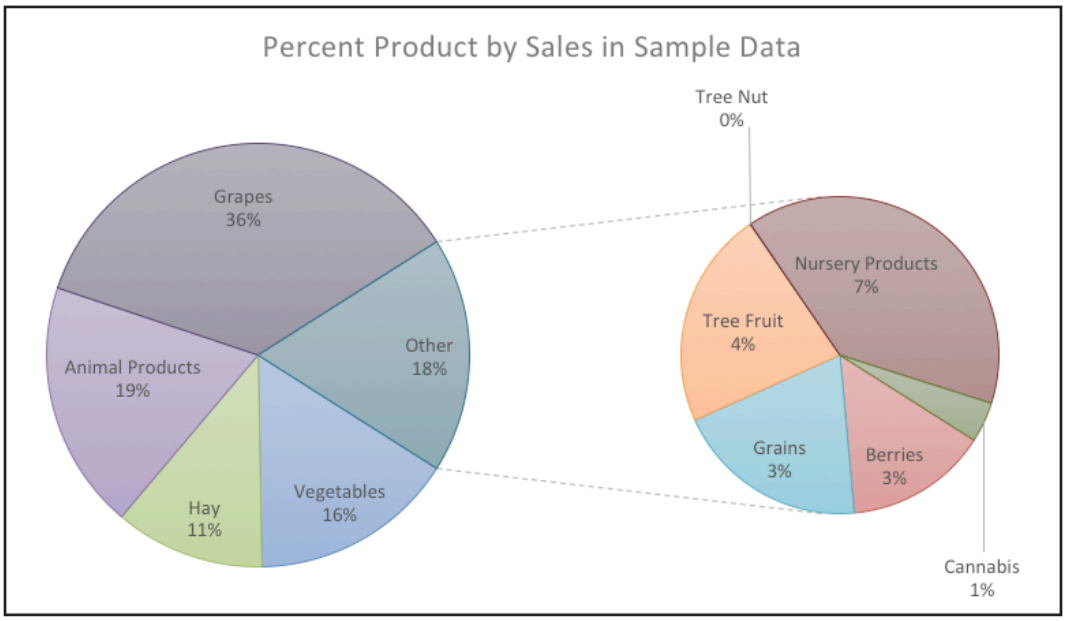

Figure 5: Estimated sales as a percentage of total sales by product type reported in survey sample

ROGUE VALLEY SALES ESTIMATES

Total Sales

The total value of products grown and the total value of products sold in the Rogue Valley represent an essential baseline figure for determining the success of programs designed to address the actions and objectives above.

Perhaps most interestingly, the relatively high percent of foods reportedly sold in the Rogue Valley suggests the need to look at how specific product types are distributed. As is demonstrated below, some crop types are more likely to be sold within the Rogue Valley than others.

Table 6: Estimates of population sales and sales within the Rogue Valley using two estimation procedures

2015 Total Sales and Population Estimates						
		Sample		Simple Estimate		Stratified Estimate
Gross Farm Sales	$	11,203,812	$	115,954,493	$	51,089,202
% of Sales in Rogue Valley		62.7 - 72.5 %		62.7 - 72.5 %		62.6 - 72.2 %
Max Sales in Rogue Valley	$	8,120,180	$	84,067,007	$	36,910,717
Min Sales in Rogue Valley	$	7,022,889	$	72,703,467	$	31,961,136
Q5 RV %		66.7%		66.6%		65.7%
Alternate Q5 RV Est	$	7,462,155	$	77,247,981	$	33,566,333
* Min and Max calculated as Range of Q4						

Sales by Product

The degree to which a product is grown for sale in the Rogue Valley is predictably based on the type of product produced. The data that follows defines the degree to which a specific crop category is both produced and sold within Jackson and/or Josephine Counties. In some cases, however, such as in the sale of animal products, it is unclear as to whether the respondent viewed the sale of a product to a distributor within the area as a sale to an end consumer in the area. Further qualitative interviews to better understand distribution methods will be needed to clarify sales distribution within the Rogue Valley.

Table 7: Agricultural product distribution within Jackson and/or Josephine County by product type

Products Sold in Rogue Valley				
Product Type	Sample	RV portion (Q5)	Simple Estimate	Stratified Estimate
Vegetables	$ 1,339,761	$ 1,003,156	$ 10,384,638	$ 3,832,494
Berries	$ 223,300	$ 136,824	$ 1,416,395	$ 462,697
Hay	$ 976,208	$ 769,974	$ 7,970,748	$ 5,200,368
Animal Products	$ 1,616,543	$ 1,139,492	$ 11,795,979	$ 5,419,216
Grains	$ 302,207	$ 263,007	$ 2,722,640	$ 1,456,834
Tree Fruit	$ 339,036	$ 333,406	$ 3,451,408	$ 1,488,384
Tree Nut	$ 675	$ 675	$ 6,988	$ 6,376
Nursery Products	$ 604,274	$ 122,464	$ 1,267,744	$ 414,464
Cannabis	$ 62,500	*$ 8,000*	$ 82,816	*$ 24,154*
Grapes	$ 3,055,563	$ 2,722,932	$ 28,187,706	$ 10,783,716
Other	$ 2,289,723	$ 962,224	$ 9,960,915	$ 4,739,140

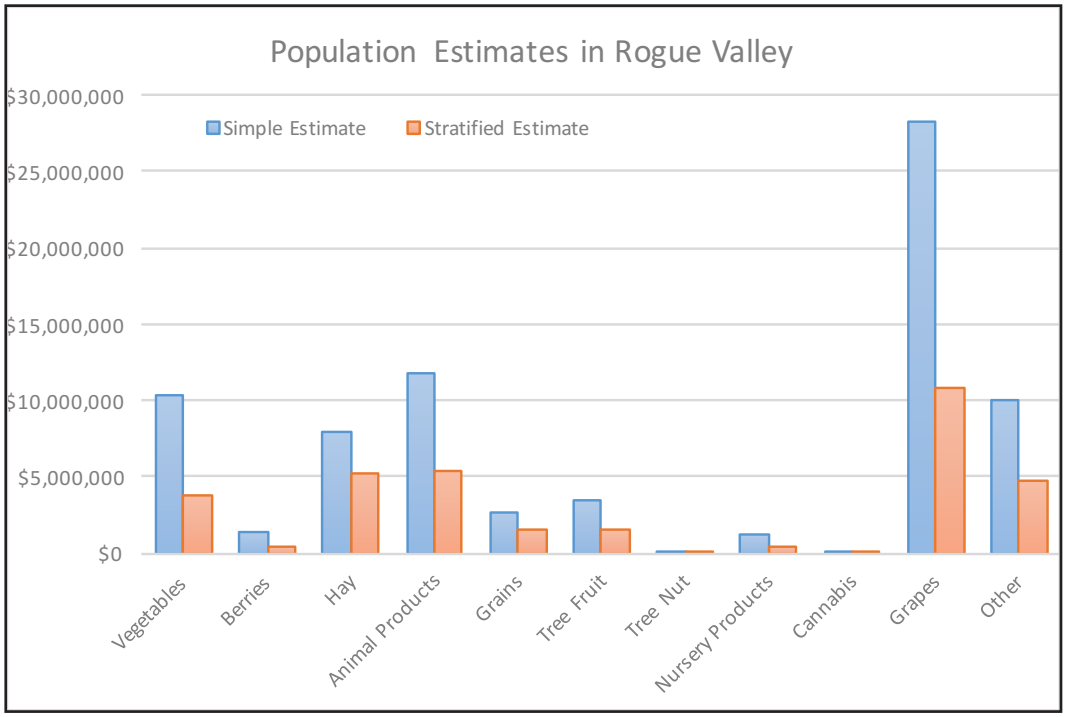

Figure 6: Estimated sales by product category within Jackson and Josephine Counties using both simple and stratified estimates

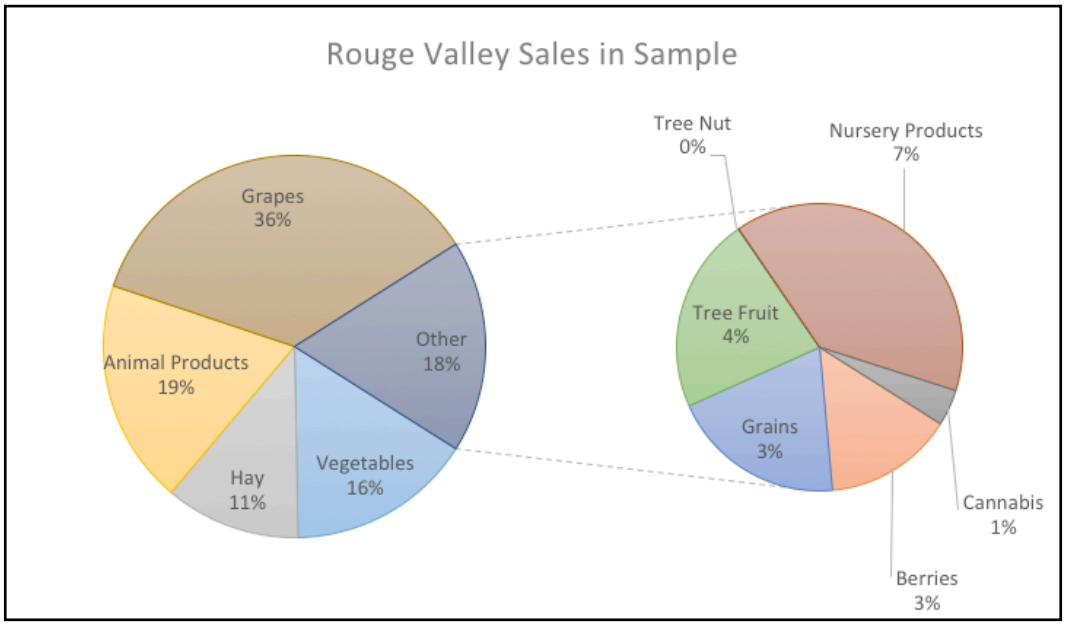

Figure 7: Estimated sales within Jackson and/or Josephine Counties as a percentage of total sales by product type in survey sample

LAND IN PRODUCTION

Respondents to the Rogue Grower Survey reported producing on 13,426 acres. Mean farm size was 56.9 acres with a median farm size of only 10.0 acres. Comparison of data from the Rogue Valley Grower Survey to the USDA Agricultural Census is not possible based on question type. The Rogue Valley Grower Survey asked growers to report on land under production in 2015. The USDA Agricultural Census asks growers to report total farm size. Early interviews with growers in this study revealed that one potential strategy for impacting farm viability and economic contribution was to improve market availability. Many growers reported growing on far less than total land owned even after considering fallow land in crop rotation. As such, we have continued to monitor land under production rather than land holding. That said, the USDA Agricultural Census reports 242,335 acres of land in farms with mean farm sizes of 124 acres in Jackson County and 46 acres in Josephine County.

REPORTED FARM PRACTICES

Growers were asked to report identification with a series of selected growing practices.

Options provided included:

1. Certified Organic
2. Biodynamic
3. No Spray
4. Other

After reclassification of "other", two new categories were created titled "organic non-certified" and "LIVE". Even after re-classification, 27% of growers choose to identify with a specific growing strategy beyond those listed in classification.

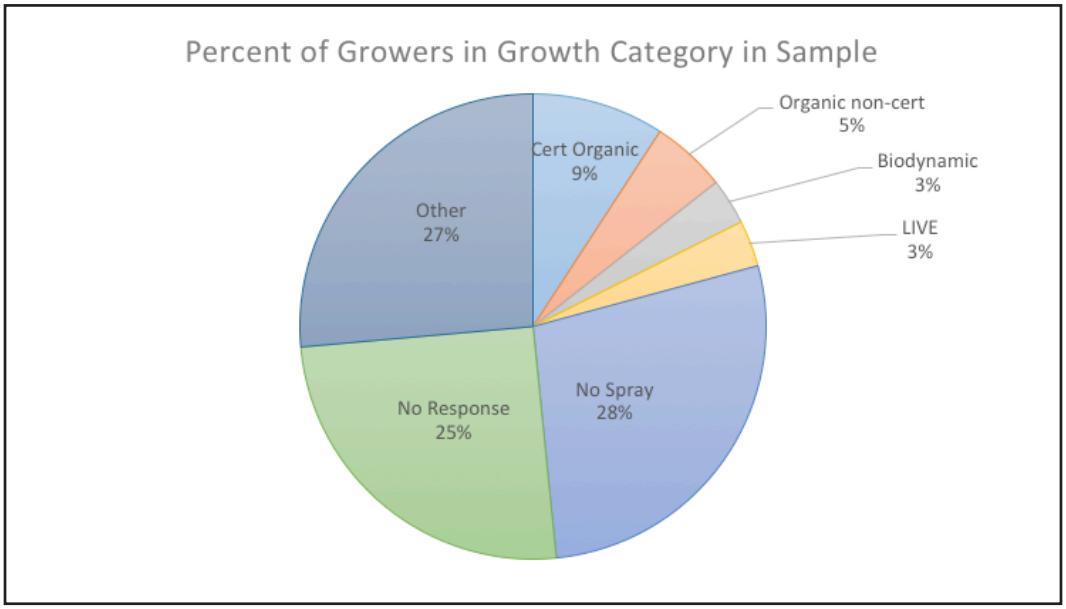

Figure 8: Percent of sampled growers identifying specific growing strategies

SALES BY ENTERPRISE

One of the primary interests in collecting novel data on farm sales was to better characterize marketing patterns and opportunities. All growers within the survey were asked to report participation in and sales volume within farm-based enterprises. Categories listed on the survey included:

1. CSA Sales
2. Growers Market Sales
3. Wholesale to Distribution Sales
4. Farm Stand Sales
5. Direct to Retail Sales (restaurants, grocers)
6. Other Sales

Through a re-classification of sales categorized as "Other", we added "Direct to Consumer Sales", "Internet", and "Winery". Within the sample collected, over $14,000 worth of agricultural products were sold through some online source. Sources identified qualitatively included "Amazon", "Facebook", and "Email lists".

Respondents additionally reported a significant number of sales directly to consumers with whom they had previous relationships. Qualitative responses in this category included "sold to my neighbors", "family", and "sold to co-workers". This finding supports research completed elsewhere on the overall economic contribution of small gardens. Though small scale operations are often individually insignificant economically, their widespread distribution and abundance collectively contributes in substantial ways to the economy. Other enterprises listed included livestock/cattle buyers, wineries, seed companies, yard sale, and dispensary. The substantial contribution of enterprises listed in the "other" category suggest the need for category refinement in future studies.

More than any other set of categories on the survey, qualitative responses to survey questions demand interview follow-up. The wide range of surprising responses in the "other" category will be explored in detail in coming months and years.

Table 8: Contribution of specific enterprises to agricultural sales in both sampled and estimated populations

Products Sold by Enterprise											
Product Type	Sample		Mean		Median	n		Simple Estimate		Stratified Estimate
CSA	75,763	$	5,828	$	2,250	11	$	784,118	$	366,052
Growers	728,509	$	26,982	$	16,000	25	$	7,539,750	$	3,375,446
Wholesale	1,958,854	$	43,530	$	9,500	46	$	20,273,276	$	7,667,041
Farm stand	1,741,776	$	24,883	$	3,600	77	$	18,026,608	$	9,007,720
Retail	903,338	$	22,033	$	4,500	41	$	9,349,147	$	3,178,495
Direct	188,103	$	18,989	$	2,250	11	$	2,947,978	$	1,037,352
Internet	284,841	$	14,469	$	10,000	14	$	1,946,783	$	1,241,186
Winery	1,818,342	$	106,961	$	60,000	14	$	18,819,035	$	7,249,557
Other	2,706,276	$	36,571	$	3,000	82	$	28,008,759	$	14,793,428

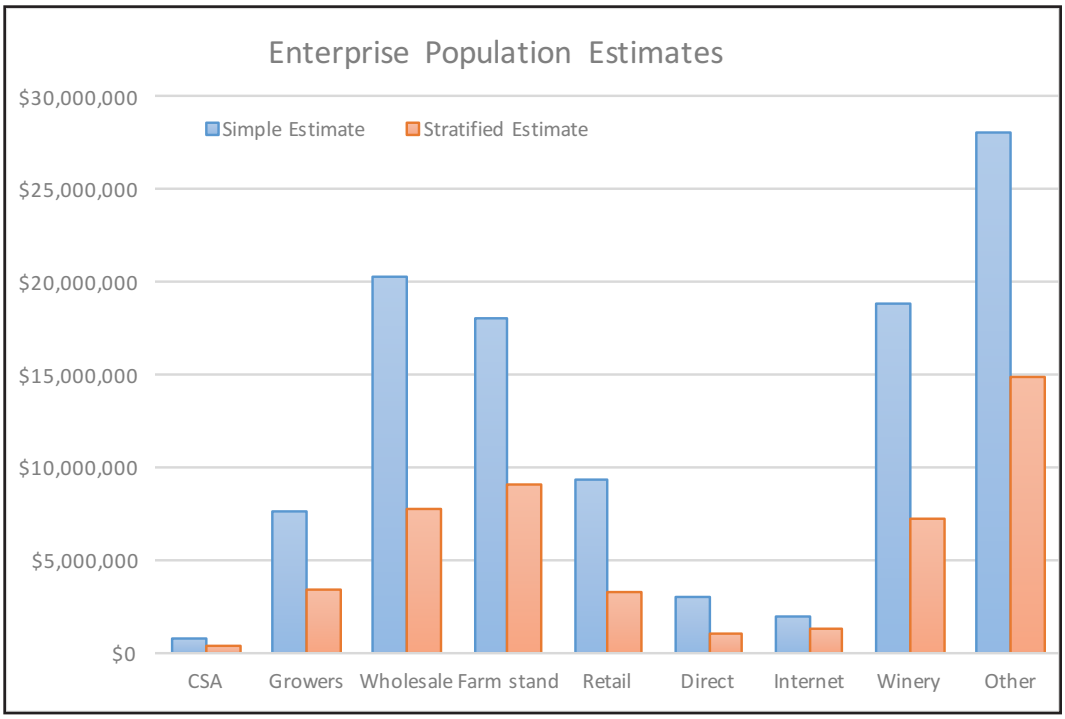

Figure 9: Comparison of estimated sales by enterprise using both simple and stratified estimation

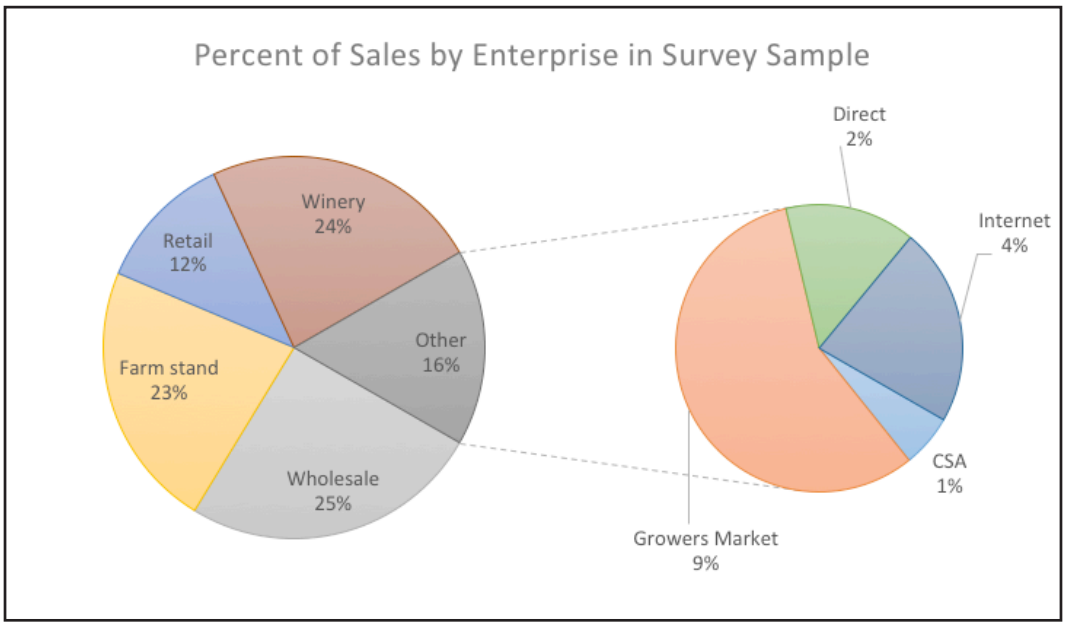

Figure 10: Contribution of farm-specific enterprises to total sales in sample

RELATIVE FOOD SYSTEM CONTRIBUTION

One of the primary questions asked in this research relates to the relative food system contribution of the agricultural sector in the Rogue Valley. Increasingly, regions are questioning the extent to which a region and/or community is food secure. Not surprisingly, few if any regions are self-sufficient in regard to food requirements. The Rogue Valley, however, does grow a portion of the food required to sustain the region.

Reliably calculating the relative food system contribution depends on both reliably estimating production and consumption. Therefore, estimates should be understood as possibly including a high margin of error. Estimates can also be calculated in a variety of ways as has been suggested earlier in this report. Calculating food needs for Jackson and Josephine Counties could be based off of estimated monthly meal plan cost (estimated by the USDA) or calculated on estimated food expenditures (estimated by Bureau of Labor Statistics). Both estimate total food needs, but both are also imperfect. The USDA estimates are based off of assumed buying patterns whereas the BLS estimates are aggregated to household rather than to individual. Specific calculations based on both estimates can be found in the Appendix.

Table 9: Percent of food contributed to total Rogue Valley food need through various estimation procedures

Relative Food System Contribution		
	USDA Estimate	BLS Estimate
Estimated Total Food Costs	$ 828,055,303	$ 761,681,842
RVGS Estimates*:		
Simple Estimated Production	$115,954,493	
Max Rogue Sales Simple Estimate	$84,059,834	
Min Rogue Sales Simple Estimate	$72,700,714	
Stratified Estimated Production	$51,089,202	
Max Rogue Sales Stratified Estimate	$36,910,717	
Min Rogue Sales Stratified Estimate	$31,961,136	
% Total Food Needed Grown in RV	6.2% - 15.2%	
% Total Food Grown and sold in RV	3.9% - 11.0%	
* These Values were first presented in Table 5		

In summary, the Rogue Valley produces between 6.2% and 15.2% of the total food needs of the Rogue Valley. Rogue Valley producers grow and sell to Rogue Valley consumers between 3.9% and 11.0% of the total food needs of the Rogue Valley. In addition, a community or region may choose to calculate and report relative contribution beyond the economic or caloric value of the food alone. For example, the economic contribution of the agricultural industry includes equipment sales, value added processing, retail development, and a host of other indirect economic benefits. Reported contribution here extends solely to direct economic benefits measured through the Rogue Valley Grower Economic Survey. However, survey data could be used in further economic analysis.

TRENDS IN ROGUE VALLEY GROWER ECONOMICS (2013-2015)

The Rogue Valley Grower Economic Survey was first administered in 2013. The 2015 data set reported here marks the first opportunity to attempt a comparative analysis of trends or patterns in data. However, determining any trend as broad and complex as a food economy based on two data points over two years is limited. The findings here suggest first and foremost the need to continue this longitudinal survey over time.

SAMPLE COMPARISON

The response rate and composition of the grower sample remained relatively constant over two years. However, as a result of low response rate, some changes in demographic composition were both expected and realized. For example, the 2015 data set contained a considerably higher percentage of farmers selling between $50,000-$100,000 annually. The 2015 data set also has a marked decrease in the number of growers selling less than $2,500 annually. While these differences are considered and weighted in the stratified estimates provided here, it is important to recognize that response rate improvement is needed to better capture a representative sample of growers.

Table 10: Comparison of response rates between 2013 and 2015

Response Rates		
	2013	**2015**
Mailing List	3181	2793
E-mail List	731	759
Total Surveys	3912	3552
Q1 - Yes	264	250
Q1 - No	502	231
Total Response	766	481
Total Response %	19.6%	13.5%
Complete Economic	244	226
Complete Economic Respc	6.2%	6.4%

Survey response data from 2015 was compared to baseline data from 2013 in two ways. The first assessment detailed in Table 11 compares the data from the total sample in 2013 to the total sample in 2015. While the comparison is useful in helping establish trends in reporting, it does not accurately portray change in production over time because survey respondents are not necessarily paired in the comparison. Of the 226 respondents in 2015, only 81 were also included in the 2013 data set. This overall comparison shows that total sales has increased as has mean sales and median sales. It also suggests that the total number of acres under production has increased.

Figure 11: Income distribution of sample data in 2013 and 2015 compared to USDA estimated population

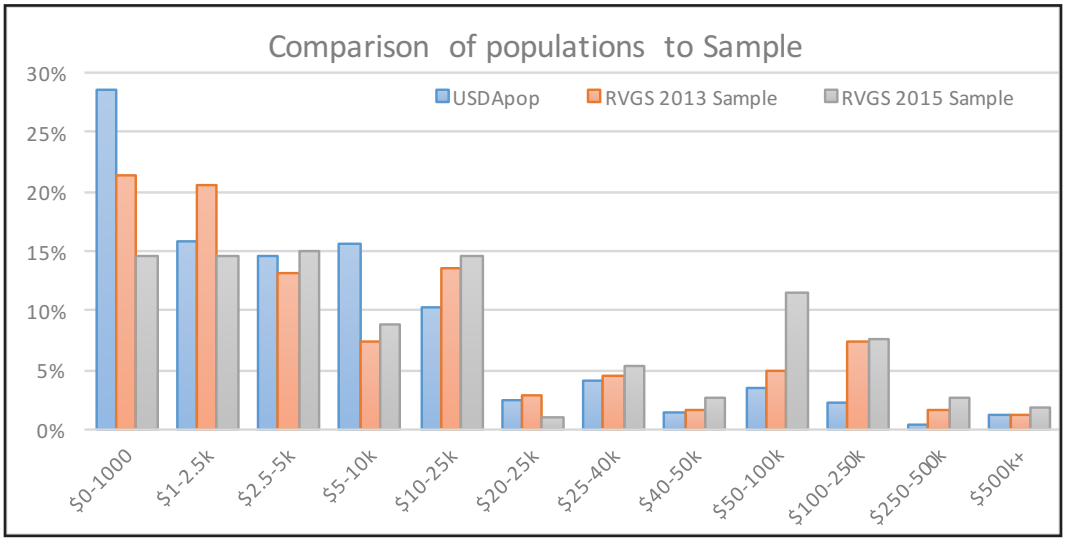

Table 11: Longitudinal comparison of 2013 sample data to 2015 sample data

Logitudinal comparision of descriptive statistics				
		n=244		*n=226*
		2013		2015
Sum of Sales	$	8,871,582	$	11,203,812
Mean Sales	$	36,359	$	49,574
Median	$	3,500	$	7,450
Max	$	1,468,000	$	1,125,000
Q5	$	4,754,837	$	7,462,155
Est RV Sales		4.7 - 5.0 M		7 - 8.1 M
Sum Acres		12481		13425
Mean Acres		50.9		56.9
Max		3500		3500
Vegetables	$	577,870	$	1,339,761
Berries	$	565,995	$	223,300
Hay	$	741,806	$	976,208
Animal Prod	$	1,565,221	$	1,616,543
Grains	$	137,500	$	302,207
Tree Fruit	$	446,454	$	339,036
Nuts	$	1,900	$	675
Nursery	$	857,412	$	604,274
Cannabis		--	$	62,500
Grapes	$	964,086	$	3,055,563
Other	$	2,110,055	$	2,289,723

Pair Comparison (n=81)

A far more reliable method for comparing Rogue Valley Grower data over time is to pair growers to the data provided in the baseline data. In this case, data were paired to allow a comparison between the 81 growers who responded to the survey instrument in both 2013 and 2015. The comparison provides evidence of a series of changes between 2013 and 2015. The paired nature of this analysis makes it possible to test the observed difference statistically. Through the use of a Wilcoxon signed-rank test it was determined that the slight increase in sales between 2013 and 2015 is statistically meaningful (P-value = 0.0148). Overall total sales, mean sales, and median sales have all increased. The total number of growers reporting sales in any specific category is relatively low making any reliable comparison of product type over time difficult. However, the data suggests that there have been increases in sales of vegetables, hay, animal products, nursery products, grapes and other products while there has been a decrease in the sale of berries, grains, tree fruit, and tree nuts.

Table 12: Paired sample data from 2013 and 2015 growers

Paired Logitudinal comparision				
		n=81		
		2013		2015
Sum of Sales	$	2,380,208	$	2,616,991
Mean Sales	$	29,385	$	32,309
Median	$	6,000	$	9,808
Max	$	250,000	$	246,200
Q5	$	1,366,187	$	1,896,605
Est RV Sales	1.3 - 1.5 M			1.5 - 1.8 M
Sum Acres		2476		1968
Mean Acres		31.8		26.2
Max Acres		460		200
Vegetables	$	179,581	$	218,221
Berries	$	387,000	$	37,291
Hay	$	206,870	$	212,034
Animal Prod	$	239,258	$	430,478
Grains	$	65,000	$	38,000
Tree Fruit	$	277,199	$	192,140
Nuts	$	933	$	675
Nursery	$	298,412	$	345,210
Cannabis	$	-	$	-
Grapes	$	443,016	$	925,155
Other	$	54,000	$	326,481

CONCLUSION

The data provided here offers a detailed description of survey findings from the 2013 and 2015 Rogue Valley Grower Survey. It also provides several qualified estimates of Rogue Valley Food System direct economic contributions. Users of this data are cautioned to regard the data as useful estimation. Ongoing surveying will improve the reliability of data provided. Specifically, future survey efforts will need to consider strategies for improving response rate.

Data analysis has suggested that simple estimation, while more comparable to USDA Agricultural Census results, is unreliably high. Analysis has also suggested that while stratified estimation appears a more robust measurement, the small sample size within each crop category makes statistical analysis difficult. Overall, only long-term repeated surveying and increasing response rate will improve the ability to compare direct economic value of agriculture over time.

The 2015 and comparative data included provides a cross-sectional and longitudinal analysis of the agricultural economy in 2013 and 2015. Any attempt to use this data to assess programs, strategies, or organizations designed to impact the agricultural economy will require comparative data from future studies. It is highly encouraged to conduct the included assessment on a regular interval to measure and monitor changes.

The summaries in this document are directly reported from survey data. Further aggregation, extrapolation, interpretation, and application are both possible and expected. Application of this data could be useful in better understanding the regional impact and dynamic nature of the food system, the effectiveness of programming designed to impact the food system, and long-term changes in the food system as a result of socioenvironmental factors.

*Questions and/or correspondence should be directed to: Vincent M. Smith, PhD, smithv3@sou.edu

Rogue Valley Grower Economic Assessment

Please answer the questions to the best of your ability. Estimates are acceptable.

1. Did you produce agricultural or horticultural products commercially in 2015?

   ( ) Yes - please continue with the rest of the survey
   ( ) No - please mail back the survey, you do not need to answer the remaining questions

2. What is the physical address(es) of your farm and/or the descriptive location of your farm fields?

_____

_____

2. What were your total gross farm sales in 2015? $_____

3. Approximately what percentage of your sales was in the Rogue Valley?

( ) 1-10%
( ) 11-20%
( ) 21-30%
( ) 31-40%
( ) 41-50%
( ) 51-60%
( ) 61-70%
( ) 71-80%
( ) 81-90%
( ) 91-100%
( ) No sales in the Rogue Valley

4. Which of the following product types did you sell in 2015?

(Select all that apply and please indicate the dollar amount.)

Check the box if you sold the product in 2015	Product	Approximate dollar amount sold in 2015	Percent of sales in Rogue Valley
	Vegetables	$_____	_____%
	Berries	$_____	_____%
	Hay	$_____	_____%
	Animal Products	$_____	_____%
	Grains	$_____	_____%
	Tree Fruits	$_____	_____%
	Tree Nuts	$_____	_____%
	Nursery Products	$_____	_____%
	Cannabis / Marijuana	$_____	_____%
	Grapes	$_____	_____%
	Other:_____	$_____	_____%

PLEASE TURN OVER THE PAGE TO COMPLETE THE SURVEY

Southern Oregon University Research Center (SOURCE)
1250 Siskiyou Boulevard - Ashland, Oregon 97520-5045
T: **541.552.6802** - F: 541.552.6439

5. On how many acres were you producing in 2015?_____

6. Please check if your farm is:

Certified Organic ( )

Biodynamic ( )

No Spray ( )

Other ( ) Describe : _____

7. Please indicate which enterprise you used to sell your product(s), and then indicate the approximate percentage sold via that enterprise.

Check the box if you sold via the enterprise in 2015	Enterprise	Approximate percentage sold via this enterprise
	CSA	_____%
	Growers Market	_____%
	Wholesale to Distribution	_____%
	Roadside/ Farm Side	_____%
	Direct to Retail (restaurants, grocers, etc.)	_____%
	Other:_____	_____%

We are under obligation to maintain the confidentiality of all data collected in this study. We are requesting your contact information here as we intend to send a follow-up survey in two years to assess changes in market opportunities over time. Your name and contact information will be used only by our research team to mail a follow-up survey.

8. Name: _____

E-mail:_____

Mailing Address:_____

Phone Number:_____

9. If you would be willing to be contacted by a member of our research team for a follow-up discussion, please check the "yes" below.

Yes ( ) No ( )

Thank you for completing the survey, and we appreciate your input. «Salutation»

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