

ECONOMIC
ANALYSIS
OF THE
FOOD AND
AGRICULTURE
SECTOR IN
NEVADA

2021



Nevada Department
of Agriculture

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INTRODUCTION

The food and agriculture sector is a critical part of Nevada's past, a key economic driver in the present and holds great potential for the future. Agriculture increasingly provides raw materials for a broad range of nonfood products, such as fibers, construction materials, lubricants and fuels. Agriculture production uses natural resources from forests, croplands and ranches across Nevada to produce agricultural commodities. Many commodities are converted into finished products by the food manufacturing industry and can be found in restaurants, grocery stores and food banks throughout the state. They also bring in revenue through global trade and domestic sales, providing a stable, yet growing economic engine. As the world population grows and demand for animal protein increases, Nevada farmers and ranchers will play a critical role in feeding families, not only in Nevada, but around the world.

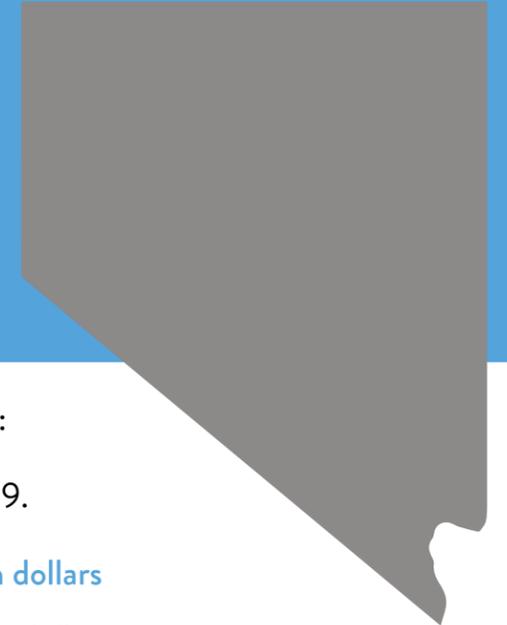
The Nevada Department of Agriculture (NDA) evaluates the economic contributions of the agriculture sector every biennium. Data for this report was collected from several federal and state resources including the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), IMPLAN, Euromonitor, the Census Bureau, the USDA Economic Research Service and through surveys conducted by the NDA.

This report provides a glimpse into Nevada's food and agriculture economy, showing the critical role Nevada's farmers, ranchers and manufacturers play in providing Nevada with a diverse, innovative and growing economy. This report includes the total impact food and agriculture has on each county and the state, including important data related to employment, output, labor income, exports and imports.

This analysis should be considered within the context of combining different data sets and in some cases, recent years of data, to get a consistent picture of the size and characteristics of the Nevada food and agriculture industry.

FOOD AND AGRICULTURE AT A GLANCE

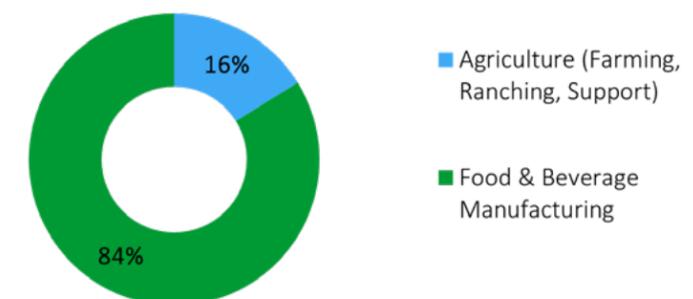
NEVADA



Economic output of the food and agriculture sector in Nevada:

- Nevada had an economic output of **\$4.85 billion** in 2019.
 - » Agriculture (ranching & farming): **\$994.2 million dollars**
 - » Food and beverage manufacturing: **\$3.904 billion dollars**
- Nevada had an economic output of **\$4.71 billion** in 2020.
 - » Agriculture (ranching & farming): **\$787.8 million dollars**
 - » Food and beverage manufacturing: **\$3.925 billion dollars**
- In 2020, the food and agriculture sector consisted of:
 - » **18,092** direct jobs
 - » Over **\$113.2 million** in wages

NEVADA FOOD & AGRICULTURE SECTOR
ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

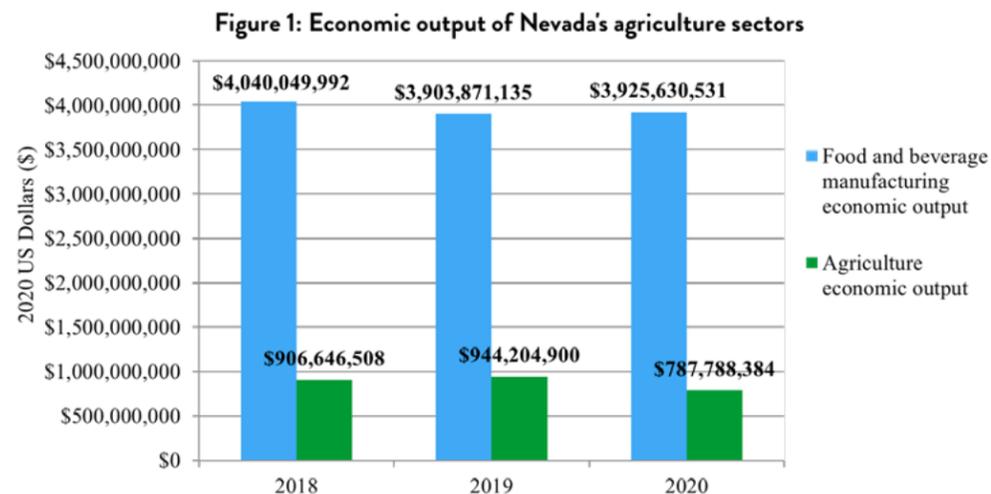


OVERVIEW OF NEVADA'S FOOD AND AGRICULTURE ECONOMY

While a complete year of data is not yet available, the total projected economic output (based on data from the first half of 2020) of the food and agriculture sector projects economic output at \$4.71 billion. This is down from the observed economic output from 2019 when the food and agriculture sector totaled \$4.85 billion.¹ From 2018 to 2020 Nevada's agriculture economy has declined by \$233.3 million dropping from a high of \$4.95 billion in 2018.

The combined economic impact from trade disputes and COVID-19 has had a negative impact on Nevada's food and agriculture sector. The economic contraction observed from 2018 to 2019 of \$98.6 million was primarily attributable to trade conflicts. While the \$134.7 million decline between 2019 and 2020 was a combination of trade impacts and COVID-19. Despite a decline in economic output for 2020, Nevada's agriculture economy continues a growing trend. Forecast modeling shows that Nevada's food and agriculture sector will exceed \$5 billion in economic output by 2023.

The shift in economic output from 2018 to 2020 has impacted the food and agriculture sector in different ways. As seen in Figure 1 between 2018 and 2020, economic output related to food and beverage manufacturing decreased by \$114.4 million, while the agriculture sector, including farming, ranching and agriculture support, declined by \$118.9 million. Declines in raw agriculture product prices, manufacturing growth and demand related to manufactured and processed food and beverage products are the primary reasons for this shift.



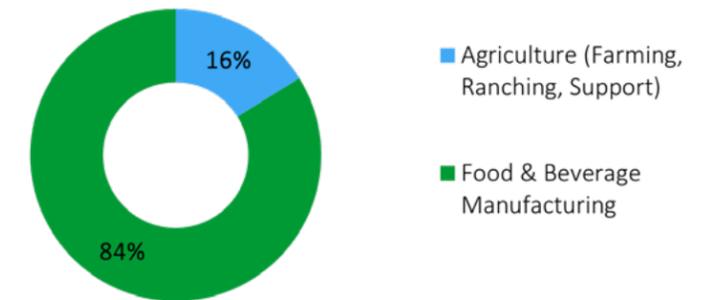
Source: IMPLAN Group, LLC

¹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

NEVADA'S AGRICULTURE DEMOGRAPHICS

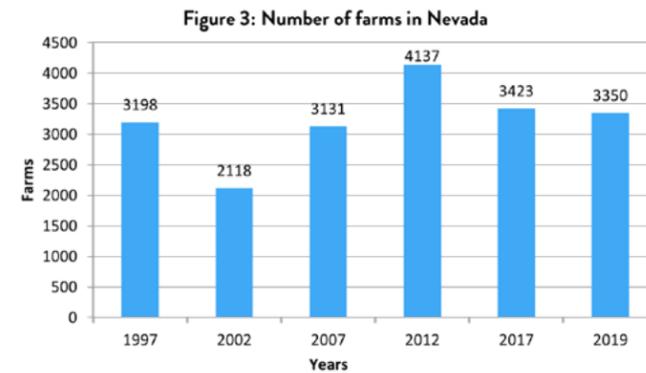
The USDA Census of Agriculture counts farms and ranches within the U.S. every five years. The last Census of Agriculture was conducted in 2017 with additional data coming from smaller sample groups. Based upon sampling and census data, the USDA NASS provides projections of sector growth. According to the USDA NASS, Nevada had 3,350 farms and ranches in 2019². These are operations that produce more than \$1,000 in agriculture products in a year. Individual agriculture operations covered an average area of 1,821 acres and accounted for a total of 6.1 million acres of Nevada's land³. Nevada's agriculture operations have remained relatively stable over the last three decades with the number and size of Nevada's farms and ranches fluctuating slightly.

Figure 2: 2020 Breakdown of Nevada's agriculture economy

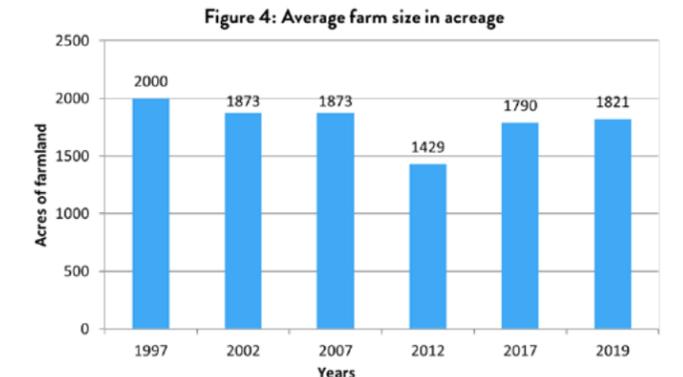


Source: IMPLAN Group, LLC

Figures 2 and 3 provide a breakdown of the number of farms and ranches reported by year.

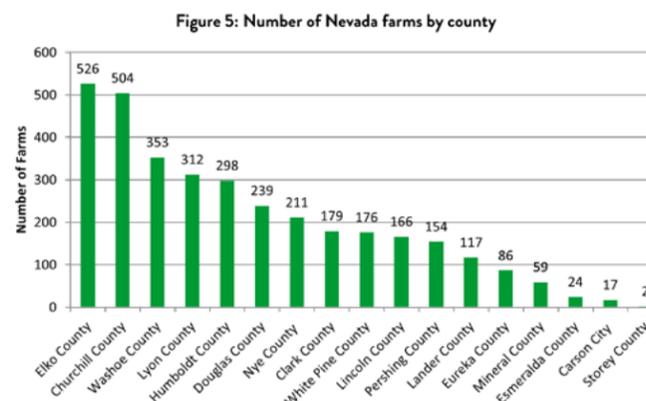


Source: USDA, NASS

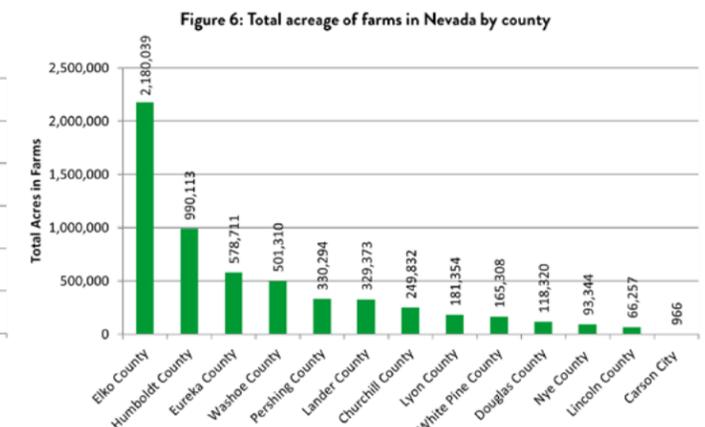


Source: USDA, NASS

Figures 5 and 6 provides a breakdown of farms by county.



Source: USDA, NASS 2020



*Note: acres in Clark, Mineral, Esmeralda and Storey counties omitted by NASS.

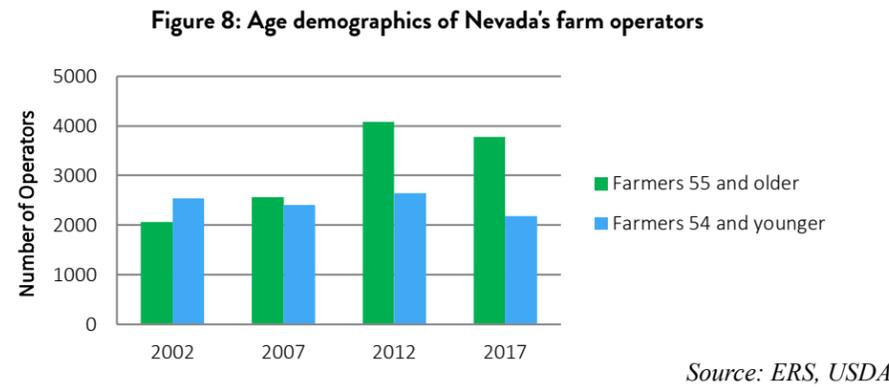
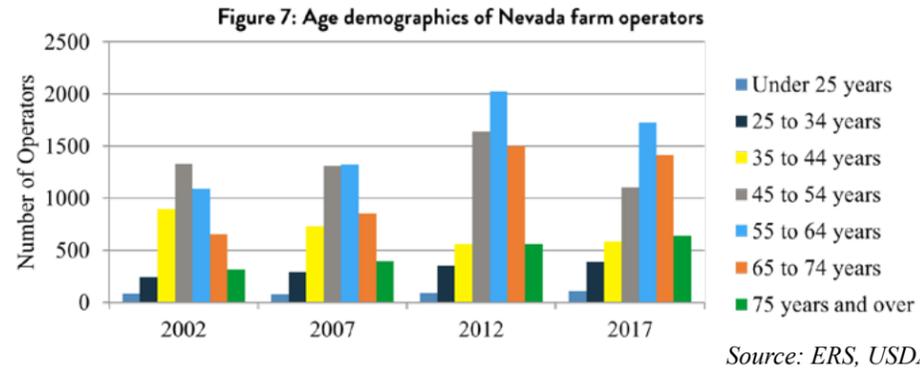
Source: USDA, NASS 2020

² NASS, 2019 State Agriculture Overview 2019- Nevada (Sept 2020) National Agriculture Statistics Service, USDA

³ Rumburg, S., Nevada Agricultural Statistics Annual Bulletin 2018 Crop Year (February 2020) National Agriculture Statistics Service, USDA

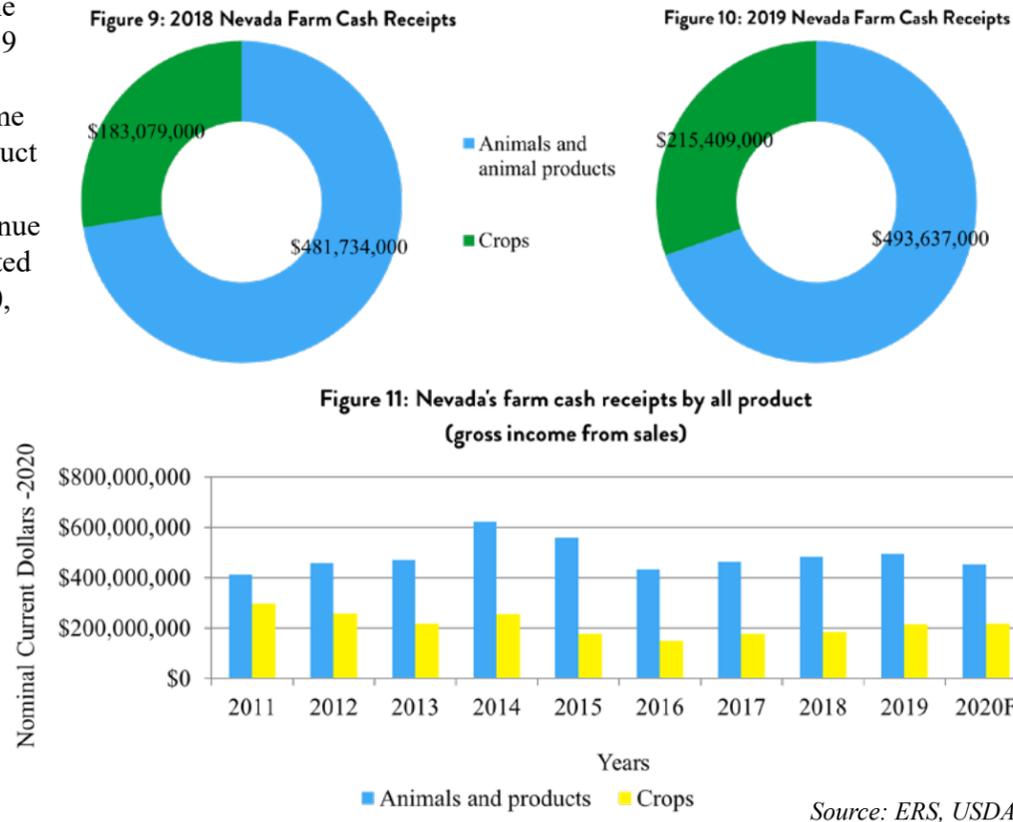
NEVADA AGRICULTURE SECTOR AGE DEMOGRAPHICS

Similar to other areas of the country, Nevada's farmer and rancher populations are aging. From 2002 to 2017, the numbers of operators over age 55 have increased significantly as can be seen in Figures 7 and 8. The fastest growing age group above age 55 in farming and ranching is the 65-74 age range. While there has been some observed growth in operators aged below 55 years, the general trend has shown a decline in younger generations entering the agriculture sector. This will have long-term economic impacts on Nevada's agriculture sector.



NEVADA'S FARM CASH RECEIPTS

Total agriculture gross income from sales in 2019 was \$708.9 million. This consisted of \$493.6 million in gross income from animal and animal product sales, and \$215.4 million in income from crops. The revenue from sales for 2020 is projected to be \$670.9 million for 2020, consisting of roughly \$453.5 million in animal and animal product sales and \$217.4 million in revenue from crops. Looking at economic indicators and agriculture markets, it is projected that gross revenue for 2021 will rebound close to 2019 levels.⁴



FARM WEALTH DISTRIBUTION AND SIZE

Figures 12 and 13 provide a visualization of the geographic size and corresponding value of farm sales for operations in Nevada. As evident within these graphs, many of Nevada's farms are small operations.

Figure 12: Nevada farms & ranches broken down by acreage

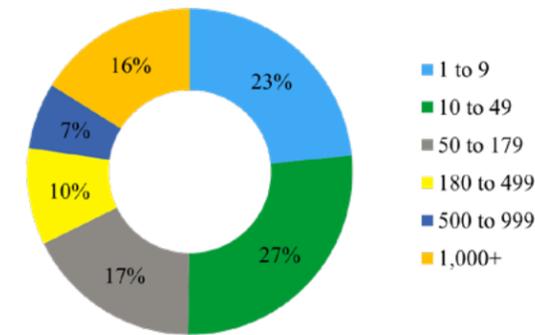
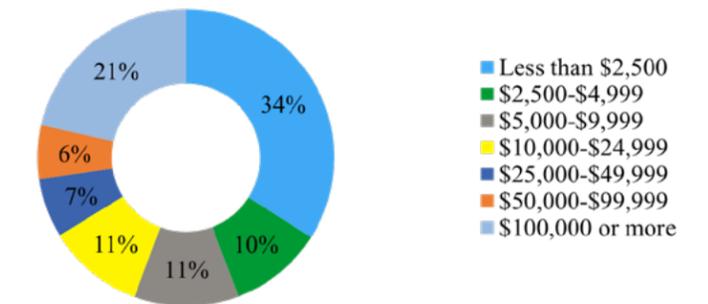


Figure 13: Nevada's farms & ranches broken down by value of sales



SUPPLEMENTAL ECONOMIC DATA FROM THE NDA'S 2020 ECONOMIC SURVEY

In 2020, the NDA conducted a series of industry-specific surveys of Nevada's agriculture and food manufacturing sectors. These surveys were conducted to help supplement federal agriculture data and industry economic modeling.

In total, 256 respondents provided past revenue, expenses and projected revenue for 2021. Figure 14 shows some of the economic contributions these food and agriculture operations bring to Nevada. The average food and agriculture operation in Nevada generated \$2,642,346 in revenue during 2019. This is projected to increase to \$2,854,037 in 2021. Additional data from this survey is provided in the industry portions of this report.

Figure 14: Total reported revenue and expenditures in 2019

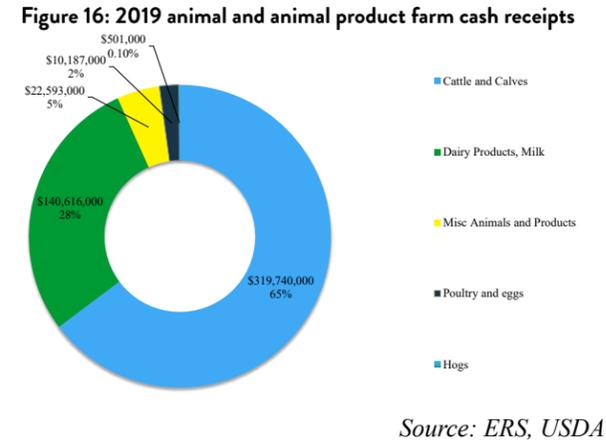
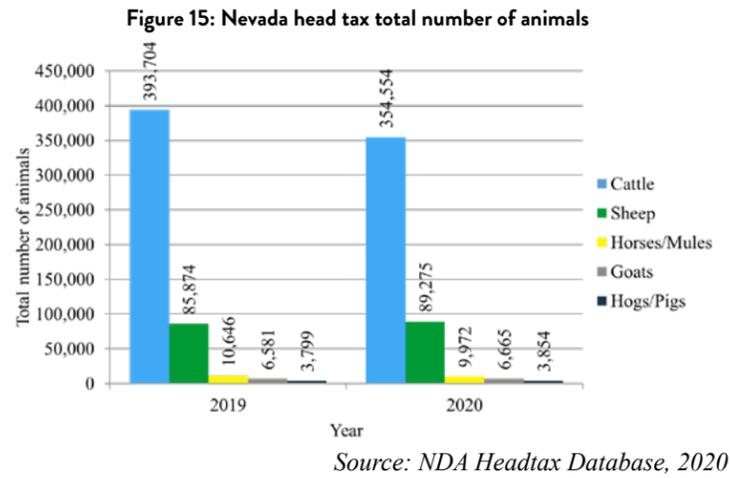
Total reported revenue	\$676,440,632
Total reported expenditures	\$120,178,246

*Note: Figure 14 is only representative of survey respondent revenues.

Source: NDA Industry Survey 2020

NEVADA'S LIVESTOCK INDUSTRY

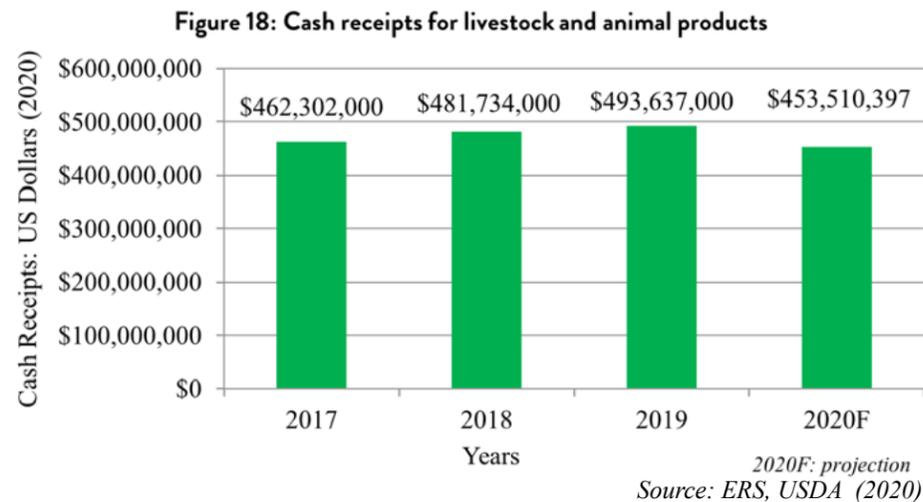
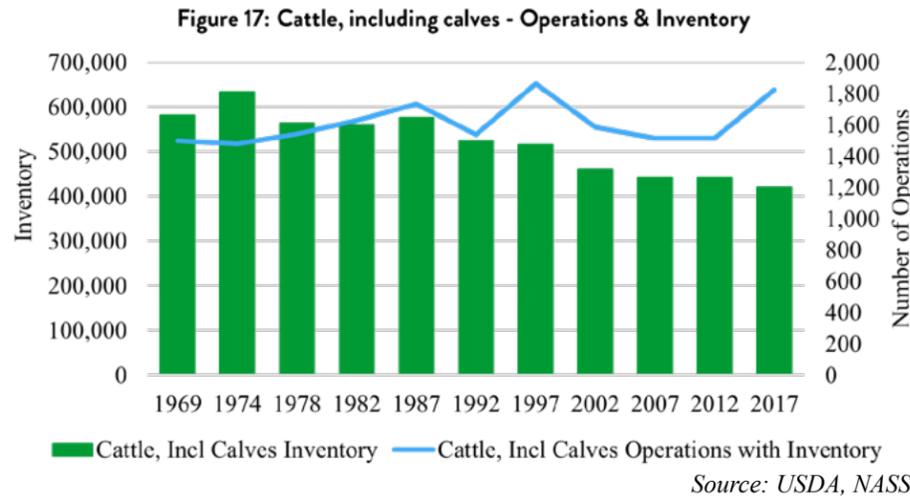
The Livestock industry contributes more than \$457 million annually to Nevada's economy. Figure 15 and Figure 16 provide breakdowns of Nevada's livestock industry.



CATTLE AND CALVES

The cattle industry, specifically beef cattle, has historically been one of Nevada's largest agriculture commodities.

While the cattle population has decreased within the state, the overall efficiency of the industry has generally increased the quality and amount of end-product. Efficiency increases have been attributed to advancements in reproductive management, genetics, growth promoting compounds, vaccines, antibiotics and feed strategies⁵. This, coupled with regional factors and increased global demand for protein, has allowed cash receipts to increase since 2011. According to the USDA-Economic Research Service (ERS) farm cash receipt data, cattle and calf operation gross sales have increased in Nevada from \$251.1 million in 2011 to \$319.7 million in 2019.⁶



⁵ Drouillard, J. (2018) Current situation and future trends for beef production in the United States of America — A review, *Asian-Australas J Animal Sci.* 2018 Jul; 31(7): 1007–1016.

⁶ USDA Economic Research Service, *Farm Income and Wealth Statistics* (2020)

The cow-calf net return for cattle operators within the region has trended down since the early 2000's (the exception being a spike in 2014-2015). It should also be noted that:

Cattle prices will fall much more, especially for 2020 and 2021, severely squeezing producers' margins. Whereas the past several years were not stellar in terms of financial robustness, this year and next are anticipated to be even worse, with net returns the lowest since early in the last recession. Recovery is expected to begin in 2022 with profits rising for the following several years.”⁷

In addition to demand, the Nevada cattle industry is heavily influenced by drought and other weather conditions. Changing environmental conditions can have a significant impact on rangeland, water access and the cattle reproductive cycle.

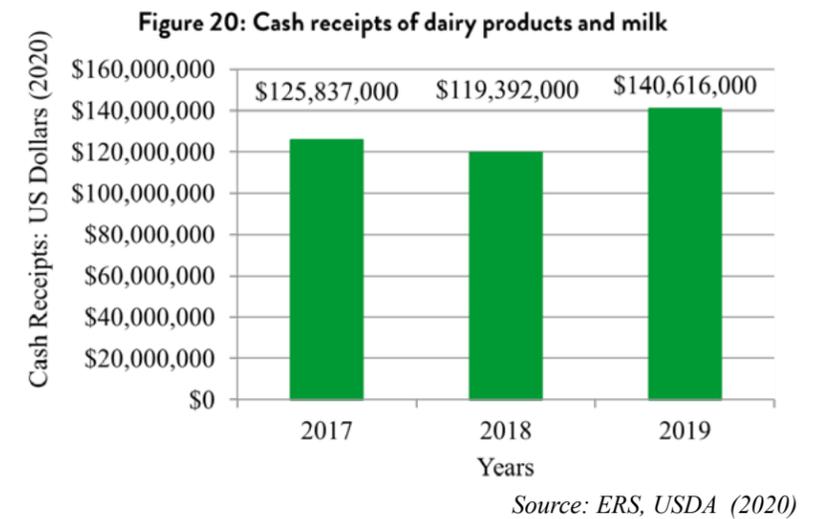
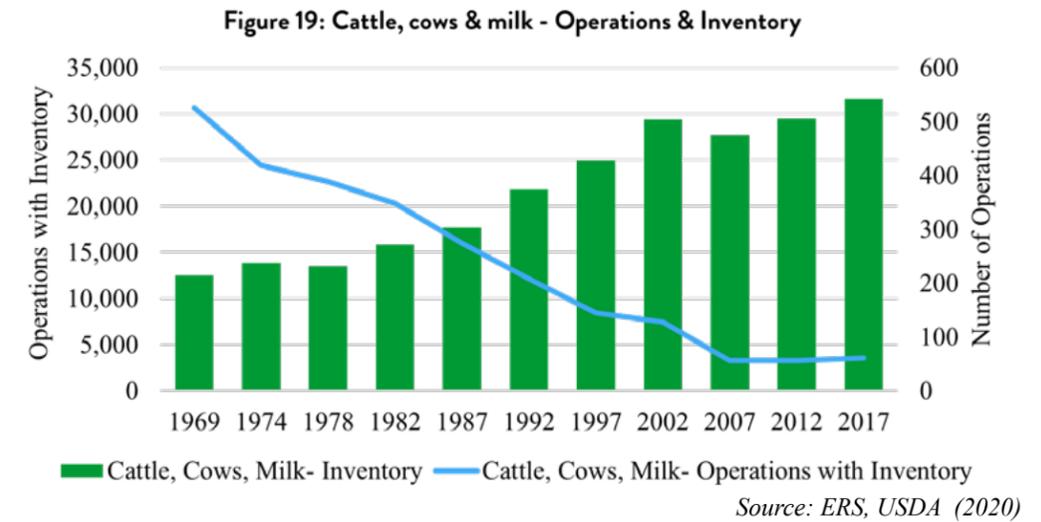
DAIRY OPERATIONS

Since 2012, the dairy cattle population in Nevada has grown by 2,115 head with much of the recent growth located in Churchill and Lyon counties. A significant portion of the growth in population was driven by the Dairy Farmers of America powder milk plant opening in Fallon, Nev. in 2014.

The addition of powdered milk production in Fallon has provided dairy operations with access to several international markets and additional growth potential. Nevada's dairy exports have increased from \$14.7 million in 2014 to \$61.2 million in 2019, primarily been driven by the addition of milk powder exports totaling \$60.6 million in 2019.

In 2019, dairy prices were heavily impacted by ongoing trade disputes. Notable impacts included diminished dairy exports to buyers like China, Canada and Mexico. Despite falling prices impacting the dairy industry, the fluid dairy market remained relatively stable. Market conditions and trade began to rebound in late 2019 into early 2020, allowing Nevada's total cash receipts for 2019 to finish the year at \$140.6 million. In March 2020, dairy prices declined due to significant losses in fluid milk and powdered milk sales fueled by school closures, restaurant closures, supply chain disruptions and decreased international demand as a result of COVID-19. While short-term economic growth has been hampered by declines in Chinese exports, there have been increases in other markets within the Asian-Pacific, South America and the Middle

⁷ University of Nevada, June 2020 Nevada Agricultural Outlook, p.7



East. These international opportunities, combined with federal price support programs, schools and restaurant re-openings, should allow some stabilization in dairy prices through the end of 2020. The University of Nevada, June 2020 Nevada Agriculture Outlook indicates:

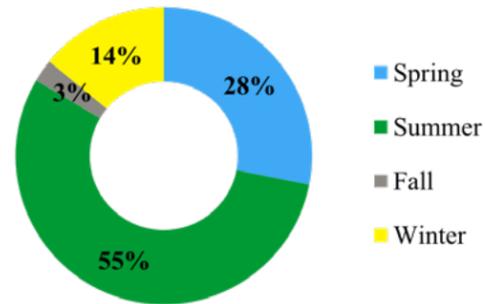
"Dairy profits will be squeezed in 2020 from both the cost and revenue sides. If prices do not hold at recent highs for the remainder of the year, revenues will fall sharply. Lower milk prices on average than a year ago reduce profitability." ⁸

NDA LIVESTOCK INDUSTRY SURVEY

A total of 251 livestock operations responded to the NDA Livestock Industry Survey. Within the survey, livestock operations reported a total of 4,690,824 acres of federal allotment grazed. Respondents also reported that statewide private acreage grazed was 258,159 acres. The average private acreage grazed by livestock operations was 887 acres, while the average federal allotment per operation was 16,231 acres.

Data on seasonal federal allotment grazing was also collected: in total, 28.1% of respondents reported primary grazing in spring, 55.37% reported summer, 2.48% reported fall and 14.05% reported winter. This data provides insight into Nevada's livestock operations and grazing patterns.

Figure 21: Federal allotment grazing season reported by respondents



Source: NDA Livestock Industry Survey

In total, 79.2% of respondents reported livestock sales. Additionally, 76.1% of livestock operations reported livestock product sales. Figure 26 provides a breakdown of reported sales.

Figure 26: Breakdown of livestock revenue

	Reported revenue	Average revenue per operation
Livestock sales	\$15,198,964.00	\$76,376.70
Livestock product sales	\$8,635,386	\$44,512.30

Source: NDA Livestock Industry Survey

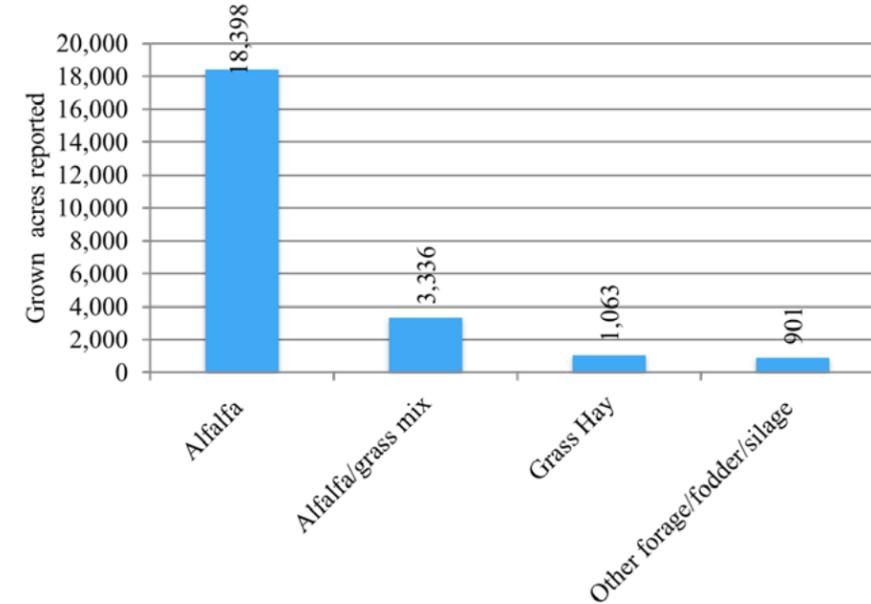
Livestock feed

There were 136 operations that reported they also grew animal feed in 2019. Data is presented in Figure 27.

Livestock feed producer keys facts:

- 54.18% of livestock operations grew feed (alfalfa, hay and other feed).
 - » 18.56% of livestock operations that grew feed used if for their livestock.
 - » 25.7% of livestock operations that grew feed reported revenue from feed sales.

Figure 27: Acres of animal feed produced by livestock operations



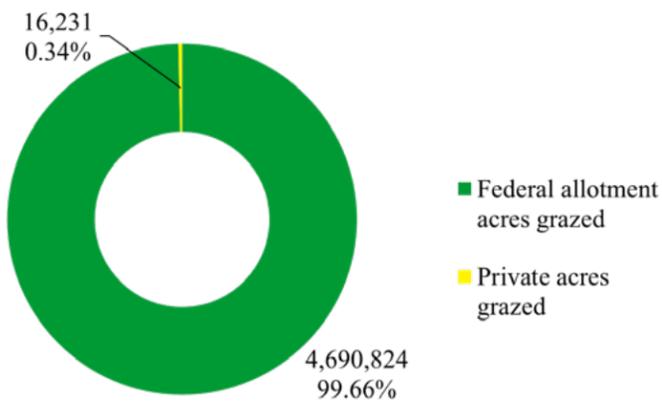
Source: NDA Livestock Industry Survey

Figure 28: Livestock feed revenue

Reported revenue
\$3,140,621
 Average revenue per operation
\$89,732

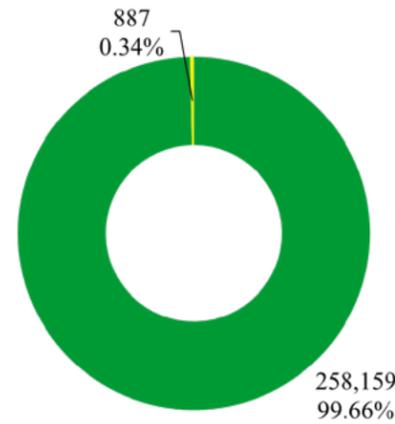
Source: NDA Livestock Industry Survey

Figure 22: Total reported grazing acreage



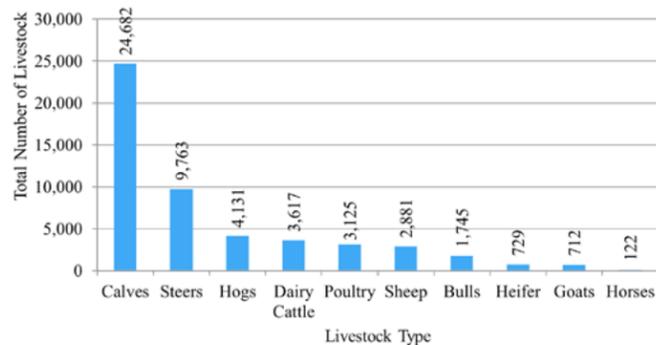
Source: NDA Livestock Industry Survey

Figure 23: Average grazing acreage by respondent



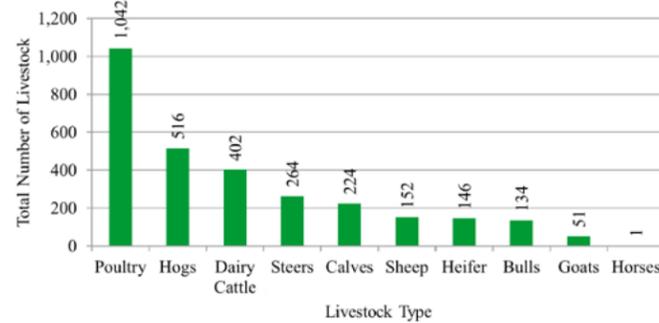
Source: NDA Livestock Industry Survey

Figure 24: Total reported livestock



Source: NDA Livestock Industry Survey

Figure 25: Reported livestock average per operation



Source: NDA Livestock Industry Survey

Livestock industry trade

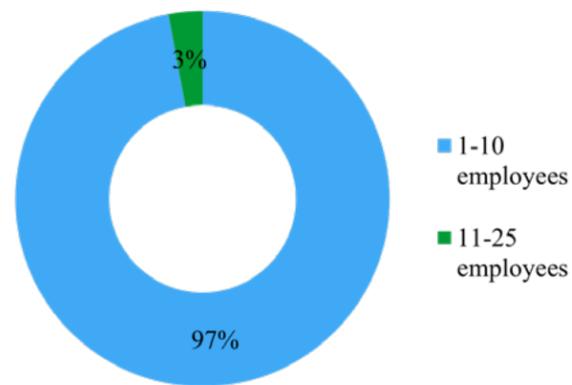
In total, 139 out of 242 livestock operations reported revenue and expenditure data.

Figure 29: Total livestock operation revenue

	Reported	Average per operation
2019 reported revenue	\$12,923,365	\$179,491
2019 reported expenditures	\$21,132,302	\$211,323

Source: NDA Livestock Industry Survey 2020

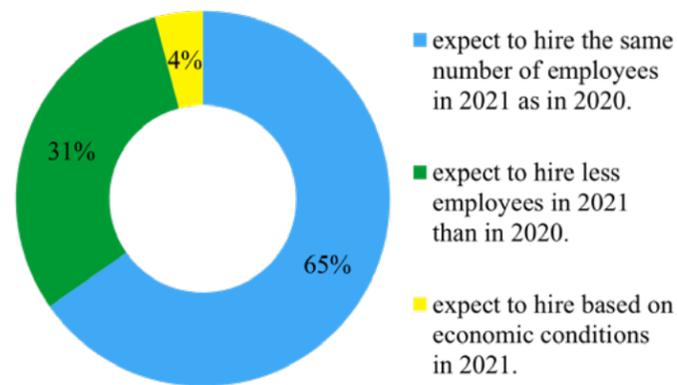
Figure 30: Total employees reported by livestock operations



Source: NDA Livestock Industry Survey 2020

- 15.63% of employees were seasonal
- \$15.60 was the average hourly wage

Figure 31: Livestock employment expectations 2021



Source: NDA Livestock Industry Survey 2020

Business outlook assessment

In addition to providing revenue numbers, respondents were asked to rate the impact of COVID-19 on their business on a scale of 1-10 (1 being the lowest and 10 being the highest). Across the livestock industry, respondents rated the impact of COVID-19 as 5.16. This suggests that the livestock industry considers COVID-19 as having a medium impact on their business. Industry was also asked whether they expected business to be better-off, worse-off, or about the same financially in 2021 as seen in Figure 32.

To assess key issues related to the livestock industry, respondents were asked the following questions. These responses are major themes present in respondent answers:

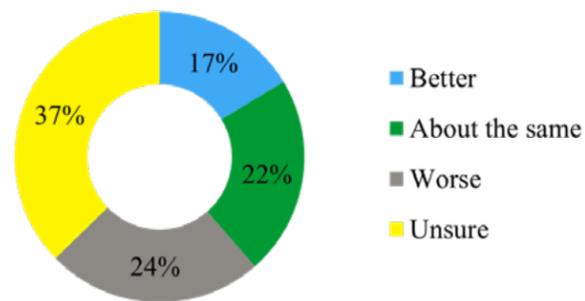
“What major challenges does your business face in 2020?”

- Market conditions and sales prices
- Drought, heat and access to water
- COVID-10 and related closures
- Continued financial hardship and bankruptcies
- Access to feed

“What could improve conditions for your business or the livestock industry in Nevada?”

- Ensure fair pricing
- Additional meat processing in-state
- Improve trade, sales and promotion of state agriculture
- Improve water conditions in-state (storage, wells, policy, access to ground water)⁹

Figure 32: Livestock Industry perception of business in 2021 compared to 2020

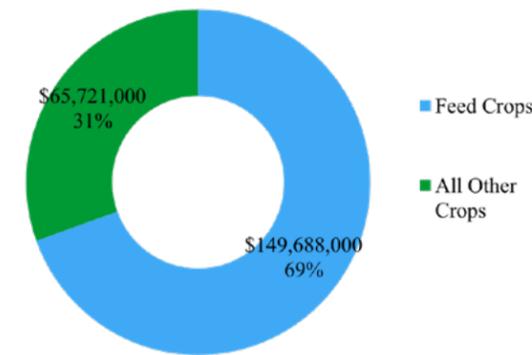


Source: NDA Livestock Industry Survey 2020

NEVADA’S CROP INDUSTRY

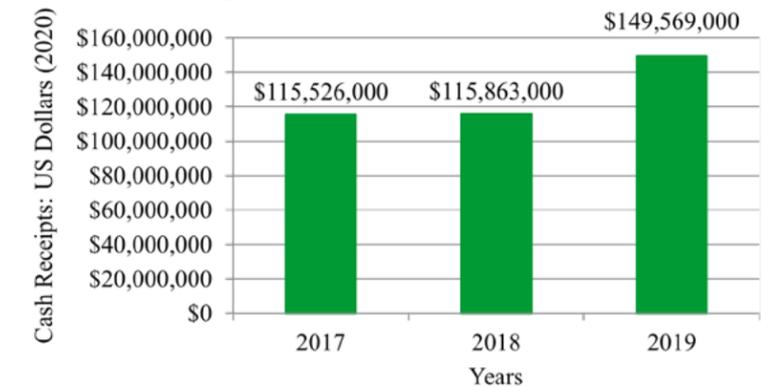
Nevada’s crop sector historically has supported the livestock industry by growing feed crops. While hay and alfalfa are the largest crop categories in Nevada’s crop industry, Nevada produces a wide range of other crops. The breakdown of these industries can be seen in Figure 33.

Figure 33: 2019 Crop farm cash receipts



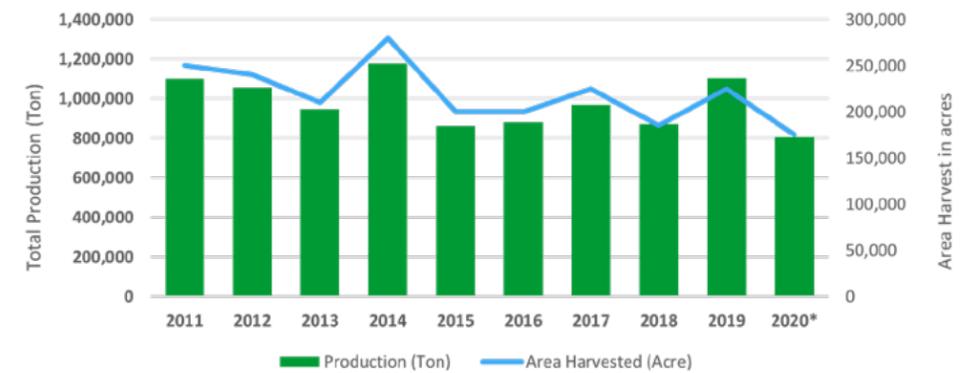
Source: ERS, USDA (2020)

Figure 34: Hay and alfalfa cash receipts



Source: ERS, USDA (2020)

Figure 35: Alfalfa and alfalfa hay mixture production and harvest



*Note: Data year to date as of August 2020 reporting.

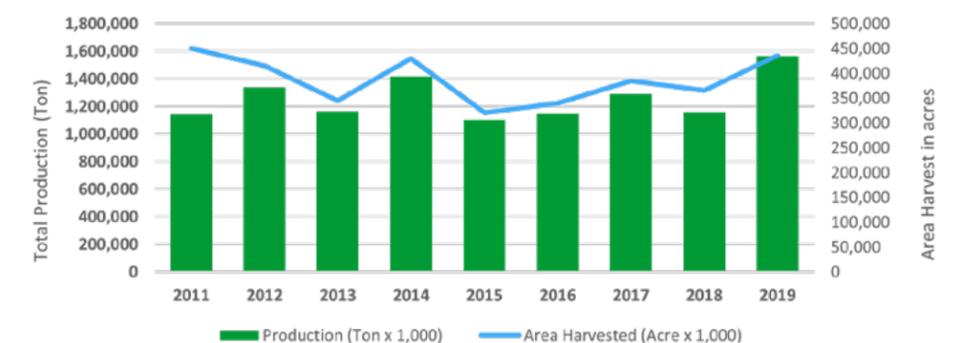
Source: USDA, NASS Annual Crop Production Summary (2012-2020)

While official numbers for all hay production will not be reported until January 2021, the University of Nevada June 2020 Nevada Agricultural Outlook indicated:

“Intentions reported in the March Prospective Plantings of total hay acreage for Nevada were 440 thousand acres, but with the lower harvested area thus far, USDA now estimates hay area to be 335 thousand acres.”¹⁰

The total yield expected from this decrease will significantly impact the total hay production from the previous 1.5 million tons in 2019. If yield trends match those observed in 2015 and 2016, it is probable that total production will fall to approximately 1.1 million tons for 2020.

Figure 36: All hay production and harvest



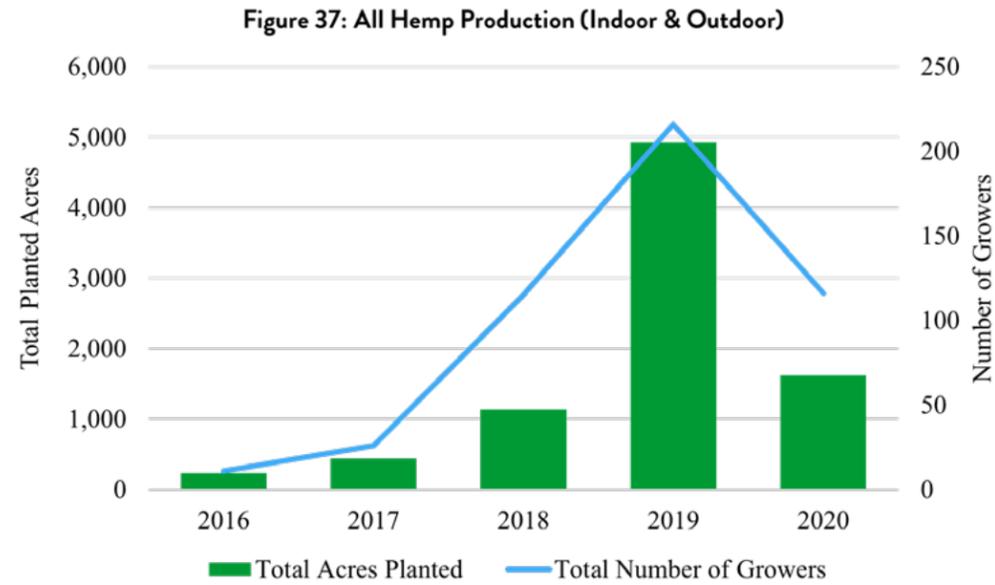
Source: USDA, NASS Crop Production Summary (2012-2020)

9 NDA Livestock Industry Survey

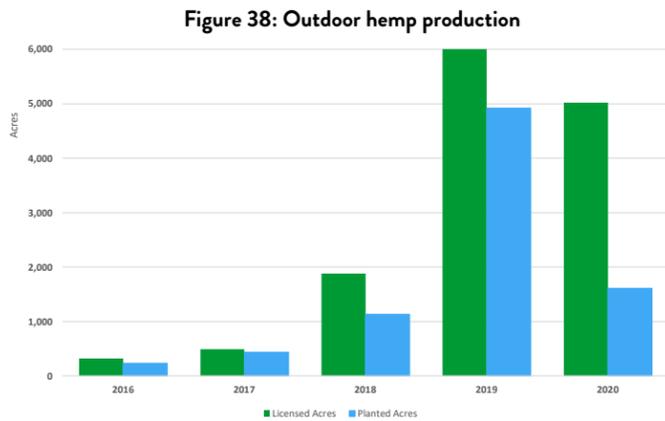
10 University of Nevada, June 2020 Nevada Agricultural Outlook, p.10

HEMP

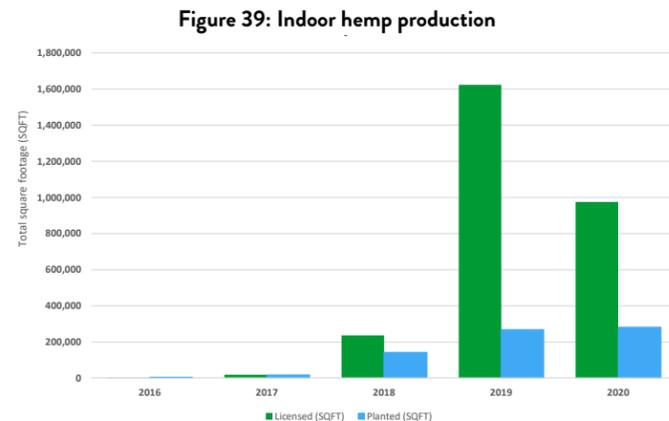
The hemp industry is one of Nevada’s newest crop categories. Based on 2019 NDA certification data, the total licensed outdoor hemp acreage covered 14,225 acres, but decreased to 3,821 acres in 2020. In 2019, the total licensed indoor square footage was 1.6 million and declined to 784,000 licensed indoor square feet in 2020. Figure 37 shows a slight decline in growers between 2019 and 2020. As an emerging industry, hemp is undergoing a wide range of development with shifting supply chains, market conditions, production/ growth factors, and an evolving federal regulatory framework. Figure 38 and 39 provides an overview of licensed hemp versus planted hemp. As illustrated, hemp operations have generally licensed more area than they have planted. This is due to a number of contributing factors influencing the difference between licensed area and planted area (environment, over-projection of planting, access to seed and market conditions are a few of the elements generally attributed).



*Note: Indoor square feet and outdoor acreage is displayed combined as acres.
Source: NDA Licensing Data, 2020 Data through November



Source: NDA Licensing Data, 2020 Data through November



Source: NDA Licensing Data, 2020 Data through November

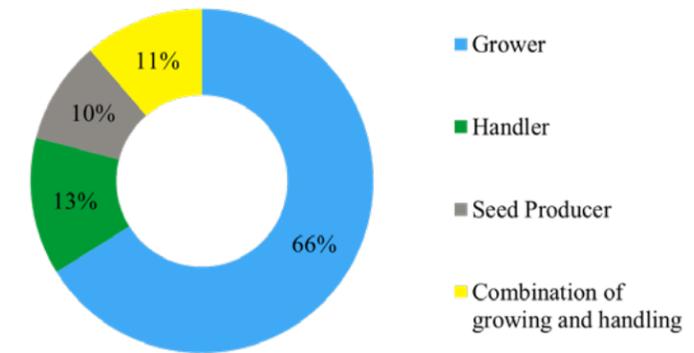
Based on 2019 NDA certification data, 41 industrial hemp operations, representing 12.65% of Nevada’s hemp industry, reported a net revenue of \$17.3 million.¹¹

¹¹ NDA 2020 Industry Survey

Hemp Industry Survey

The Hemp Industry survey was designed to assess the economic conditions of Nevada’s hemp industry. In total, there were 56 respondents to the survey.

Figure 40: Hemp Survey-How would you best classify your operation?

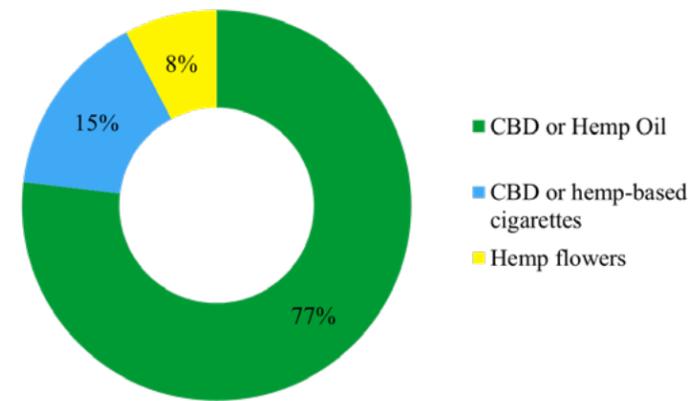


Source: NDA Hemp Industry Survey 2020

Hemp processing

- 12 entities reported that their industrial hemp processing facilities totaled 93,701 square feet, or on average 7,808 square feet per respondent.
 - » 39,751 lbs. of industrial hemp processed in 2019
 - » 74.9% of hemp processed was grown in Nevada

Figure 41: Hemp processor end product produced (%)



Source: NDA Hemp Industry Survey 2020

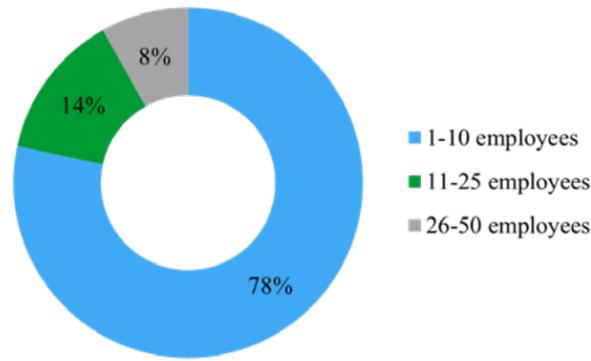
Hemp revenue and expenditures

Figure 42: Total reported revenue of hemp operations

	Reported	Average per operation
2019 reported revenue	\$17,282,502	\$421,524
2019 reported expenditures	\$13,558,700	\$338,967

Source: NDA Hemp Industry Survey 2020

Figure 43: Total Employees reported by Hemp Operations



Source: NDA Hemp Industry Survey 2020

Hemp industry employment facts:

- \$17.17 was the average hourly wage reported

Impact of COVID-19

In addition to providing revenue numbers, respondents were asked to rate the impact of COVID-19 on their business on a scale of 1-10 (1 being the lowest and 10 being the highest). Across the industrial hemp industry, respondents rated the impact of COVID-19 as 7.70. This suggests that the industrial hemp industry considers the impact of COVID-19, as having a high impact on their business. Respondents were asked whether they expected business to be better-off, worse-off, or about the same financially in 2021. Responses can be seen in Figure 45.

Major issues related to hemp

Hemp businesses were asked the following questions and the primary themes in responses were noted:

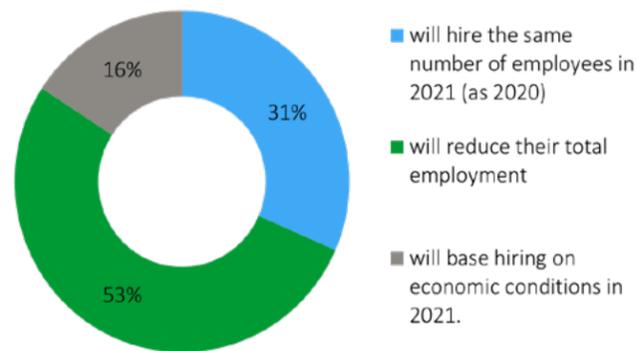
“What major challenges does your business face in 2020?”

- Financial Issues and Sales
- Access to reliable processing and industry supply chain
- Regulations related to growing & processing
- Closures related to COVID-19
- FDA food and CBD regulations

“What could improve conditions for your business or the hemp industry in Nevada?”

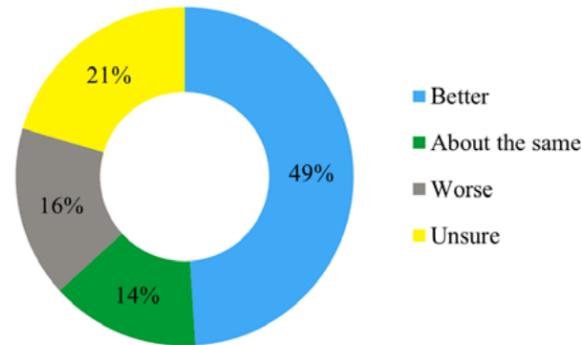
- Greater support (advocacy, finance, regulatory framework, and education)
- Increase or change methodology for measurement of THC content
- Limit number of hemp licenses¹²

Figure 44: Hemp industry employment expectations



Source: NDA Hemp Industry Survey 2020

Figure 45: Hemp industry perception of business in 2021 compared to 2020



Source: NDA Hemp Industry Survey 2020

12 NDA Hemp Industry Survey

CROP INDUSTRY SURVEY

Figure 46: Crop production by crop category

Crop category	Total acres	Operations
Fruits - not including melons (apples, berries, grapes, etc.)	56	9
Melons (cantaloupe, watermelons, etc.)	19	10
Summer/Winter Squash (crookneck, zucchini, pattypan, acorn, etc.)	12	9
Leafy greens (kale, spinach, arugula, collard, etc.)	8	8
Tuber Crops (potatoes, sweet potatoes, yams, etc.)	8	4
Herbs/Spices (mint, rosemary, sage, basil, etc.)	7	7
Root vegetables (carrots, turnips, radish, etc.)	7	7
Allium (onions, garlic, shallots, etc.)	6	6
Pulses (dried: beans, lentils, peas, etc.)	3	3
Legumes non-fodder (harvested green: beans, peas, lentils, etc.)	3	3
Ancient grains (teff, einkorn, emmer, amaranth, etc.)	2	2
Cereals - not ancient grain (wheat, rice, maize, millet, barley, etc.)	1	1
Oil seeds (soybean, castor, linseed, sunflower, etc.)	1	1

Source: NDA Crop Industry Survey 2020

In total, crop operations reported 857 acres of non-irrigated crops, 24,748 acres of irrigated outdoor crops, and 45,134 square feet of indoor irrigated crops. On average, operations reported that roughly 22.29% of their crops were grown indoors. Industry additionally reported that 37.50% of their operations had processing capability for their crops.

The average reported acreage per operation was 651 acres of irrigated crop production. Figure 46 shows a breakdown of the reported crop production by acreage.

- 45.17% of crops grown in 2019 were reported sold.
- \$2,502,670 in revenue was reported from crop sales in 2019.

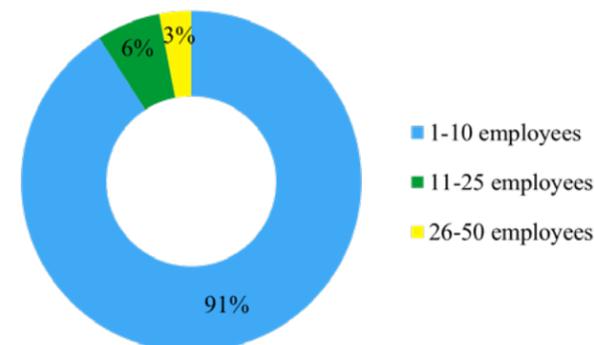
Figure 47: Total reported revenue by farm and crop industry

	Reported	Average per operation
2019 reported revenue	\$5,592,465	\$155,346
2019 reported expenditures	\$4,720,994	\$131,138

Source: NDA Crop Industry Survey 2020

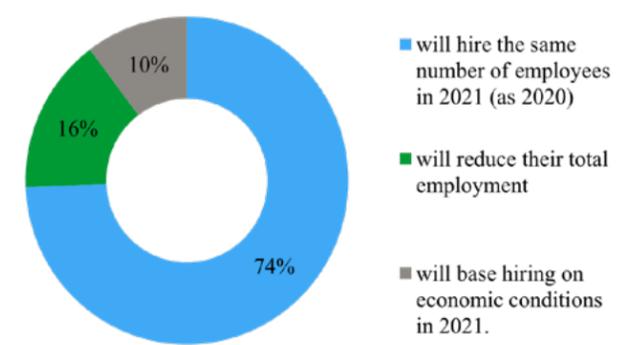
Farm and crop industry employment

Figure 48: Crop Industry reported employees by operation



Source: NDA Crop Industry Survey 2020

Figure 49: Crop industry employment expectations



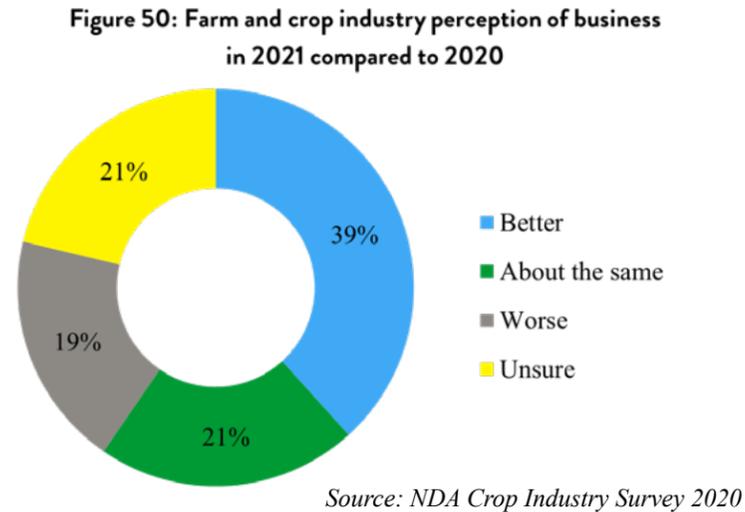
Source: NDA Crop Industry Survey 2020

Crop Industry employment facts:

- 59.91% of employees were seasonal
- \$12.27 was the average hourly wage

Impact of COVID-19

In addition to providing revenue numbers, respondents were asked to rate the impact of COVID-19 on their business on a scale of 1-10 (1 being the lowest and 10 being the highest). Across the farm and crop industry, 34 respondents rated the impact of COVID-19 as an averaged 7.35. This suggests that the farm and crop industry considers the impact of COVID-19, as having a high impact on their business. Respondents were also asked whether they expected business to be better-off, worse-off, or about the same financially in 2021. Figure 50 models those responses.



Respondents were asked the following questions and the primary themes in responses were noted:

“What major challenges does your business face in 2020?”

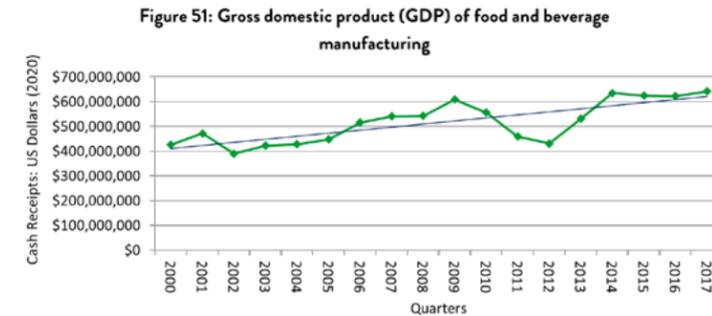
- COVID-19 and related closures
- Need assistance selling product
- Market and sales conditions
- Drought, heat, and access to water

“Thinking long term, what ideas do you have that could improve conditions for your business, or the farm and crop industry in Nevada?”

- Amend regulations to improve farming for (dairy, poultry, farmer input, consistency of regulations).
- Market access and support (trade, virtual marketplace, sales)
- More educational opportunities and support for growers¹³

¹³ NDA Crop Industry Survey, 2020

NEVADA'S FOOD, BEVERAGE AND SPECIALTY PRODUCT MANUFACTURING



Nevada has a diverse and growing manufacturing sector consisting of food products, beverages and specialty products. This industry includes a wide array of bakeries, processors, manufacturers, coffee roasters and other companies that provide the globe with a variety of products including breads and tortillas, jerky, food ingredients, chocolate, spices, ice cream, beverages, cereal and grain products and beverages, animal food, desserts and more. These companies range from small businesses to multinational corporations with some of the largest production facilities in the world located in Nevada.

- From 2017 to 2018, Nevada’s food manufacturing sector grew from \$3.6 billion to \$4.04 billion in economic output (value of production).¹⁴
- Gross domestic product, or total value added of the food manufacturing industry in Nevada was \$642.2 million.¹⁵
- Food manufacturing sector output in 2020 declined by \$3.9 million.

**Note: Nutraceutical manufacturing was not included in these figures, but it should be noted this industry is part of botanical and pharmaceuticals manufacturing with an economic output in excess of \$185 million.*

¹⁴ IMPLAN Website, IMPLAN Group, LLC, 2020.

¹⁵ U.S Bureau of Economic Analysis (BEA), 2020.

Figure 52: Total output from food manufacturing categories in 2020

Manufacturing Category	2020 Output
Bottled and canned soft drinks & water	\$402,403,800
Bread and bakery product, except frozen, manufacturing	\$389,060,930
Fluid milk manufacturing	\$245,871,951
All other food manufacturing	\$213,215,133
Ice cream and frozen dessert manufacturing	\$210,320,159
Spice and extract manufacturing	\$208,216,263
Coffee and tea manufacturing	\$179,496,601
Soybean and other oilseed processing	\$175,953,468
Meat processed from carcasses	\$174,928,388
Mayonnaise, dressing, and sauce manufacturing	\$169,866,797
Dog and cat food manufacturing	\$159,180,346
Frozen specialties manufacturing	\$137,854,316
Other animal food manufacturing	\$119,288,527
Frozen cakes and other pastries manufacturing	\$117,154,065
Canned fruits and vegetables manufacturing	\$106,906,716
Frozen fruits, juices and vegetables manufacturing	\$104,751,992
Confectionery manufacturing from purchased chocolate	\$100,412,518
Other snack food manufacturing	\$99,046,423
Cookie and cracker manufacturing	\$94,363,116
Breakfast cereal manufacturing	\$94,104,222
Fats and oils refining and blending	\$68,156,125
Distilleries	\$67,478,436
Dry, condensed, and evaporated dairy product manufacturing	\$58,107,750
Canned specialties	\$57,690,384
Breweries	\$57,393,555
Roasted nuts and peanut butter manufacturing	\$38,864,487
Flavoring syrup and concentrate manufacturing	\$38,153,810
Animal, except poultry, slaughtering	\$27,204,538
Non-chocolate confectionery manufacturing	\$26,683,241
Rendering and meat byproduct processing	\$25,783,640
Tortilla manufacturing	\$22,845,719
Dry pasta, mixes, and dough manufacturing	\$21,294,874
Dehydrated food products manufacturing	\$12,938,911
Seafood product preparation and packaging	\$12,174,766
Manufactured ice	\$11,321,477
Tobacco product manufacturing	\$11,157,896
Chocolate and confectionery manufacturing from cacao beans	\$6,915,992
Cheese manufacturing	\$6,696,365
Wineries	\$5,856,614

Source: IMPLAN Website, IMPLAN Group, LLC, 2020

FOOD, BEVERAGE AND SPECIALTY PRODUCT MANUFACTURING INDUSTRY SURVEY

Nevada's food, beverage and specialty product manufacturing produces the largest segment of agricultural economic impact for Nevada. The survey received 80 respondents from around the state.

- Respondents reported 1,949,653 square feet of manufacturing space
- 89.79% of their manufacturing took place within Nevada with a total product value reported at \$655,049,304.¹⁶

Figure 53 provides a breakdown of major manufacturing industries under North American Industry Classification System (NAICS) categories. This breakdown is based upon respondents' perceived industry category. Some manufacturers classified themselves under the 'other' category. Their self-classification has been maintained within the reported data. Examples of categories that are under the other category include: prepared meals, frozen beverages, food ingredients and snack foods.

Nevada's food manufacturers reported producing the following products: beverages, beer, baked goods, beef products, meat products, tortillas, animal feed, animal treats, cheese, chocolate products, candy, cookies, crackers, dietary supplements, nutraceuticals, tea, coffee, ice cream, food ingredients, spices, sauces, marinades, whiskey, wine, prepared foods (fresh and frozen), desserts, snack bars and health foods. These primary products had a total value of \$640,574,304, while secondary manufactured products had a value of \$14,475,000.

Revenue and expenditures

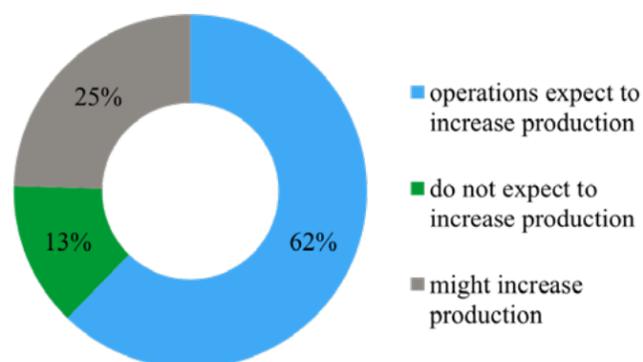
In total, 40 respondents provided revenue and expenditure data for 2019. They were additionally asked questions related to industry conditions and future projections. Respondents were mixed on whether to increase food manufacturing production moving into 2021. These operations consider COVID-19 and market conditions as major factors in considering increased production in 2021.

Figure 53: Respondent identification of industry

Manufacturing Category	% of respondents
Animal food manufacturing	5.00%
Grain & oilseed milling manufacturing	0.00%
Sugar & confectionery product manufacturing	6.25%
Cocoa or cocoa product manufacturing	1.25%
Nutraceutical manufacturing or processing	5.00%
Spice manufacturing or processing	1.25%
Coffee or tea manufacturing	6.25%
Fruits & vegetable preserves and specialty foods manufacturing	1.25%
Dairy product manufacturing	10.00%
Meat products & meat packaging product manufacturing	2.50%
Seafood products, prepared, canned or packaged manufacturing	0.00%
Bakery & tortilla product manufacturing	8.75%
Juice or soft drink product manufacturing	0.00%
Bottled water manufacturing	0.00%
Cottage food manufacturing	6.25%
Specialty food manufacturing	1.25%
Tobacco product manufacturing	0.00%
Brewery	6.25%
Winery	20.00%
Distillery	3.75%
Other	15.00%

Source: NDA Food, Beverage and Specialty Product Manufacturing Survey

Figure 54: Manufacturing output expectations into 2021



Source: NDA Industry Survey 2020

Figure 55: Total reported revenue by respondents

	Reported	Average per operation
2019 reported revenue	\$640,602,300	\$16,016,057
2019 reported expenditures	\$ 80,766,250	\$2,019,156

Source: NDA Crop Industry Survey 2020

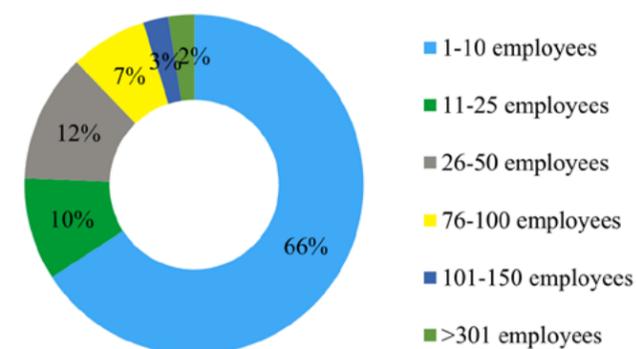
¹⁶ Source: NDA Food, Beverage and Specialty Product Manufacturing Survey

Industry employment

Key employment facts:

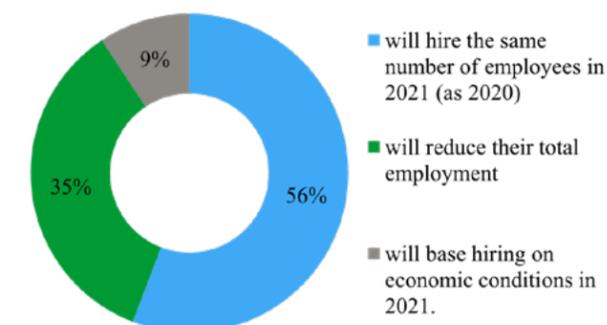
- 30% of employees were seasonal
- \$16.69 was the average hourly wage of employees

Figure 56: Food manufacturing: employees per operation



Source: NDA Industry Survey 2020

Figure 57: Food manufacturing employment expectations

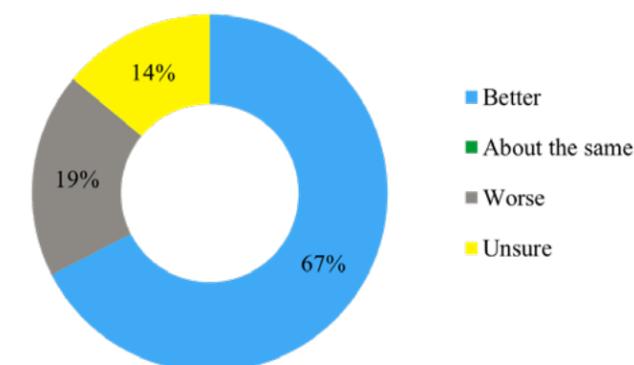


Source: NDA Industry Survey 2020

Impact of COVID-19

In addition to providing revenue numbers, respondents were asked to rate the impact of COVID-19 on their business on a scale of 1-10 (1 being the lowest and 10 being the highest). The 34 industry respondents rated the impact of COVID-19 an average of 8.15. This suggests that the industry considers the impact of COVID-19 as having a high impact on their business. When asked whether they expected business to be better-off, worse-off or about the same financially in 2021, they provided the results seen in Figure 58.

Figure 58: Food and beverage industry perception of business in 2021 compared to 2020



Source: NDA Food, Beverage and Specialty Product Manufacturing Survey

Major issues related to the food, beverage and specialty product manufacturing industry

In order to assess major issues related to the food manufacturing industry respondents were asked the following questions and the primary themes in responses were noted:

“What major challenges does your business face in 2020?”

- Decline in customers
- COVID-19 related policies and closures
- Decline in sales
- Supply chain issues
- Staffing and employee retention

“What could improve conditions for your business or the food, beverage and specialty product manufacturing industry in Nevada?”

- Access to financing and fiscal support
- Relax distillery, winery, brewery regulations regarding production and distribution.
- Skilled employees and industry training¹⁷

¹⁷ NDA Food, Beverage and Specialty Product Manufacturing Survey

FOOD AND AGRICULTURE EMPLOYMENT

According to IMPLAN data, the total employment of Nevada's food and agriculture sector in 2018 was approximately 18,629 jobs with a labor income of \$665.1 million.¹⁸ The total employment of agriculture operations was approximately 7,897 jobs with a labor income of \$153.2 million. In the food manufacturing industry, total employment was 10,731 jobs, with a labor income of \$511.9 million. This dataset utilizes Census County Business Patterns, Bureau of Labor Statistics and Bureau of Economic Analyses data to establish an employment model. Given the methodology and modeling utilized, the data differs from statistics reported by individual entities like the Bureau of Labor Statistics. In order to provide clarity, additional data is provided utilizing information pulled directly from the US Bureau of Labor Statistics Quarterly Census of Employment and Wages. This helps to provide more depth to the salary and wage data of individual sector areas.

The Bureau of Labor and Statistics reported complete data from 225 agriculture businesses in 2019. These entities reported having 1,900 employees with total wages of \$76.5 million.

The average annual wages ranged from \$32,694 to \$162,931. Figure 59 provides a breakdown of that data.¹⁹

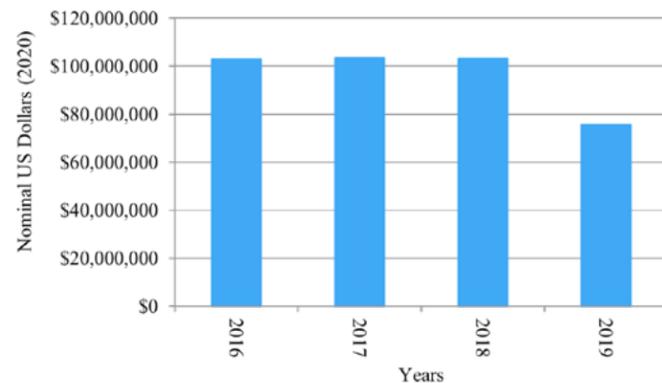
In addition to this data, in 2019, the Economic Research Service (ERS) of the USDA reported that total labor expenses for farms was \$75.8 million. This follows closely with the reported wage data from

Figure 59: 2019 Agriculture industry employment

Agriculture NAICS Code Categories	Total Wages	Annual Wage	Annual Average Employment	Establishments
Hay farming	\$19,981,602	\$38,547	520	74
All other crop farming	\$5,000,086	\$46,621	107	11
Beef cattle ranching and farming	\$18,396,882	\$34,689	530	86
Cattle feedlots	\$2,113,521	\$33,907	62	6
Dairy cattle and milk production	\$18,306,382	\$38,158	480	17
All other animal production	\$1,520,293	\$32,694	47	5
Finfish fishing	\$6,042,017	\$162,931	37	9
Soil prep, planting, cultivation	\$1,950,814	\$48,974	40	7
Post harvest crop activities	\$2,059,987	\$47,630	43	7
Farm labor contractors	\$1,165,457	\$33,945	34	3

Source: US Bureau of Economic Analysis, 2020

Figure 60: Farm Labor Expenses



Source: USDA, ERS 2020

Figure 61: Agriculture wages and salaries



Source: Bureau of Labor and Statistics, 2020

¹⁸ IMPLAN Website, IMPLAN Group, LLC, 2020

¹⁹ U.S Bureau of Economic Analysis (BEA), Quarterly Census of Employment and Wages (2020).

the Bureau of Labor and Statistics. Looking at this data, it appears that 2019 labor expenses may have been impacted by declines in some agriculture exports. While labor expenses have remained relatively stable from 2011-2019, they may experience a slight decline in 2020 and will likely begin to recover in late 2021.

In the fourth quarter of 2018, Nevada's agriculture wages and salaries were \$113.2 million. This was followed by a sharp drop in wages and salaries in the first quarter of 2019 to \$86.5 million. This was likely attributable to the U.S. announcement that it intended to withdraw from the North American Free Trade Agreement in December of 2018. Since the easing of trade conditions, there has been some stabilization of wages, but the agriculture sector has not recovered from this drop. Many of the wage and salary gains over 2019 have deteriorated in the first two quarters of 2020 due to COVID-19.

The Bureau of Labor and Statistics reported complete data from 154 Nevada food and beverage manufacturers in 2019. These entities reported having 4,072 employees with total wages of \$196.7 million. The average annual wages ranged from \$28,176 to \$75,424. Figure 62 provides a breakdown of that data.

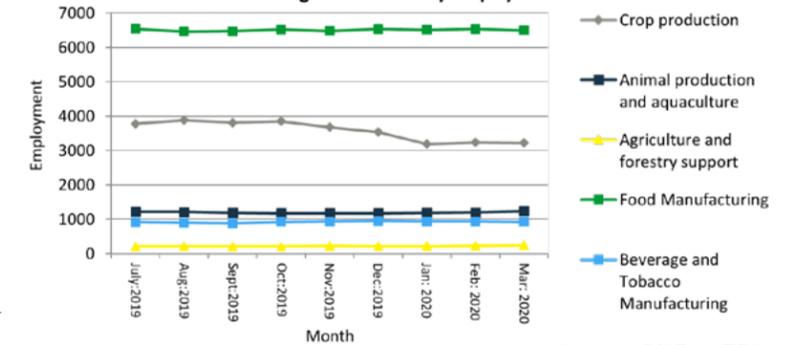
2020 employment data for Nevada's food and agriculture sector has shown resiliency within the sector's employment. Changes in demand and facility closures have created supply chain compression in the food and beverage manufacturing sector. This compression will likely lead to a short period of temporary hiring to support shifts in demand. However, it is likely there will be slight declines in employment following revenue declines experienced due to COVID-19. Furthermore, the scope of these declines will likely lead to minimal contraction within the sector's employment.

Figure 62: 2019 Food manufacturing industries employment

Agriculture NAICS Code Categories	Total Wages	Annual Wage	Annual Average Employment	Establishments
Non-chocolate confectionery manufacturing	\$2,286,311	\$39,027	59	6
Fruit and vegetable canning	\$10,557,983	\$65,408	161	6
Fluid milk manufacturing	\$19,883,472	\$65,514	304	7
Ice cream and frozen dessert manufacturing	\$21,615,257	\$75,424	287	4
Meat processed from carcasses	\$11,406,325	\$39,755	287	9
Commercial bakeries	\$35,272,835	\$35,665	989	28
Cookie and cracker manufacturing	\$15,445,437	\$56,715	272	5
Pasta, dough and mixes from purchased flour	\$976,768	\$28,176	35	3
Tortilla manufacturing	\$3,262,659	\$30,853	106	6
Coffee and tea manufacturing	\$13,015,929	\$58,785	221	14
Perishable prepared food manufacturing	\$13,267,283	\$28,506	465	29
All other miscellaneous food manufacturing	\$2,445,237	\$60,252	41	4
Soft drink manufacturing	\$8,513,470	\$45,284	188	3
Bottled water manufacturing	\$27,259,417	\$68,291	399	8
Ice manufacturing	\$2,692,120	\$39,736	68	4
Breweries	\$4,295,513	\$38,439	112	11
Distilleries	\$4,505,932	\$58,016	78	7

Source: US Bureau of Economic Analysis, 2020

Figure 63: Monthly employment



Source: USDA, ERS 2020

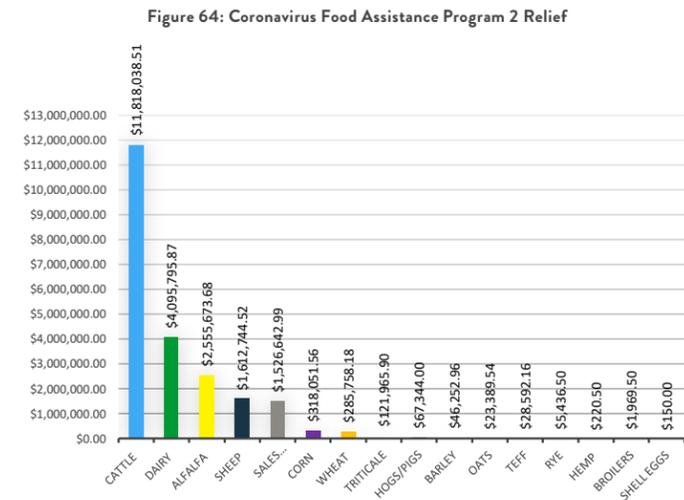
MAJOR ECONOMIC IMPACTS ON NEVADA'S FOOD AND AGRICULTURE SECTOR

Nevada has experienced three major economic challenges that have had a significant impact on Nevada's food and agriculture sector in 2020. These have included trade conflicts, COVID-19 and drought conditions. While many trade disputes have been resolved, conditions with trade partners like China and the European Union continue to destabilize the agricultural economy.

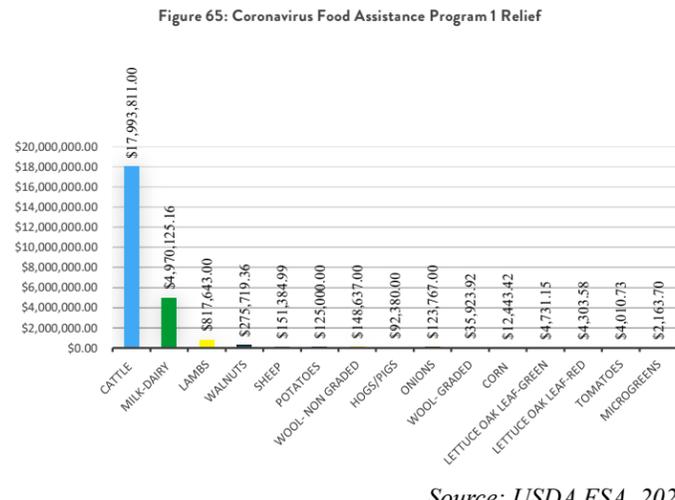
IMPACTS OF COVID-19

Nevada's food and agriculture sector has faced significant impacts from COVID-19, leading to supply chain shocks, price fluctuations and administrative closures. To mitigate impacts to the agriculture economy, USDA and other federal programs have provided a wide range of economic stimulus. Through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act):

- Nevada's agriculture sector has received over \$64.6 million dollars in economic stimulus.
 - » \$24.7 million from the first round of CFAP funding (as of December 2020).
 - » \$22.3 million in funding through CFAP 2 (as of December 2020).
 - » Over \$16.4 million in loans through the paycheck protection program.
- Additional support has been issued through programs administered by the NDA and funding made available through the CARES Act:
 - » \$351,253 through the Nevada Agriculture Adaptability and Recovery Program to reimburse agriculture businesses for expenses to safely operate and adapt during the public health crisis.
 - » \$789,421 was awarded through the Inventory and Distribution Systems for Nevada Agricultural Produce and Products to fund projects that aggregated Nevada agriculture products and increased consumer access to local food during the pandemic.



Source: USDA FSA, 2021

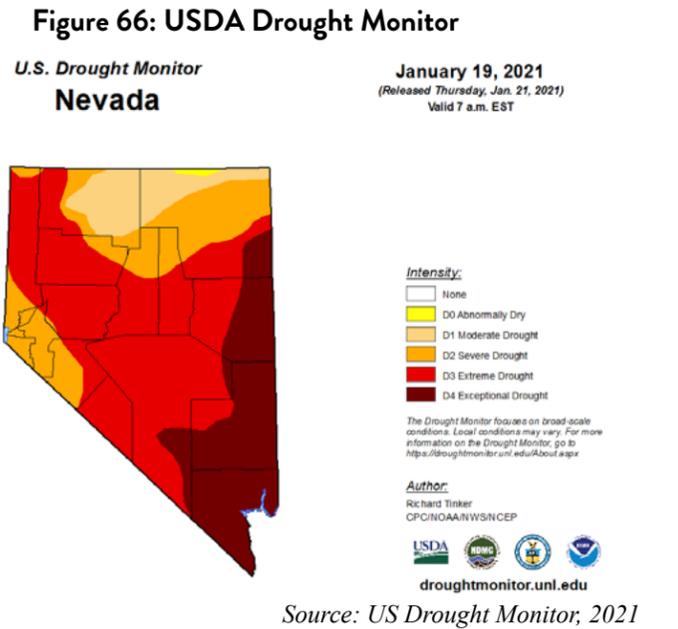


Source: USDA FSA, 2021

DROUGHT AND CLIMATIC CONDITIONS IMPACTING AGRICULTURE

In 2020, USDA Secretary Purdue issued disaster declarations due to drought conditions in all Nevada counties. These disaster declarations provide access and emergency financial support mechanisms for Nevada's farms and ranches. Similar drought conditions impacted Nevada from 2011 to 2017. These droughts cause significant impacts to farmers and ranchers with reductions in surface water resources and strains Nevada's limited ground water. Drought conditions and heat can have significant impacts on agriculture leading to decreased production, crop loss, declining rangeland conditions, increased wildland fire risks and impacts to livestock health and reproduction. In the 2020 NDA Nevada Agriculture Industry Surveys, many operations listed these conditions as major impacts to their economic vitality.

According to the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information, "temperatures in Nevada have increased about 2°F since the beginning of the 20th century. In the last 15 years, the annual number of days of extreme heat (above 95°F), averaged over the state, has been above average." General projected trends point towards warmer conditions and declines in snowpack leading to additional drought conditions. It is probable that these projections would lead to additional strain on Nevada's agriculture sector.²⁰



²⁰ NOAA, NCEI, State Summaries: Nevada, www.NCEI.NOAA.gov

NEVADA'S GLOBAL TRADE OF FOOD AND AGRICULTURE PRODUCTS

Nevada's proximity to western ports provides Nevada's agriculture sector with unique access to markets throughout Asia, North America, Central America, South America and the Middle East. This proximity provides Nevada with significant agriculture export opportunities. Figure 67 provides an overview of the annual growth seen in Nevada's agriculture exports since 2015.

In addition to this annual growth Figure 68 provides an overview of the monthly growth experienced in Nevada's agriculture exports. This shows a sustained month-over-month growth for exports.

Expanding upon these annual and monthly trends, Figure 69 provides some insight into the export growth potential of Nevada's agriculture sector, while Figure 70 provides an overview of the specific export areas.

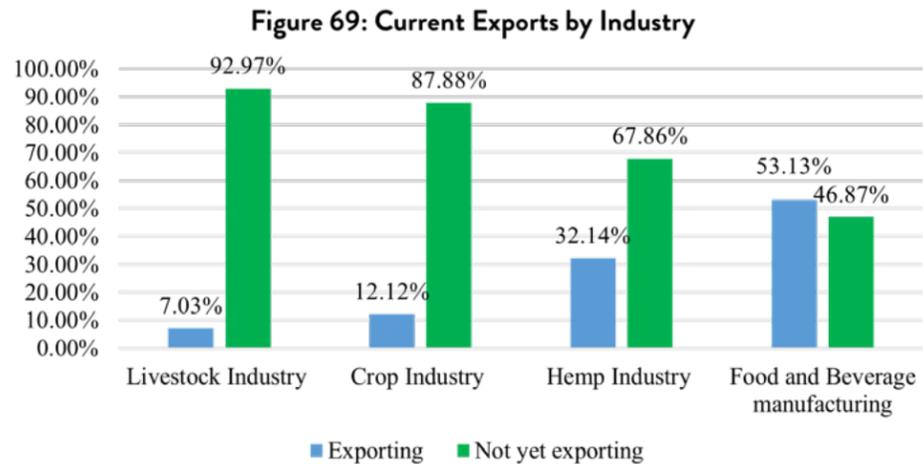
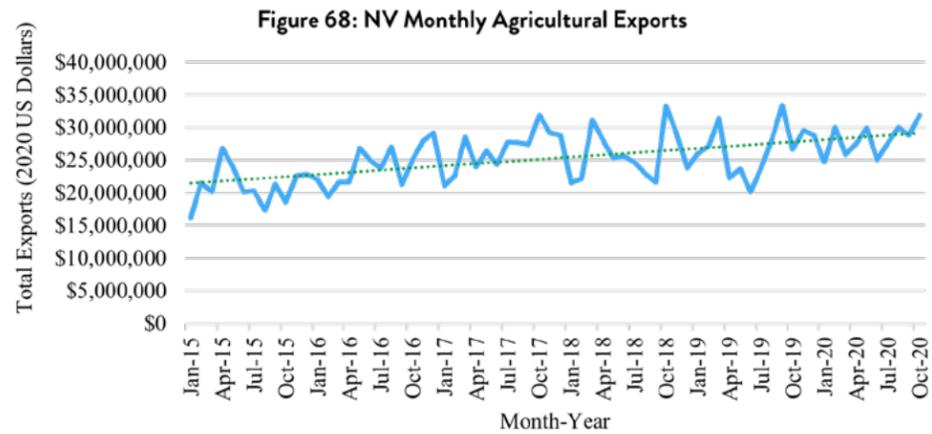
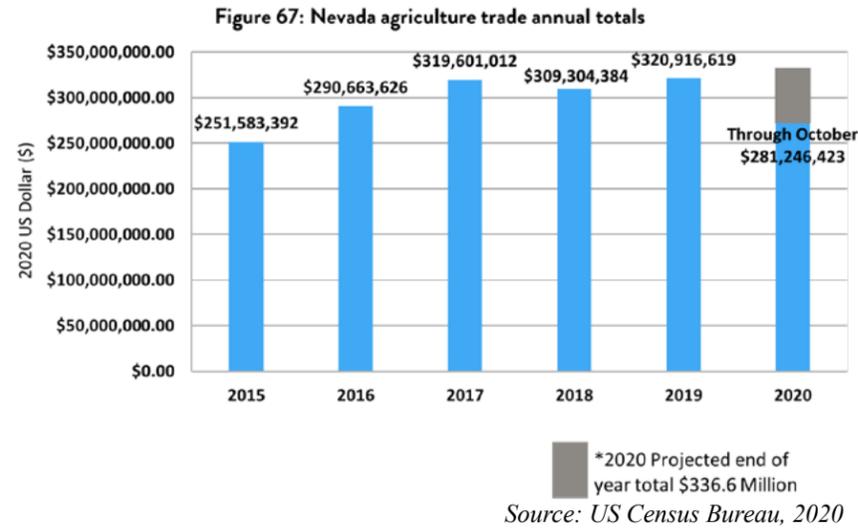


Figure 70: Nevada Trade by category

Export Category	2018	2019	2020*
Coffee, Tea, Mate & Spices	\$90,713,863	\$96,754,569	\$82,584,274
Dairy Prods; Bird Eggs; Ed Animal Pr Nesoi	\$58,426,911	\$61,199,412	\$64,290,914
Miscellaneous Edible Preparations	\$35,713,929	\$37,920,061	\$34,810,113
Prep Cereal, Flour, Starch Or Milk; Bakers Wares	\$36,493,270	\$40,225,560	\$29,236,271
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	\$11,416,052	\$13,722,330	\$17,945,889
Edible Vegetables & Certain Roots & Tubers	\$12,051,423	\$11,293,615	\$11,290,988
Beverages, Spirits and Vinegar	\$22,041,777	\$12,382,218	\$10,206,918
Prep Vegetables, Fruit, Nuts or Other Plant Parts	\$6,153,263	\$7,902,246	\$8,009,065
Live Trees, Plants, Bulbs, etc., Cut Flowers Etc.	\$4,911,937	\$5,960,989	\$5,165,236
Food Industry Residues & Waste; Prep Animal Feed	\$2,126,595	\$3,638,658	\$4,444,563
Sugars and Sugar Confectionary	\$4,490,501	\$4,710,870	\$3,495,240
Cocoa and Cocoa Preparations	\$3,508,906	\$4,876,966	\$2,309,790
Edible Preparations Of Meat, Fish, Crustaceans etc.	\$5,311,622	\$4,336,120	\$1,609,133
Live Animals	\$383,272	\$1,017,224	\$1,313,591
Tobacco and Manufactured Tobacco Substitutes	\$442,860	\$2,373,188	\$1,194,871
Meat and Edible Meat Offal	\$1,240,947	\$763,882	\$1,024,725
Lac; Gums, Resins & Other Vegetable Sap & Extract	\$1,150,883	\$1,141,160	\$733,280
Animal or Vegetable Fats, Oils Etc. & Waxes	\$1,853,622	\$803,959	\$594,210
Fish, Crustaceans & Aquatic Invertebrates	\$455,580	\$167,725	\$308,882
Milling Products; Malt; Starch; Inulin; Wht Gluten	\$73,993	\$62,842	\$228,117
Products of Animal Origin, Nesoi	\$657,614	\$258,036	\$222,948
Edible Fruit & Nuts; Citrus Fruit or Melon Peel	\$275,224	\$429,028	\$221,300
Cereals	\$401,474	\$5,798,569	\$6,105

*Note: 2020 date as of October 2020. Data reported in USD.
Source: US Bureau of Economic Analysis, 2020

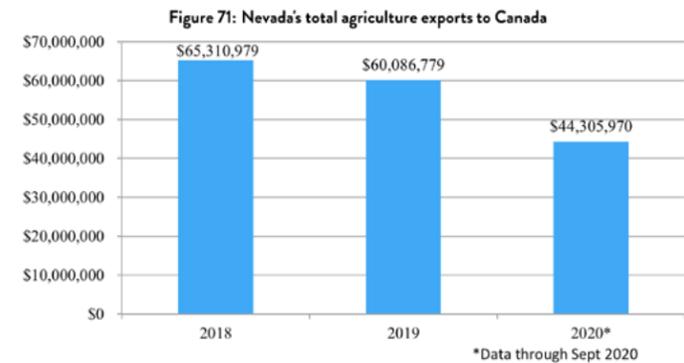
NEVADA'S TOP EXPORT PARTNERS BY EXPORT VALUE

The following provides an overview of our top trade partners in order of export value. These trade partners represent a significant portion of Nevada's overall exports.

CANADA



- Nevada exported \$65 million in food and agriculture products to Canada in 2018.
- In 2019, exports from Nevada to Canada declined to \$60 million.²¹



Source: Euromonitor International, 2020

Figure 72: Products exported to Canada

Export Category	2018	2019	2020*
Live animals	\$121,844	\$419,464	\$655,829
Meat, edible offal	\$51,905	\$8,877	\$0
Fish, crustaceans, others	\$58,697	\$113,089	\$0
Dairy products	\$31,179	\$45,062	\$113,666
Animal products, nesoi	\$65,050	\$42,708	\$0
Live trees, plants	\$3,680,813	\$4,383,931	\$3,314,298
Edible vegetables	\$4,924,797	\$4,746,410	\$5,625,956
Edible fruit, nuts	\$96,085	\$200,078	\$77,313
Coffee, tea, spices	\$1,387,725	\$1,157,872	\$764,783
Cereals	\$195,906	\$0	\$6,105
Milling products	\$35,825	\$32,495	\$6,887
Oil seed	\$2,291,175	\$928,026	\$1,540,501
Lac, gums, resins	\$0	\$14,232	\$148,261
Vegetable plaiting	\$0	\$3,788	\$0
Fats, animal, vegetables	\$1,326,087	\$429,546	\$254,892
Meat, fish, prepared	\$5,178,999	\$4,304,661	\$1,428,859
Sugars	\$393,613	\$355,062	\$151,469
Cocoa & cocoa prepared	\$909,205	\$914,154	\$383,800
Cereal, flour, starch	\$33,678,003	\$36,635,957	\$24,179,932
Vegetables, fruit, prepared	\$34,315	\$161,773	\$197,433
Misc. edible preps	\$3,551,204	\$4,364,054	\$3,569,191
Beverages, vinegar	\$7,023,651	\$502,004	\$207,567
Residues, wastes	\$274,901	\$323,536	\$1,679,228

*Note: 2020 date as of September 2020. Data reported in USD.

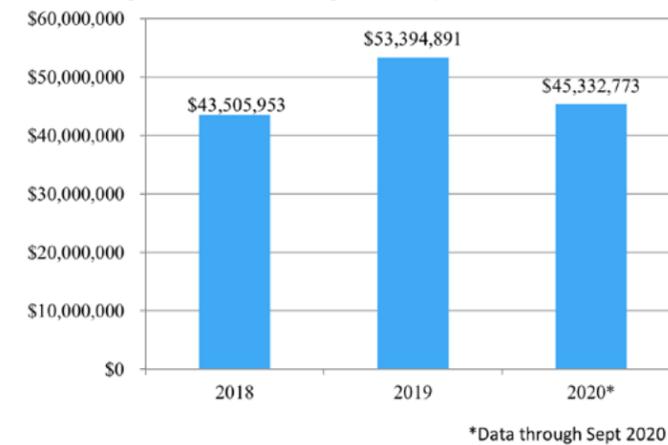
Source: Euromonitor International, 2020

SOUTH KOREA



- Nevada exported \$43.5 million in food and agriculture products to South Korea in 2018.
- In 2019, exports from Nevada to South Korea increased to \$53.3 million.²²

Figure 73: Nevada's total agriculture exports to South Korea



Source: Euromonitor International, 2020

Figure 74: Products exported to South Korea

Export Category	2018	2019	2020*
Fish, crustaceans, others	\$325,486	\$0	\$0
Dairy products	\$130,809	\$426,157	\$605,996
Animal products, nesoi	\$11,257	\$5,937	\$12,094
Coffee, tea, spices	\$40,241,820	\$48,872,545	\$40,946,941
Oil seed	\$7,450	\$37,494	\$451,041
Lac, gums, resins	\$324,967	\$140,006	\$0
Meat, fish, prepared	\$15,873	\$0	\$71,718
Cocoa & cocoa prepared	\$16,719	\$71,551	\$0
Cereal, flour, starch	\$387,291	\$452,630	\$95,928
Vegetables, fruit, prepared	\$731,733	\$798,360	\$825,896
Misc. edible preps	\$1,281,902	\$2,104,252	\$1,263,682
Beverages, vinegar	\$30,646	\$326,761	\$1,036,467
Residues, wastes	\$0	\$111,258	\$23,010
Tobacco	\$0	\$47,940	\$0

*Note: 2020 date as of September 2020. Data reported in USD.

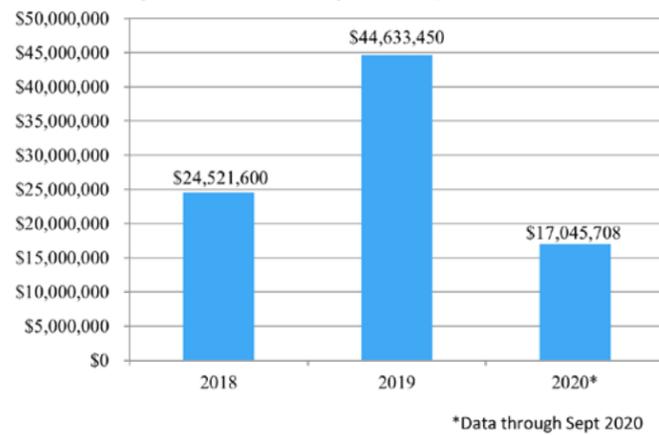
Source: Euromonitor International, 2020

MEXICO



- Nevada exported \$24.5 million in food and agriculture products to Mexico in 2018.
- In 2019, exports from Nevada to Mexico increased to \$44.6 million.²³

Figure 75: Nevada's total agriculture exports to Mexico



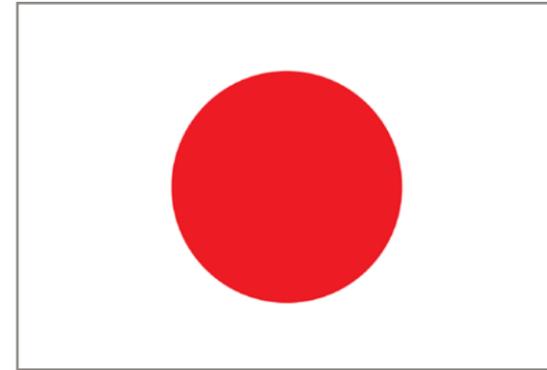
*Data through Sept 2020
Source: Euromonitor International, 2020

Figure 76: Products exported to Mexico

Export Category	2018	2019	2020*
Live animals	\$26,928	\$25,415	\$516,299
Meat, edible offal	\$464,954	\$517,467	\$930,620
Fish, crustaceans, others	\$43,939	\$0	\$161,901
Dairy products	\$4,022,067	\$17,525,612	\$224,357
Animal products, nesoi	\$0	\$0	\$0
Live trees, plants	\$899,984	\$604,041	\$406,083
Edible vegetables	\$5,456,111	\$5,375,486	\$2,789,070
Edible fruit, nuts	\$67,203	\$23,172	\$17,626
Coffee, tea, spices	\$893,075	\$1,020,743	\$1,315,198
Cereals	\$0	\$5,748,225	\$0
Milling products	\$34,370	\$19,219	\$9,111
Oil seed	\$35,088	\$11,446	\$2,512
Lac, gums, resins	\$558,651	\$391,426	\$6,075
Fats, animal, vegetables	\$55,985	\$8,592	\$35,446
Meat, fish, prepared	\$96,186	\$0	\$0
Sugars	\$3,552,277	\$3,903,157	\$2,784,526
Cocoa & cocoa prepared	\$2,210,761	\$2,980,561	\$1,349,762
Cereal, flour, starch	\$8,736	\$622,632	\$1,229,864
Vegetables, fruit, prepared	\$90,002	\$66,225	\$220,543
Misc. edible preps	\$4,827,528	\$3,331,381	\$4,488,830
Beverages, vinegar	\$268,765	\$133,887	\$6,741
Residues, wastes	\$908,990	\$2,262,393	\$551,144
Tobacco	\$0	\$62,370	\$0

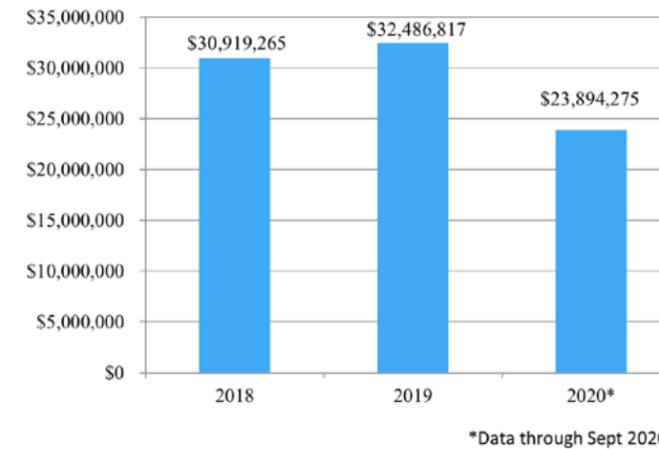
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

JAPAN



- Nevada exported \$30.9 million in food and agriculture products to Japan in 2018.
- In 2019, exports from Nevada to Japan increased to \$32.5 million.²⁴

Figure 77: Nevada's total agriculture exports to Japan



*Data through Sept 2020
Source: Euromonitor International, 2020

Figure 78: Products exported to Japan

Export Category	2018	2019	2020*
Dairy products	\$71,373	\$0	\$0
Live trees, plants	\$21,353	\$13,141	\$19,253
Edible fruit, nuts	\$0	\$0	\$15,000
Coffee, tea, spices	\$22,121,585	\$23,197,035	\$16,402,372
Oil seed	\$2,805,663	\$3,244,972	\$3,996,780
Cocoa & cocoa prepared	\$43,209	\$0	\$0
Cereal, flour, starch	\$78,745	\$196,803	\$73,740
Vegetables, fruit, prepared	\$76,617	\$112,651	\$18,900
Misc. edible preps	\$5,650,673	\$5,596,197	\$2,649,187
Beverages, vinegar	\$47,498	\$126,018	\$188,273
Residues, wastes	\$0	\$0	\$527,451
Tobacco	\$2,549	\$0	\$3,319

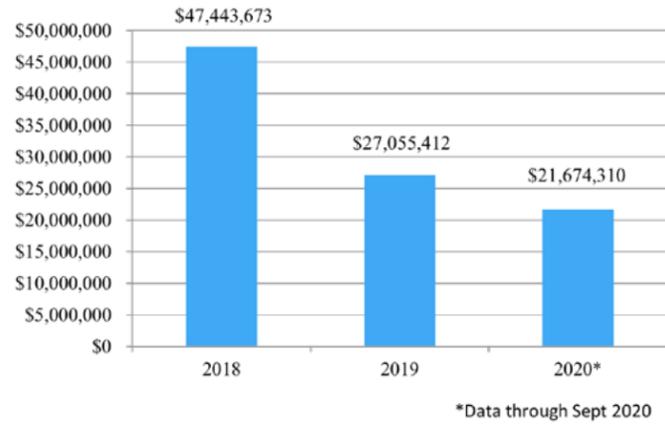
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

CHINA



- Nevada exported \$47.4 million in food and agriculture products to China in 2018.
- In 2019, exports from Nevada to China decreased to \$27 million.²⁵

Figure 79: Nevada's total agriculture exports to China



Source: Euromonitor International, 2020

Figure 80: Products exported to China

Export Category	2018	2019	2020*
Live animals	\$0	\$45,045	\$0
Meat, edible offal	\$0	\$0	\$50,968
Fish, crustaceans, others	\$0	\$0	\$9,456
Dairy products	\$23,327,220	\$254,271	\$1,718,610
Animal products, nesoi	\$142,133	\$0	\$98,000
Live trees, plants	\$0	\$917,912	\$917,903
Coffee, tea, spices	\$12,954,467	\$10,586,393	\$7,438,586
Oil seed	\$4,778,702	\$7,694,915	\$7,870,852
Lac, gums, resins	\$105,600	\$0	\$0
Fats, animal, vegetables	\$25,541	\$130,970	\$35,741
Sugars	\$456,461	\$393,010	\$44,976
Cocoa & cocoa prepared	\$49,560	\$107,222	\$206,077
Cereal, flour, starch	\$8,794	\$62,537	\$93,784
Vegetables, fruit, prepared	\$1,908,220	\$2,137,402	\$1,707,469
Misc. edible preps	\$3,686,975	\$4,725,735	\$1,481,888
Beverages, vinegar	\$2,080,659	\$344,533	\$154,739
Residues, wastes	\$101,800	\$0	\$0

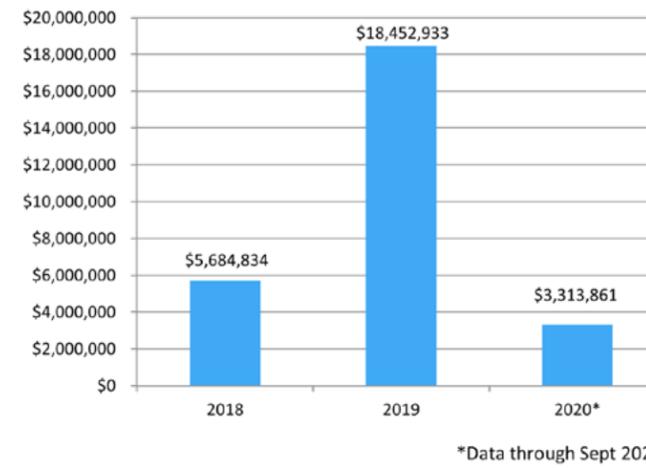
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

COLUMBIA



- Nevada exported \$5.6 million in food and agriculture products to Columbia in 2018.
- In 2019, exports from Nevada to Columbia increased to \$18.4 million.²⁶

Figure 81: Nevada's total agriculture exports to Columbia



Source: Euromonitor International, 2020

Figure 82: Products exported to Columbia

Export Category	2018	2019	2020*
Dairy products	\$4,992,284	\$18,258,819	\$3,149,086
Edible vegetables	\$0	\$0	\$3,177
Cereal, flour, starch	\$397,487	\$0	\$0
Misc. edible preps	\$295,063	\$194,114	\$161,598

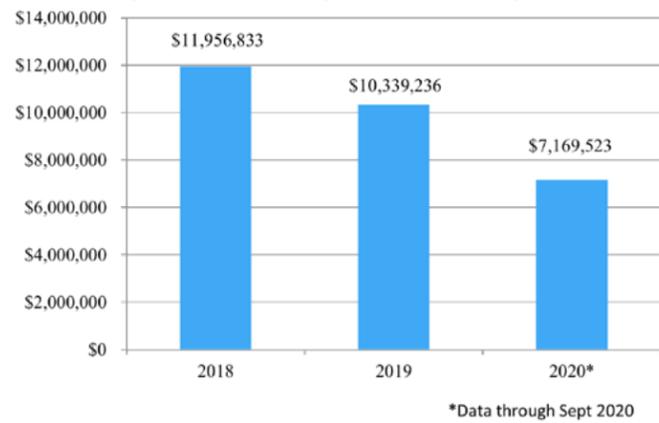
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

SINGAPORE



- Nevada exported \$11.9 million in food and agriculture products to Singapore in 2018.
- In 2019, exports from Nevada to Singapore decreased to \$10.3 million.²⁷

Figure 83: Nevada's total agriculture exports to Singapore



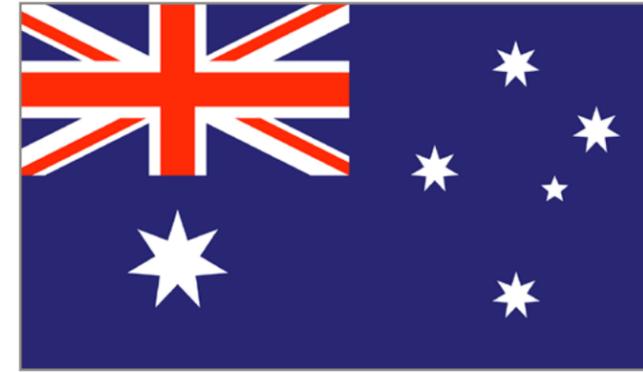
*Data through Sept 2020
Source: Euromonitor International, 2020

Figure 84: Products exported to Singapore

Export Category	2018	2019	2020*
Dairy products	\$1,113,207	\$608,678	\$454,488
Edible vegetables	\$11,389	\$0	\$0
Coffee, tea, spices	\$10,752,181	\$9,673,417	\$6,673,233
Oil seed	\$26,267	\$34,515	\$18,725
Lac, gums, resins	\$0	\$6,024	\$0
Fats, animal, vegetables	\$22,881	\$0	\$0
Sugars	\$0	\$0	\$15,109
Cocoa & cocoa prepared	\$18,806	\$16,602	\$7,968
Cereal, flour, starch	\$12,102	\$0	\$0
Vegetables, fruit, prepared	\$166,091	\$199,244	\$13,795
Misc. edible preps	\$1,339,452	\$2,393,847	\$1,278,592
Beverages, vinegar	\$987,488	\$366,753	\$15,496
Residues, wastes	\$0	\$3,948	\$39,647

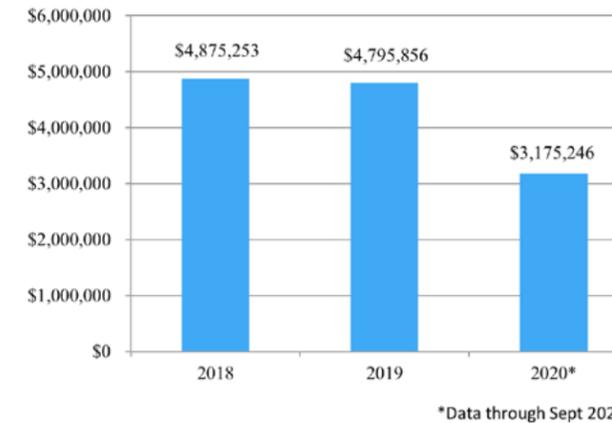
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

AUSTRALIA



- Nevada exported \$4.8 million in food and agriculture products to Australia in 2018.
- In 2019, exports from Nevada to Australia decreased to \$4.7 million.²⁸

Figure 85: Nevada's total agriculture exports to Australia



*Data through Sept 2020
Source: Euromonitor International, 2020

Figure 86: Products exported to Australia

Export Category	2018	2019	2020*
Dairy products	\$0	\$89,000	\$0
Animal products, nesoi	\$24,208	\$8,200	\$0
Edible vegetables	\$80,572	\$43,494	\$74,880
Coffee, tea, spices	\$139,466	\$214,684	\$199,828
Oil seed	\$693,818	\$558,614	\$199,569
Fats, animal, vegetables	\$235,060	\$29,370	\$33,375
Cocoa & cocoa prepared	\$0	\$0	\$17,746
Cereal, flour, starch	\$1,555,243	\$1,750,532	\$898,393
Vegetables, fruit, prepared	\$30,727	\$135,647	\$261,929
Misc. edible preps	\$2,116,159	\$1,966,315	\$1,489,526
Beverages, vinegar	\$7,968,581	\$8,454,619	\$5,879,580
Residues, wastes	\$6,203	\$0	\$0

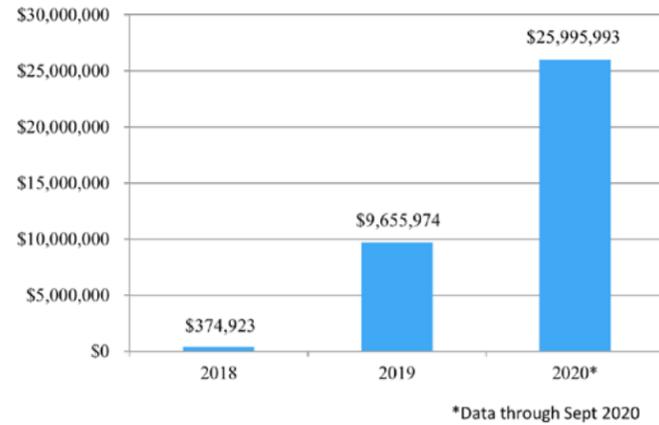
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

PERU



- Nevada exported \$374,000 in food and agriculture products to Peru in 2018.
- In 2019, exports from Nevada to Peru increased to \$9.6 million.²⁹

Figure 87: Nevada's total agriculture exports to Peru



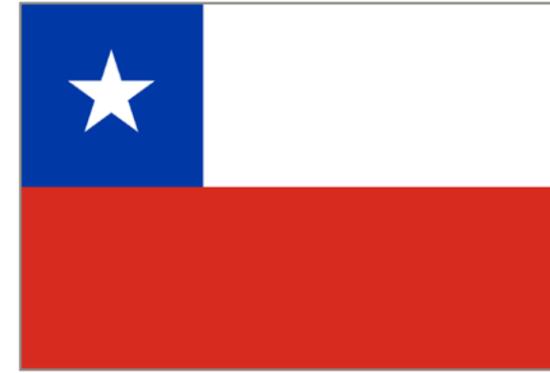
Source: Euromonitor International, 2020

Figure 88: Products exported to Peru

Export Category	2018	2019	2020*
Dairy products	\$273,027	\$9,571,201	\$25,986,449
Oil seed	\$0	\$11,862	\$9,544
Misc. edible preps	\$94,953	\$65,414	\$0
Beverages, vinegar	\$4,065	\$7,497	\$0
Residues, wastes	\$2,878	\$0	\$0

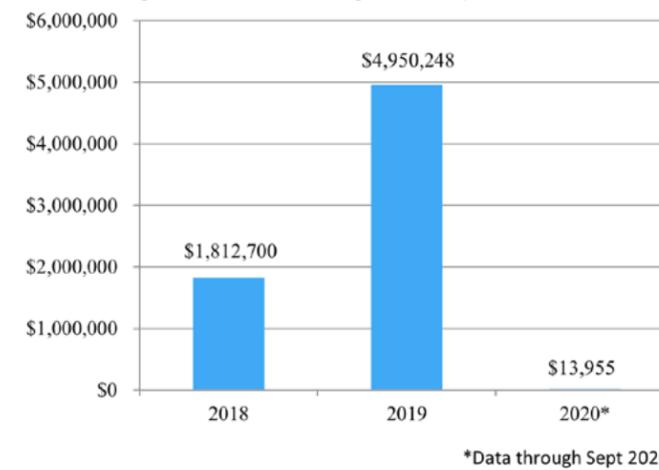
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

CHILE



- Nevada exported \$1.8 million in food and agriculture products to Chile in 2018.
- In 2019, exports from Nevada to Chile increased to \$4.9 million.³⁰

Figure 89: Nevada's total agriculture exports to Chile



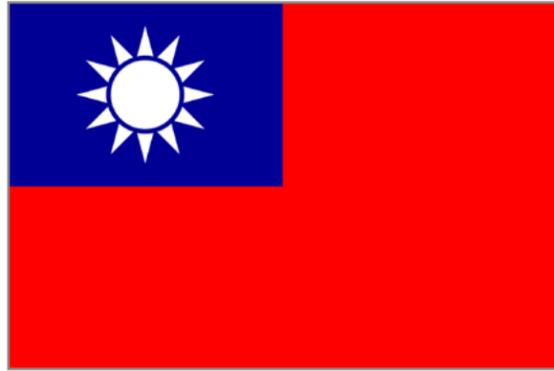
Source: Euromonitor International, 2020

Figure 90: Products exported to Chile

Export Category	2018	2019	2020*
Dairy products	\$1,551,805	\$4,901,667	\$0
Live trees, plants	\$23,718	\$11,477	\$0
Edible vegetables	\$0	\$0	\$0
Coffee, tea, spices	\$12,974	\$3,642	\$0
Oil seed	\$8,370	\$0	\$0
Fats, animal, vegetables	\$0	\$0	\$0
Sugars	\$0	\$10,080	\$0
Cocoa & cocoa prepared	\$0	\$0	\$0
Cereal, flour, starch	\$3,411	\$8,437	\$10,206
Misc. edible preps	\$125,606	\$0	\$3,749
Beverages, vinegar	\$60,410	\$0	\$0
Residues, wastes	\$26,406	\$7,841	\$0
Tobacco	\$0	\$7,104	\$0

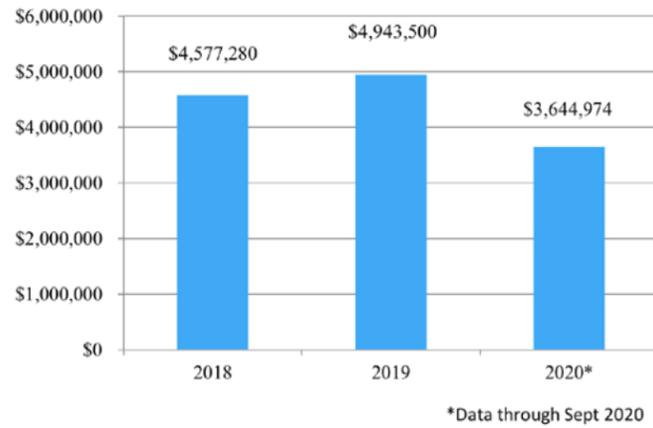
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

TAIWAN



- Nevada exported \$4.5 million in food and agriculture products to Taiwan in 2018.
- In 2019, exports from Nevada to Taiwan increased to \$4.9 million.³¹

Figure 91: Nevada's total agriculture exports to Taiwan



Source: Euromonitor International, 2020

Figure 92: Products exported to Taiwan

Export Category	2018	2019	2020*
Meat, edible offal	\$29,900	\$0	\$0
Dairy products	\$153,516	\$72,484	\$0
Animal products, nesoi	\$4,500	\$0	\$3,000
Edible vegetables	\$75,799	\$20,945	\$45,900
Coffee, tea, spices	\$1,394,789	\$1,116,823	\$396,252
Cereals	\$0	\$50,344	\$0
Oil seed	\$226,079	\$323,171	\$167,730
Cocoa & cocoa prepared	\$3,197	\$0	\$39,669
Cereal, flour, starch	\$50,053	\$0	\$7,682
Vegetables, fruit, prepared	\$1,807,865	\$2,888,144	\$2,798,288
Misc. edible preps	\$377,228	\$228,438	\$177,477
Beverages, vinegar	\$347,014	\$234,461	\$8,976
Residues, wastes	\$107,340	\$8,690	\$0

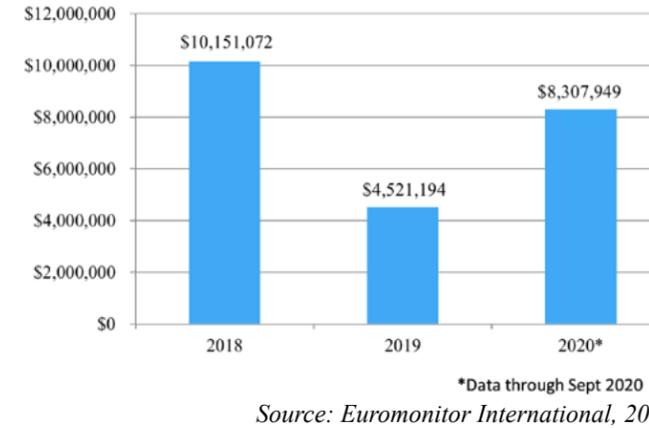
*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

INDONESIA



- Nevada exported \$10.1 million in food and agriculture products to Indonesia in 2018.
- In 2019, exports from Nevada to Indonesia decreased to \$4.5 million.³²

Figure 93: Nevada's total agriculture exports to Indonesia



Source: Euromonitor International, 2020

Figure 94: Products exported to Taiwan

Export Category	2018	2019	2020*
Dairy products	\$7,136,717	\$3,645,538	\$8,057,929
Edible vegetables	\$29,571	\$22,329	\$0
Edible fruit, nuts	\$0	\$47,727	\$0
Coffee, tea, spices	\$38,236	\$21,227	\$36,865
Oil seed	\$38,624	\$207,978	\$0
Fats, animal, vegetables	\$33,159	\$65,627	\$65,629
Misc. edible preps	\$2,791,688	\$433,321	\$147,526
Beverages, vinegar	\$83,077	\$77,447	\$0

*Note: 2020 date as of September 2020. Data reported in USD.
Source: Euromonitor International, 2020

NEVADA FOOD AND AGRICULTURE AT A GLANCE



CARSON CITY

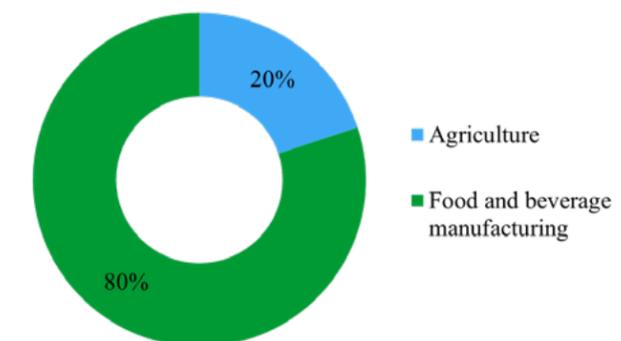
OVERVIEW OF NEVADA'S FOOD AND AGRICULTURE ECONOMY BY COUNTY



Economic output of the food and agriculture sector in Carson City:

- Carson City had a total economic output of **\$84.1 million** in 2018.
- Carson City had a total economic output of **\$83.4 million** in 2020.
- In total, the food and agriculture sector represents **1.42%** of Carson City's total economic output of \$5.9 billion.

CARSON CITY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

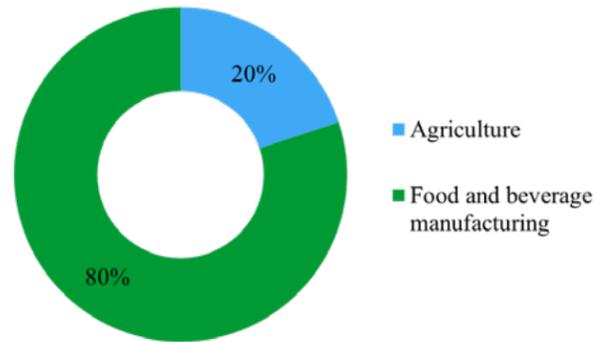
THE FOOD AND AGRICULTURE SECTOR IN CARSON CITY

Economic output of the food and agriculture sector:

- Carson City had a total economic output of \$84.1 million in 2018.
- In 2020, the total economic output decreased to \$83.4 million due to trade disputes.
- In total, the food and agriculture sector represents 1.42% of Carson City's total economic output of \$5.9 billion.³³

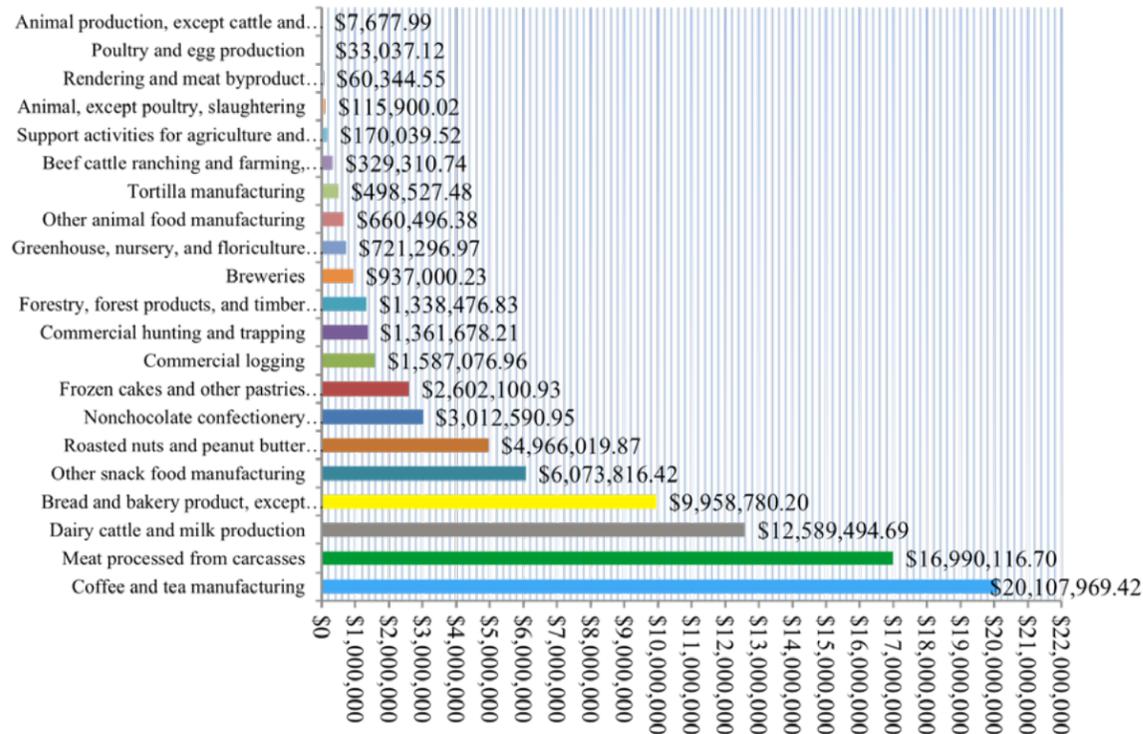
The economic output of the food and agriculture sector in Carson City in 2018 was comprised of \$18.1 million generated from agriculture (farming, ranching and agriculture support) and \$65.9 million generated from food and beverage manufacturers. In 2020, this shifted to \$16.6 million, or 20%, in economic output from agriculture and \$66.8 million, or 80% from manufacturing as seen in Figure 95.

Figure 95: Carson City food & agriculture sector economic output in 2020



Source: Implan Group, LLC. Implan (2020)

Figure 96: Carson City economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

³³ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Carson City by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 97, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.29. This means that for every dollar of production this business produces, there will be \$0.29 in additional regional economic activity from business to business transactions.

Figure 97: Carson City output multipliers by industry

Industry	Direct Multiplier
Greenhouse, nursery and floriculture	1.21
Beef cattle ranching and farming, including feedlots, dual purpose	1.29
Dairy cattle and milk production	1.31
Poultry and egg production	1.21
Animal production, except cattle, poultry, and eggs	1.16
Forestry, forest products and timber	1.02
Commercial logging	1.11
Commercial hunting & trapping	1.35
Support activities for agriculture	1.23
Other animal food manufacturing	1.13
Non-chocolate confectionery manufacturing	1.26
Frozen cakes and other pastry manufacturing	1.11
Animal, except poultry, slaughtering	1.21
Meat processed from carcasses	1.18
Rendering and meat byproduct processing	1.31
Bread and bakery product, except frozen, manufacturing	1.22
Tortilla manufacturing	1.25
Roasted nuts and peanut butter manufacturing	1.18
Other snack food manufacturing	1.15
Coffee and tea manufacturing	1.16
Breweries	1.27

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 365.08 total jobs in 2018
- 358.66 total jobs in 2020 (2nd fiscal quarter modeling)
- 0.94% of Carson City's total employment (38,847 jobs in 2018)³⁴

Agriculture Industry (2018):

- 66.20 agriculture jobs with employee compensation totaling \$3.2 million.*
- \$21.05 was the average hourly wage in 2018.³⁵

Food and beverage manufacturing (2018):

- 181.37 jobs with employee compensation totaling \$9.6 million.*
- \$22.45 was the average hourly wage in 2018.³⁶

*Not reflective of total employment. Granular level data not available for specific job categories.

³⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

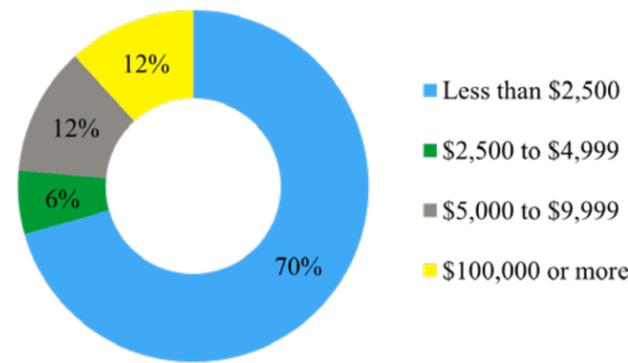
³⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

³⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 17 farms in Carson City comprising 966 acres. The average farm size was 57 acres, while the median farm size was 15 acres. Between 2012 and 2017, the number of farms in Carson City decreased by four. This drop in farms led USDA NASS to omit a wide array of production and revenue data due to proprietary and confidentiality concerns. Given this omission, total cash receipts for farms in Carson City were not reported in 2017. The total market value, or products sold, in 2012 for operations in Carson City was \$5.8 million. Given the distribution of revenue, it is projected that the total market value of products remained near \$5.8 million in 2017.^{37 38}

Figure 98: Number of farms by value of annual sales



Source: USDA NASS, 2020

Farms in Carson City primarily focus on animal and hay production. These operations include 6 cow-calf operations that produced 478 cattle in 2017. The total number of cattle sold in 2017 was 133. In addition to this production, several operations and crops for Carson City have been omitted from datasets by USDA NASS due to confidentiality concerns.^{39 40}

Carson City has a wide range of animal production, including livestock and animal products, which can be seen in Figure 99.

Figure 99: Carson City livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf*	6	478
Sheep and lambs	7	233
Chicken for meat	4	36

*Note: Data omitted by USDA, NASS not included, such as: Beef operations: 5, Dairy cattle operations: 2.

Source: 2017 Census of Agriculture – County Data, Nevada

Carson City is additionally a producer of crops as can be seen in Figure 100.

Figure 100: Carson City crop production in 2017

Industry	Farms	Acres of production
Hay	7	367

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

³⁷ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

³⁸ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

³⁹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁴⁰ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

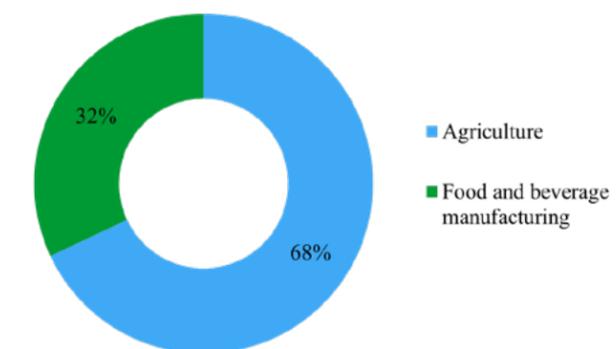
NEVADA FOOD AND AGRICULTURE AT A GLANCE

CHURCHILL COUNTY

Economic output of the food and agriculture sector in Churchill County:

- Churchill County had a total economic output of **\$168.3 million** in 2018.
- Churchill County had a total economic output of **\$150.9 million** in 2020.
- In total, the food and agriculture sector represents **7.65%** of Churchill County's total economic output of \$2.2 billion.

CHURCHILL COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

THE FOOD AND AGRICULTURE SECTOR IN CHURCHILL COUNTY

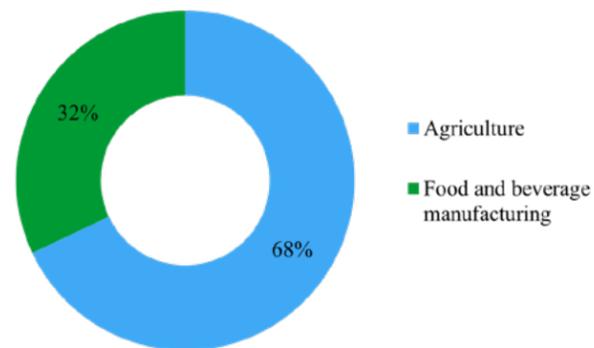
Economic output of the food and agriculture sector:

- The Churchill County agriculture sector had an economic output of \$168.3 million in 2018.
- Churchill County had an economic output of \$150.9 million in 2020.
- In total, the food and agriculture sector represents 7.65% of Churchill County’s total economic output of \$2.2 billion.⁴¹

Decreases from 2018 to 2020 were attributable to trade disputes compounded by COVID-19 closures and supply chain complications. One area of trade that impacted Churchill County particularly hard has been a decline in Nevada’s powdered milk sales to China.

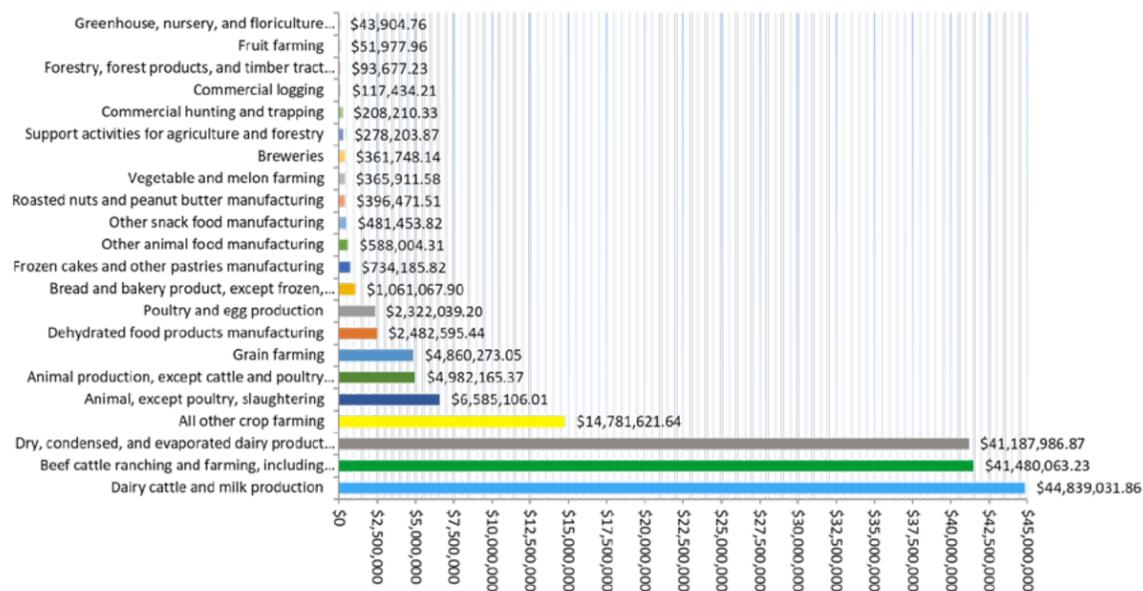
In 2018, Nevada exported \$23.3 million in powdered dairy products to China. In 2019, these exports to China shrank by \$23.1 million to \$200,000 and have not rebounded in 2020.⁴² Fortunately, a significant portion of this loss has been minimized by increased exports to other trade partners; however, this decline in purchases poses ongoing challenges, especially for powdered milk producers. In addition to this loss, Churchill County has high exposure to declines in raw agriculture commodity prices. According to the Census of Agriculture, Churchill agriculture commodity sales totaled \$90.7 million in 2017 (up from \$89.9 million in 2012).⁴³ However, with the onset of trade disputes and declines attributable to COVID-19, commodity values have declined significantly. In Churchill County, this has caused a drop of \$19.8 million in economic output from agriculture. Food manufacturing hasn’t been impacted as severely.

Figure 101: Churchill County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 102: Churchill County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

41 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

42 Euromonitor International, Passport (2020)

43 USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Churchill County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 103, \$1.00 of production by a vegetable and melon farming operation will have an economic multiplier of 1.20. This means that for every dollar of production, there will be \$0.20 in additional regional economic activity from business to business transactions. This does not include the additional economic impact created from induced impacts like household spending.⁴⁴ It should also be noted that some agriculture industries are missing from these economic multipliers, likely due to business classification and licensure.

Figure 103: Churchill County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.26
Vegetable and melon farming	1.20
Fruit farming	1.16
Greenhouse, nursery and floriculture	1.14
All other crop farming	1.18
Beef cattle ranching and farming, including feedlots, dual purpose	1.43
Dairy cattle and milk production	1.28
Poultry and egg production	1.17
Animal production, except cattle, poultry and eggs.	1.18
Forestry, forest products and timber tract production	1.04
Commercial logging	1.09
Commercial hunting and trapping	1.21
Support activities for agriculture and forestry	1.23
Other animal food manufacturing	1.17
Dehydrated food products manufacturing	1.08
Dry, condensed and evaporated dairy product manufacturing	1.32
Frozen cakes and other pastries manufacturing	1.07
Animal, except poultry, slaughtering	1.65
Bread and bakery product, except frozen, manufacturing	1.16
Roasted nuts and peanut butter manufacturing	1.13
Other snack food manufacturing	1.20
Breweries	1.20

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 923.22 total jobs in 2018
- 852.94 total jobs in 2020
- 7.4% of Churchill County’s total employment (12,481 jobs in 2018)⁴⁵

Agriculture Industry (2018):

- 220.10 agriculture jobs with employee compensation totaling \$12 million*
- \$24.36 was the average hourly wage in 2018.⁴⁶

Food and beverage manufacturing (2018):

- 58.15 jobs with employee compensation totaling \$3.92 million*
- \$27.64 was the average hourly wage in 2018.⁴⁷

*Not reflective of total employment. Granular level data not available for specific job categories.

44 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

45 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

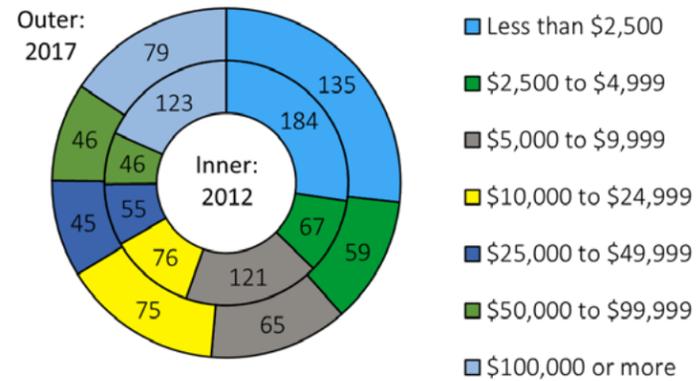
46 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

47 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 504 farms in Churchill County comprising 249,832 acres. The average farm size was 496 acres, while the median farm size was 30 acres. Between 2012 and 2017, the number of farms reported in the Census of Agriculture dropped from 672 to 504 farms. Reported farm acreage increased from 197,232 acres in 2012 to 249,832 acres in 2017. The total market value, or products sold, in 2017 for farms in Churchill County was \$90.7 million. This was comprised of \$70.8 million from animals and animal products and \$19.8 million from crops.^{48 49}

Figure 104: Number of farms by value of annual sales



Source: USDA, NASS 2020

Churchill County has a wide range of animal production including livestock and animal products as can be seen in Figure 105.

Churchill County is also a significant producer of crops as can be seen in Figure 106.

Figure 105: Churchill County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	210	60,209
Beef cattle	154	17,051
Dairy cattle	17	13,171
Hogs and pigs	11	111
Sheep and lambs	30	4,816
Layers (egg production)	148	3,770

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 106: Churchill County crop production in 2017

Industry	Farms	Production
Corn for silage	48	110,673 tons
Hay and grass silage (Alfalfa=70%)	326	136,351 tons (dry)
Wheat for grain	12	38,817 bushels
Vegetables, Potatoes, and Melons	7	28 acres
All non-citrus fruit	14	20 acres

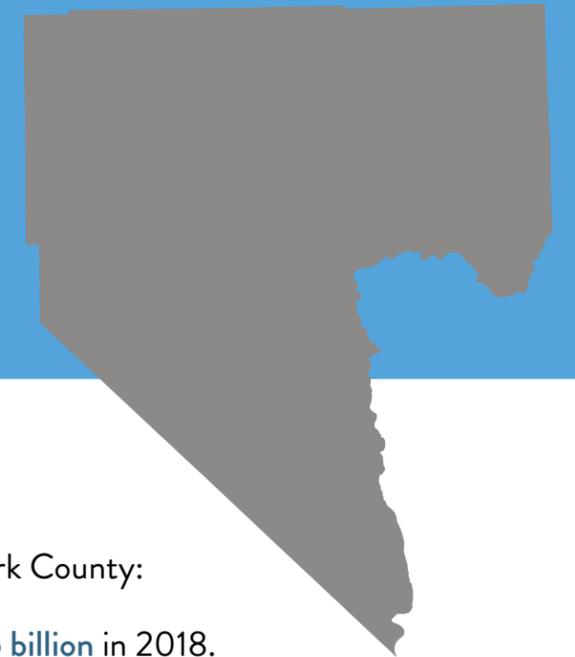
*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

⁴⁸ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁴⁹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

NEVADA FOOD AND AGRICULTURE AT A GLANCE

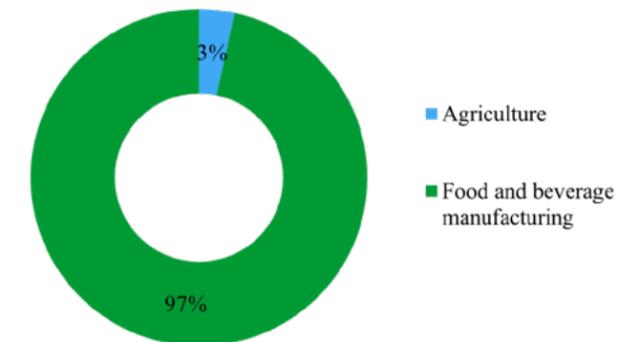
CLARK COUNTY



Economic output of the food and agriculture sector in Clark County:

- Clark County had a total economic output of **\$2.45 billion** in 2018.
- Clark County had a total economic output of **\$2.47 billion** in 2020.
- In total, the food and agriculture sector represents **1.23%** of Clark County's total economic output of \$198.9 billion.

CLARK COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

THE FOOD AND AGRICULTURE SECTOR IN CLARK COUNTY

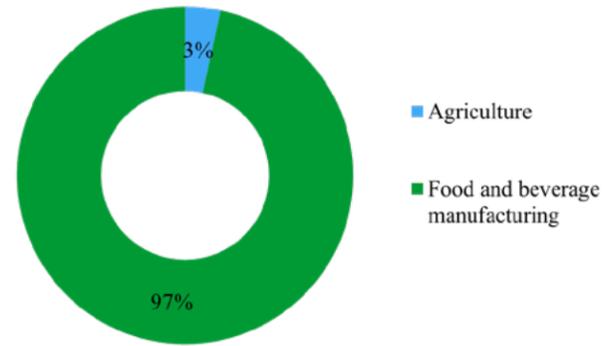
Economic output of the food and agriculture sector:

- \$2.45 billion was the total economic output of the food and agriculture sector in 2018.
- \$2.47 billion is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 1.23% of Clark County's total economic output of \$198.9 billion.⁵⁰

Clark County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$82.6 million in 2018. In 2020, specific areas of the agriculture economy contracted due to the impacts of COVID-19 and trade disputes. While this contraction was significant for many industry areas, agriculture support and natural resource harvesting did not experience this contraction. The agriculture sector grew to \$84 million in 2020. Just as agriculture continues to be a positive contributor to Clark County's regional economy, the food and beverage manufacturing sector in Clark County continues to grow. In 2018, food manufacturing had a total economic output of \$2.37 billion and grew to \$2.39 billion in 2020.

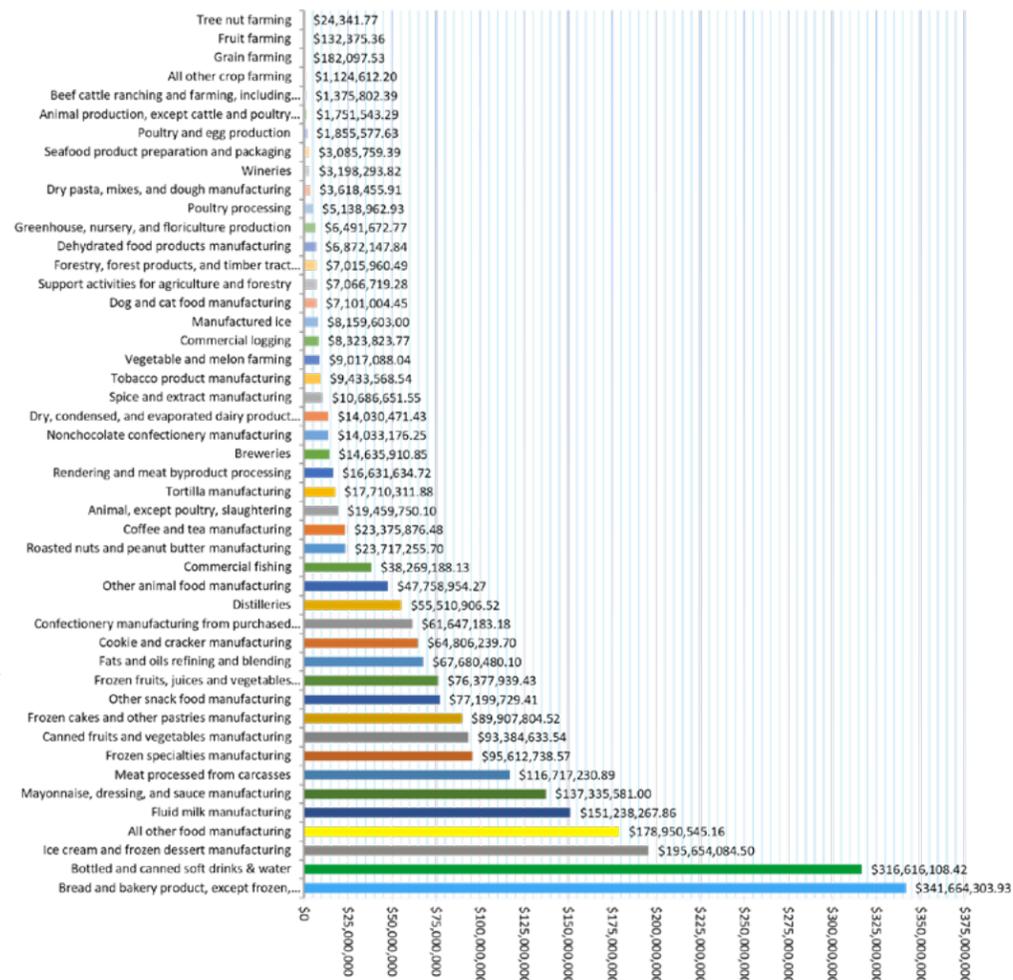
50 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

Figure 107: Clark County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 108: Clark County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Clark County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 109 \$1.00 of production by a brewery is going to have an economic multiplier of 1.32. This means that for every dollar of production this business produces, there will be \$0.32 in additional regional economic activity from business to business transactions.

Figure 109: Clark County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.60
Vegetable and melon farming	1.53
Fruit farming	1.46
Tree nut farming	1.21
Greenhouse, nursery and floriculture	1.35
All other crop farming	1.46
Beef cattle ranching and farming, including feedlots, dual purpose	1.44
Poultry and egg production	1.40
Animal production, except cattle, poultry and eggs	1.28
Forestry, forest products and timber tract production	1.12
Commercial logging	1.17
Commercial fishing	1.17
Support activities for agriculture and forestry	1.16
Dog and cat food manufacturing	1.26
Other animal food manufacturing	1.23
Fats and oils refining and blending	1.25
Non-chocolate confectionery manufacturing	1.41
Confectionery manufacturing from purchased chocolate	1.36
Frozen fruits, juices and vegetables manufacturing	1.41
Frozen specialties manufacturing	1.21
Canned fruits and vegetables manufacturing	1.28
Dehydrated food products manufacturing	1.23
Dry, condensed and evaporated dairy product manufacturing	1.28
Fluid milk manufacturing	1.28
Ice cream and frozen dessert manufacturing	1.26
Frozen cakes and other pastries manufacturing	1.21
Poultry processing	1.19
Animal, except poultry, slaughtering	1.27
Meat processed from carcasses	1.24
Rendering and meat byproduct processing	1.49
Seafood product preparation and packaging	1.42
Bread and bakery product, except frozen, manufacturing	1.32
Cookie and cracker manufacturing	1.33
Dry pasta, mixes, and dough manufacturing	1.39
Tortilla manufacturing	1.35
Roasted nuts and peanut butter manufacturing	1.28
Other snack food manufacturing	1.30
Coffee and tea manufacturing	1.39
Mayonnaise, dressing and sauce manufacturing	1.23
Spice and extract manufacturing	1.36
All other food manufacturing	1.37
Bottled and canned soft drinks & water	1.23
Manufactured ice	1.48
Breweries	1.32
Wineries	1.43
Distilleries	1.28
Tobacco product manufacturing	1.26

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 8,304.39 total jobs in 2018
- 8,367.51 total jobs in 2020 (2nd fiscal quarter modeling)
- 0.63% of Clark County's total employment (1,314,954 jobs in 2018) ⁵¹

Agriculture Industry (2018):

- 487.53 agriculture jobs with employee compensation totaling \$26.8 million*
- \$25.24 was the average hourly wage in 2018. ⁵²

Food and beverage manufacturing (2018):

- 6,842.20 jobs with employee compensation totaling \$336.5 million*
- \$21.07 was the average hourly wage in 2018. ⁵³

*Not reflective of total employment. Granular level data not available for specific job categories.

AGRICULTURE FARM DATA

In 2017, there were 179 farms in Clark County comprising an estimated 13,000 acres. The average median farm size was 5 acres. Between 2012 and 2017, the number of farms reported in Clark County dropped from 252 to 179 farms. Total reported farm acreage in 2012 was 15,620 acres, with the average farm being 62 acres. The total market value, or products sold, in 2017 for farms in Clark County was \$12.6 million. This was comprised of \$1.2 million from animals and animal product and \$11.4 million from crops.

Clark County has a wide range of animal production including livestock and animal products as can be seen in Figure 111.

Clark County also produces several crops. In 2012, there were 242 acres of vegetables, melons and potatoes harvested. Unfortunately, in 2017 the total harvest numbers were omitted as they dipped below thresholds for confidentiality and were omitted from data by the USDA NASS. It should additionally be noted that there are 10 farms producing other fruit and nuts. This production was not reported by NASS. Reported crops can be seen in Figure 112.

Figure 111: Clark County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	75	1,997
Beef cattle	49	784
Dairy cattle	5	8
Sheep and lambs	10	492
Layers (egg production)	45	1,697

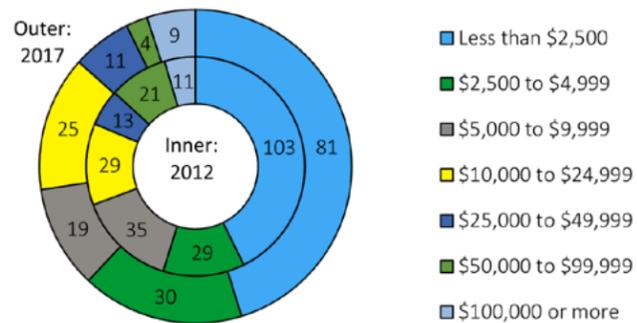
*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

⁵¹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁵² Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁵³ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

Figure 110: Number of farms by value of annual sales



Source: USDA, NASS 2020

Figure 112: Clark County crop production in 2017

Industry	Farms	Production
Corn for silage	3	938 tons
Greenhouse tomatoes	5	8,449 sq ft.
Hay and grass silage (Alfalfa=70%)	29	8,756 tons, dry

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

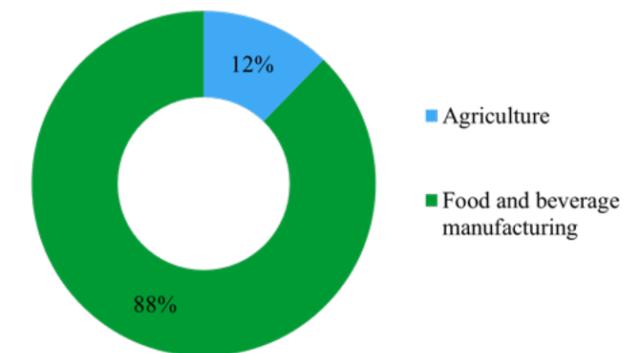
NEVADA FOOD AND AGRICULTURE AT A GLANCE

DOUGLAS COUNTY

Economic output of the food and agriculture sector in Douglas County:

- Douglas County had a total economic output of **\$201.62 million** in 2018.
- Douglas County had a total economic output of **\$201.63 million** in 2020.
- In total, the food and agriculture sector represents **4.24%** of Douglas County's total economic output of \$4.75 billion.

DOUGLAS COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

THE FOOD AND AGRICULTURE SECTOR IN DOUGLAS COUNTY

Economic output of the food and agriculture sector:

- \$201.62 million was the total economic output of the food and agriculture sector in 2018.
- \$201.63 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 4.24% of Douglas County's total economic output of \$4.75 billion.⁵⁴

Douglas County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$24.7 million in 2018. In 2020, the economic output of agriculture declined to \$21.4 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Douglas County, the cattle industry's economic output declined by \$2 million, while crops saw a loss of \$1.1 million. In 2018, food and beverage manufacturing had a total economic output of \$176.9 million and grew to \$180.2 million in 2020.⁵⁵ Almost all of the growth observed in Douglas County's food and beverage manufacturing

sector was generated by coffee roasting. During this period, projected output increased by \$4.4 million. It is probable that sale declines of coffee seen in Q2 and Q3 of 2020 may hamper this growth trend.⁵⁶ While Nevada's coffee exports have remained steady, declines observed in March and June of 2020 suggest some residual instability in the market from COVID-19.⁵⁷

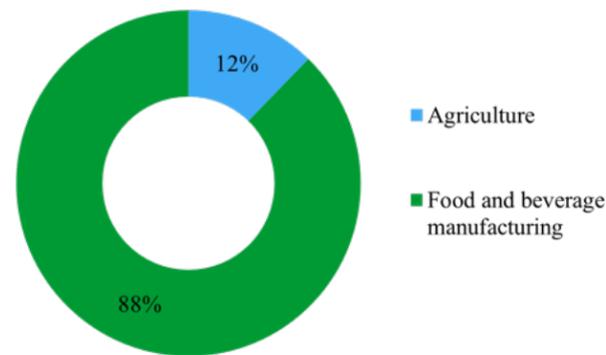
⁵⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁵⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁵⁶ Starbucks, Starbucks Reports Q3 Fiscal 2020 Results, July, 2020 <https://investor.starbucks.com/press-releases/financial-releases/press-release-details/2020/Starbucks-Reports-Q3-Fiscal-2020-Results/default.aspx>

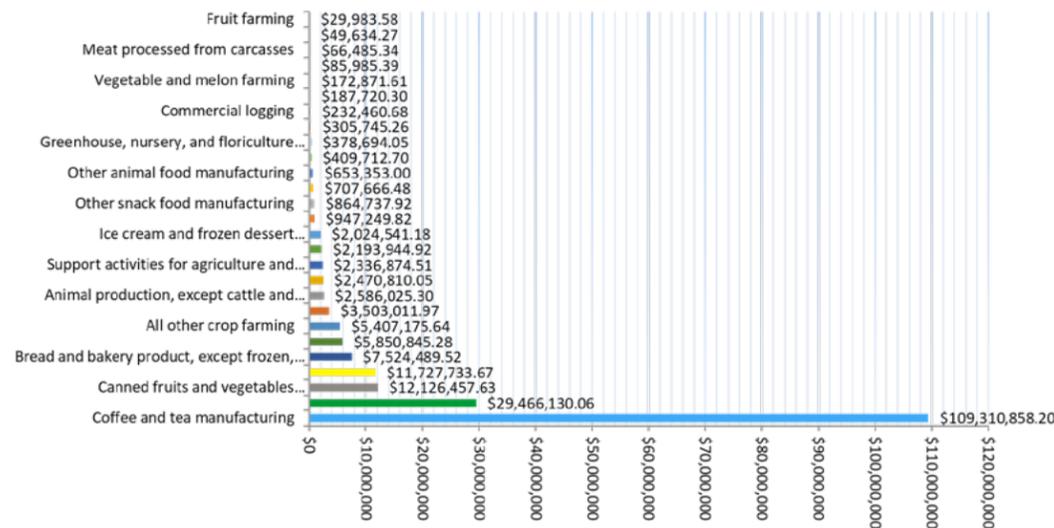
⁵⁷ US Census, USA Trade, 2020

Figure 113: Douglas County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 114: Douglas County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Douglas County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 115, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.66. This means that for every dollar of production this business produces, there will be over \$0.66 in additional regional economic activity from business to business transactions.

Figure 115: Douglas County output multipliers by industry

Industry	Direct Multiplier
Grain farming	1.55
Vegetable and melon farming	1.47
Fruit farming	1.45
Greenhouse, nursery and floriculture	1.28
All other crop farming	1.41
Beef cattle ranching and farming, including feedlots, dual purpose	1.66
Poultry and egg production	1.24
Animal production, except cattle, poultry and eggs.	1.31
Forestry, forest products and timber tract production	1.17
Commercial logging	1.21
Commercial hunting and trapping	1.31
Support activities for agriculture and forestry	1.19
Confectionery manufacturing from purchased chocolate	1.19
Frozen fruits, juices and vegetables manufacturing	1.20
Canned fruits and vegetables manufacturing	1.12
Ice cream and frozen dessert manufacturing	1.14
Frozen cakes and other pastries manufacturing	1.10
Animal, except poultry, slaughtering	1.82
Meat processed from carcasses	1.31
Rendering and meat byproduct processing	1.13
Bread and bakery product, except frozen, manufacturing	1.18
Roasted nuts and peanut butter manufacturing	1.15
Other snack food manufacturing	1.18
Coffee and tea manufacturing	1.17
Breweries	1.17
Distilleries	1.13

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 954.66 total jobs in 2018
- 921.29 total jobs in 2020 (2nd fiscal quarter modeling)
- 3.1% of Douglas County's total employment (30,766 jobs in 2018)⁵⁸

Agriculture Industry (2018):

- 167.89 agriculture jobs with employee compensation totaling \$7.2 million*
- \$19.68 is the average hourly wage in 2018.⁵⁹

Food and beverage manufacturing (2018):

- 329.21 jobs with employee compensation totaling \$20.1 million*
- \$25.23 is the average hourly wage in 2018.⁶⁰

*Not reflective of total employment. Granular level data not available for specific job categories.

⁵⁸ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

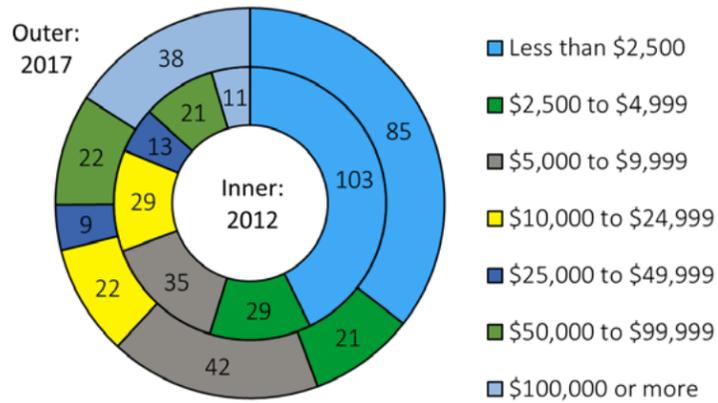
⁵⁹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁶⁰ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 239 farms in Douglas County comprising an estimated 118,320 acres.⁶¹ The average farm size was 495 acres, while the median farm size was 25 acres. Between 2012 and 2017, the number of farms reported in Douglas County dropped from 255 to 239 farms.⁶² Total reported farm acreage in 2012 was 100,944 acres, with the average farm being 396 acres. The total market value, or products sold, in 2017 for farms in Douglas County was \$23.5 million. This was comprised of \$17.5 million from animals and animal product and \$6 million from crops.^{63 64}

Figure 116: Number of farms by value of annual sales



Source: USDA, NASS 2020

Douglas County is one of Nevada's oldest agriculture regions. Douglas County historically has had a strong livestock and animal product industry with significant production of cattle and other livestock. Production numbers from 2017 can be seen in Figure 117.

Douglas County also produces several crops as can be seen in Figure 118.

Figure 117: Douglas County livestock production in 2017

Industry	Farms	Number of animals
Cattle and calf	118	17,023
Beef cattle	103	11,232
Sheep and lambs	16	298
Layers (egg production)	26	418

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

Figure 118: Douglas County crop production in 2017

Industry	Farms	Production
Hay- all hay including alfalfa	94	57,766 tons
Forage hay and grass silage	111	59,096 tons
Corn silage	3	51 tons

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

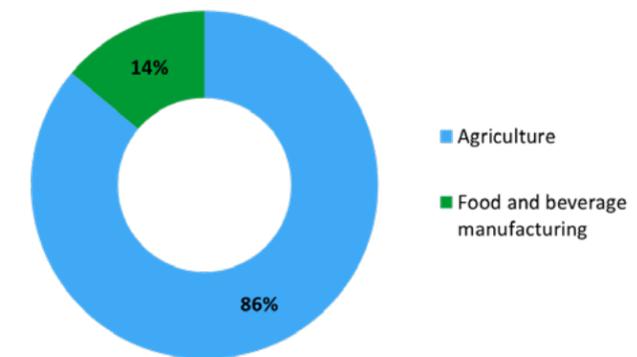
NEVADA FOOD AND AGRICULTURE AT A GLANCE

ELKO COUNTY

Economic output of the food and agriculture sector in Elko County:

- Elko County had a total economic output of **\$150.8 million** in 2018.
- Elko County had a total economic output of **\$133.8 million** in 2020.
- In total, the food and agriculture sector represents **3.02%** of Elko County's total economic output of \$5 billion.

ELKO COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

⁶¹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁶² USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

⁶³ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁶⁴ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

THE FOOD AND AGRICULTURE SECTOR IN ELKO COUNTY

Economic output of the food and agriculture sector:

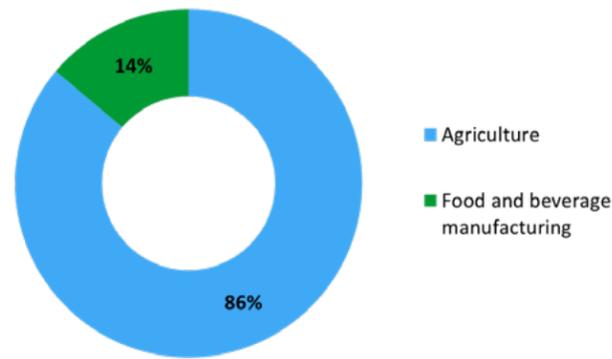
- \$150.8 million was the total economic output of the food and agriculture sector in 2018.
- \$133.8 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 3.02% of Elko County's total economic output of \$5 billion.⁶⁵

Elko County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$129.8 million in 2018. In 2020, the economic output of agriculture declined to \$113.3 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Elko County, the beef cattle industry's economic output declined by \$15 million. Additionally, dairy cattle economic output declined by \$2.2 million, while crops saw a loss of \$2.1 million. The combined impacts of 2019 and 2020 will likely put serious strain on Elko County's agriculture operations moving into 2021. In 2018,

food and beverage manufacturing had a total economic output of \$20.9 million and contracted to \$20.5 million in 2020.⁶⁶ The declines observed in Elko County's food manufacturing sector were mostly attributable to administrative closures as a result of COVID-19. It is likely that the manufacturing industry will recover to normal levels going into 2021.

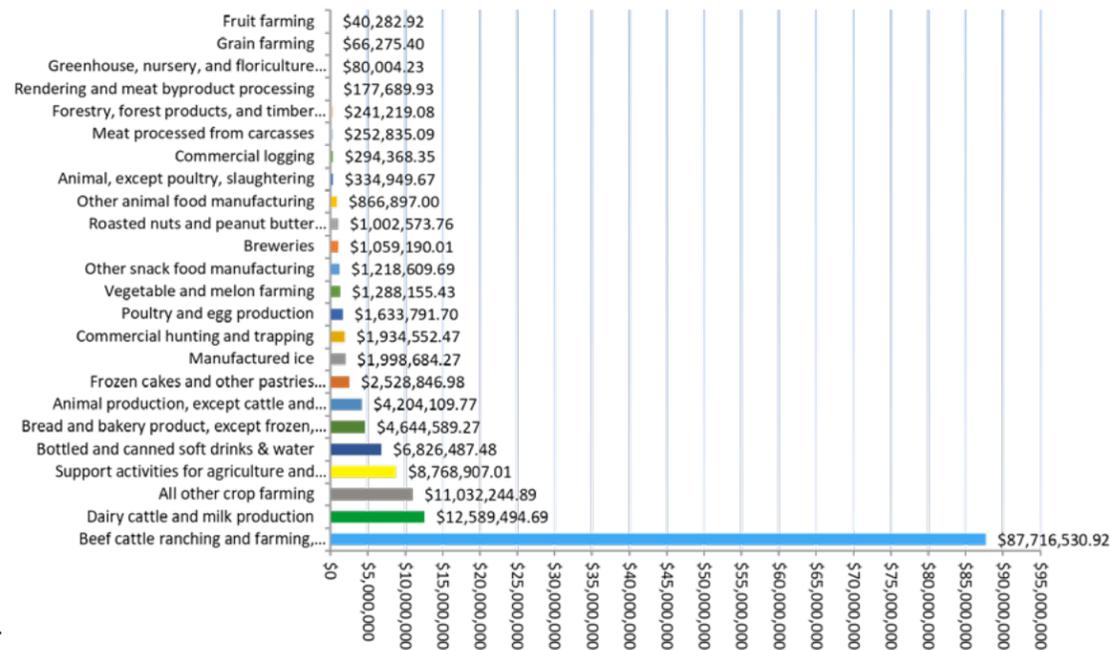
⁶⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
⁶⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

Figure 119: Elko County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 120: Elko County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Elko County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 121, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.23. This means that for every dollar of production this business produces, there will be over \$0.23 in additional regional economic activity from business to business transactions.

Figure 121: Elko County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.39
Vegetable and melon farming	1.35
Fruit farming	1.38
Greenhouse, nursery and floriculture	1.22
All other crop farming	1.31
Beef cattle ranching and farming, including feedlots, dual purpose	1.23
Dairy cattle and milk production	1.26
Poultry and egg production	1.17
Animal production, except cattle and poultry and eggs	1.15
Forestry, forest products and timber tract production	1.18
Commercial logging	1.16
Commercial fishing	1.16
Commercial hunting and trapping	1.12
Support activities for agriculture and forestry	1.45
Other animal food manufacturing	1.11
Animal, except poultry, slaughtering	1.12
Meat processed from carcasses	1.11
Rendering and meat byproduct processing	1.17
Bread and bakery product, except frozen, manufacturing	1.18
Roasted nuts and peanut butter manufacturing	1.16
Other snack food manufacturing	1.20
Bottled and canned soft drinks & water	1.14
Manufactured ice	1.29
Breweries	1.18

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 968.46 total jobs in 2018
- 875.28 total jobs in 2020 (projected)
- 3.5% of Douglas County's total employment of 27,602 jobs in 2018⁶⁷

Agriculture Industry (2018):

- 352.46 agriculture jobs with employee compensation totaling \$19.6 million*
- \$25.27 was the average hourly wage in 2018.⁶⁸

Food and beverage manufacturing (2018):

- 90.96 jobs with employee compensation totaling \$3.7 million*
- \$18.03 was the average hourly wage in 2018.⁶⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

⁶⁷ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

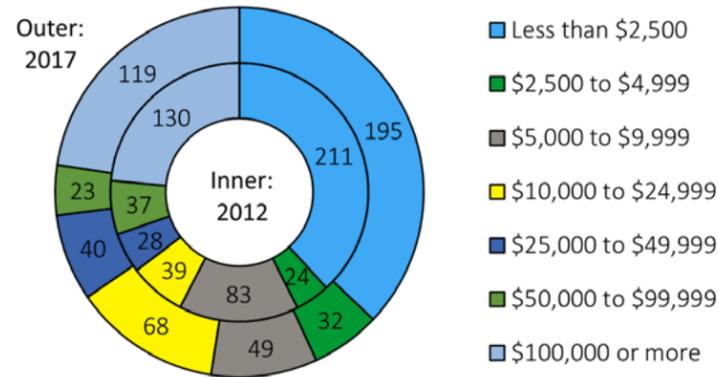
⁶⁸ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁶⁹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 526 farms in Elko County comprising 2,180,039 acres.⁷⁰ The average farm size was 4,145 acres, while the median farm size was 100 acres. Between 2012 and 2017, the number of farms reported in the Elko County dropped from 552 to 526 farms.⁷¹ Total reported farm acreage in 2012 was 2,126,980 acres, with the average farm being 3,853 acres. The total market value, or products sold in 2017 for farms in Elko County was \$72.2 million. This was comprised of \$61 million from animals and animal products and \$11 million from crops.^{72 73}

Figure 122: Number of farms by value of annual sales



Source: USDA, NASS 2020

Elko County historically has had a strong livestock and animal product industry with significant production of cattle, sheep and other livestock. Production from 2017 can be seen in Figure 123.

Elko County additionally produces several crops as can be seen in Figure 124.

Figure 123: Elko County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	327	127,322
Beef cattle	286	76,103
Dairy cattle	10	42
Hogs and pigs	10	96
Sheep and lambs	62	17,881
Layers (egg production)	68	1,132
Broilers and other meat chickens	3	150

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

Figure 124: Elko County crop production in 2017

Industry	Farms	Production
Hay- all hay including alfalfa	190	216,084 tons, dry
Forage hay and grass silage	206	226,667 tons, dry
Alfalfa hay	76	61,945 tons, dry

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

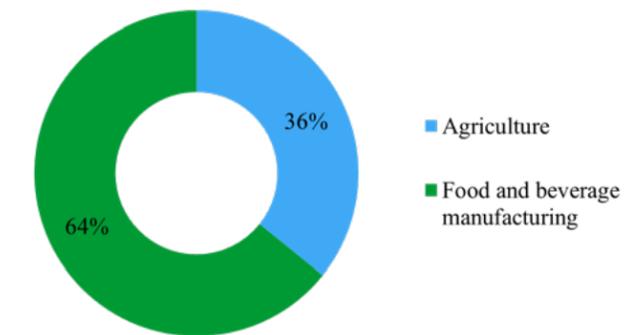
NEVADA FOOD AND AGRICULTURE AT A GLANCE

ESMERALDA COUNTY

Economic output of the food and agriculture sector in Esmeralda County:

- Esmeralda County had a total economic output of **\$12.92 million** in 2018.
- Esmeralda County had a total economic output of **\$12.98 million** in 2020.
- In total, the food and agriculture sector represents **16.68%** of Esmeralda County's total economic output of \$77.4 million.

ESMERALDA COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

⁷⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁷¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

⁷² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁷³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

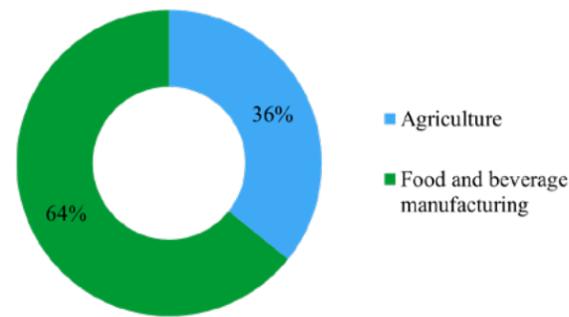
THE FOOD AND AGRICULTURE SECTOR IN ESMERALDA COUNTY

Economic output of the food and agriculture sector:

- \$12.92 million was the total economic output of the food and agriculture sector in 2018.
- \$12.98 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 16.68% of Esmeralda County's total economic output of \$77.4 million.⁷⁴

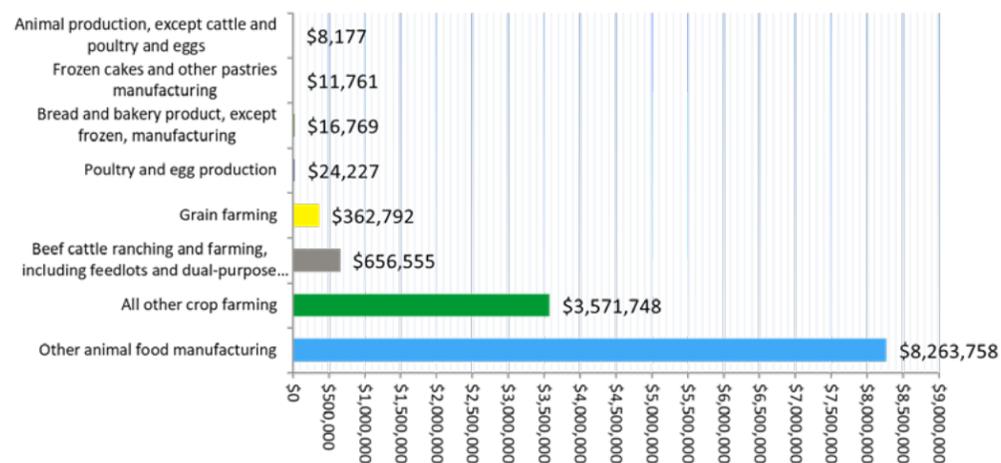
Esmeralda County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$4.6 million in 2018. In 2020, the economic output of agriculture declined to \$3.8 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities, like cattle and crops significantly. These falling prices have caused a \$700,000 decline in crop production and a \$116,000 decline in animal production. In 2018, food and beverage manufacturing had a total economic output of \$8.2 million and increased to \$9.1 million in 2020.⁷⁵ The growth observed between 2018 and 2020 was almost entirely fueled by the other animal food production category. This industry increased by \$877,000 between 2018 and 2020.

Figure 125: Esmeralda County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 126: Esmeralda County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Esmeralda County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 127, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.57. This means that for every dollar of production this business produces, there will be \$0.57 in additional regional economic activity from business to business transactions.⁷⁶

Figure 127: Esmeralda County output multiplier by industry

Industry	Direct Multiplier
All other crop farming	1.08
Beef cattle ranching and farming, including feedlots, dual purpose	1.57
Poultry and egg production	1.44
Animal production, except cattle, poultry, and eggs	1.23
Other animal food manufacturing	1.10
Frozen cakes and other pastries manufacturing	1.03
Bread and bakery product, except frozen, manufacturing	1.06

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 70.46 total jobs in 2018
- 65.70 total jobs in 2020 (projected)
- 15.02% of Esmeralda County's total employment of 469 jobs in 2018⁷⁷

Agriculture Industry (2018):

- 21.20 agriculture jobs with employee compensation totaling \$1.15million*
- \$24.92 was the average hourly wage in 2018.⁷⁸

Food and beverage manufacturing (2018):

- 5.69 jobs with employee compensation totaling \$3.7 million*
- \$30.22 was the average hourly wage in 2018.⁷⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

⁷⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁷⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁷⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁷⁷ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

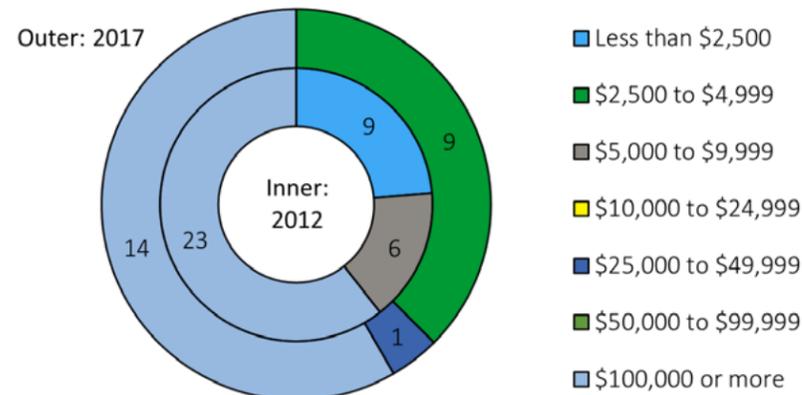
⁷⁸ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁷⁹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 24 farms in Esmeralda County comprising roughly 34,606 acres.⁸⁰ In 2017, there were 9 farms with 10-49 acres, 1 farm with 50-179 acres, 7 farms with 180-499 acres, 7 farms with more than 1,000. Between 2012 and 2017, the number of farms reported in the Esmeralda County dropped from 38 to 24 farms.⁸¹ This dropped Esmeralda County to a level of farms in which the USDA NASS omitted data to protect individual operation confidentiality. The total market value, or products sold, in 2017 for farms in Esmeralda County was \$11.9 million. This was comprised of \$498,000 from animals and animal products and \$11.5 million from crops.^{82 83}

Figure 128: Number of farms by value of annual sales



Source: USDA, NASS 2020

In 2017, Esmeralda County had a strong livestock and animal product industry. This industry has historically had significant production of cattle, sheep and other livestock. The 2017 production can be seen in Figure 129.

In 2017, Esmeralda County had 13,535 acres of harvested cropland. This harvested land includes the production numbers seen in Figure 130.

Figure 129: Esmeralda County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	14	953
Beef cattle	8	764
Layers (egg production)	1	omitted

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 130: Esmeralda County crop production in 2017

Industry	Farms	Production
All hay including alfalfa	15	68,925 tons, dry
Alfalfa hay	14	68,455 tons, dry
Other dry hay	3	470 tons, dry

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

⁸⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁸¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

⁸² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁸³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

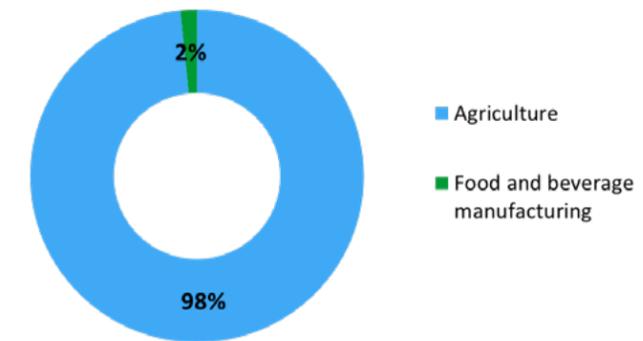
NEVADA FOOD AND AGRICULTURE AT A GLANCE

EUREKA COUNTY

Economic output of the food and agriculture sector in Eureka County:

- Eureka County had a total economic output of **\$45.3 million** in 2018.
- Eureka County had a total economic output of **\$37.9 million** in 2020.
- In total, the food and agriculture sector represents **2.04%** of Eureka County's total economic output of \$2.2 billion.

EUREKA COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

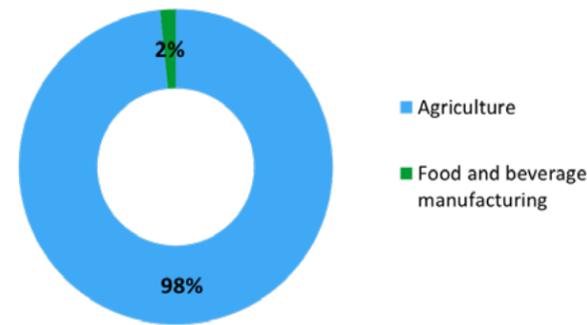
THE FOOD AND AGRICULTURE SECTOR IN EUREKA COUNTY

Economic output of the food and agriculture sector:

- \$45.3 million was the total economic output of the food and agriculture sector in 2018.
- \$37.9 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.04% of Eureka County's total economic output of \$2.2 billion.⁸⁴

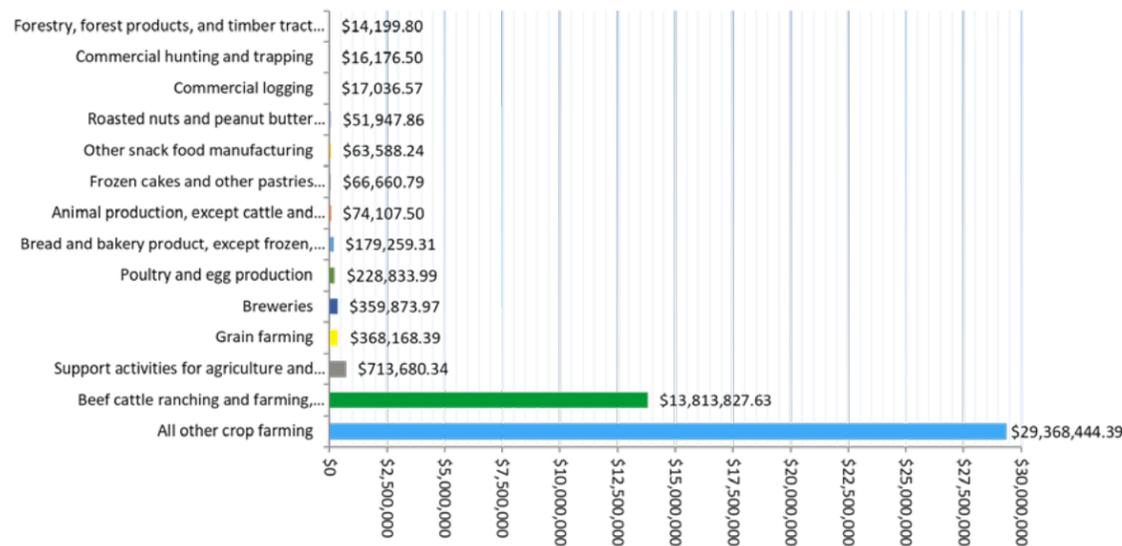
Eureka County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$44.6 million in 2018. In 2020, the economic output of agriculture declined to \$37.2 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Eureka County, the beef cattle industry's economic output declined by \$2.4 million. While the crop industry declined by \$5.1 million. In 2018, food and beverage manufacturing had a total economic output of \$721,000 and contracted to \$711,000 in 2020.⁸⁵

Figure 131: Eureka County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 132: Eureka County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

⁸⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁸⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Eureka County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 133, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.42. This means that for every dollar of production this business produces, there will be \$0.42 in additional regional economic activity from business to business transactions.⁸⁶

Figure 133: Eureka County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.12
All other crop farming	1.08
Beef cattle ranching and farming, including feedlots, dual purpose	1.42
Poultry and egg production	1.05
Animal production, except cattle and poultry and eggs	1.11
Forestry, forest products and timber tract production	1.03
Commercial logging	1.08
Commercial hunting and trapping	1.14
Support activities for agriculture and forestry	1.02
Frozen cakes and other pastries manufacturing	1.03
Bread and bakery product, except frozen, manufacturing	1.07
Roasted nuts and peanut butter manufacturing	1.12
Other snack food manufacturing	1.10
Breweries	1.11

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 217.23 total jobs in 2018
- 191.67 total jobs in 2020 (projected)
- 4.22% of Eureka County's total employment of 5,145 jobs in 2018⁸⁷

Agriculture Industry (2018):

- 113.85 agriculture jobs with employee compensation totaling \$19.6 million*
- \$17.70 was the average hourly wage in 2018.⁸⁸

Food and beverage manufacturing (2018):

- 4.11 jobs with employee compensation totaling \$56,000*
- \$12.39 was average hourly wage in 2018.⁸⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

⁸⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁸⁷ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

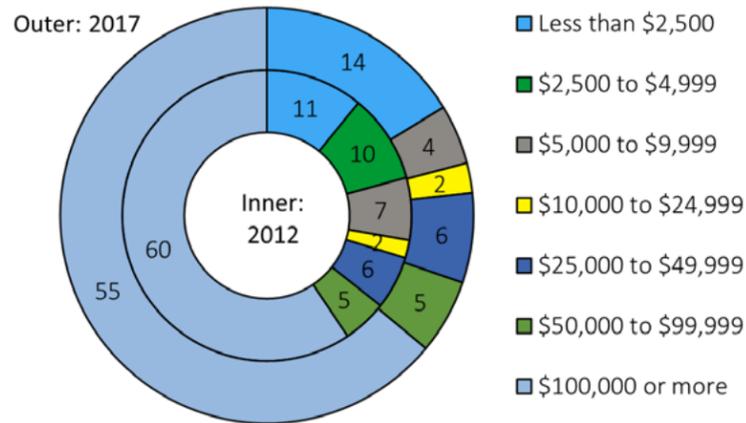
⁸⁸ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

⁸⁹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 86 farms in Eureka County comprising 578,711 acres.⁹⁰ The average farm size was 6,729 acres, while the median farm size was 590 acres. Between 2012 and 2017, the number of farms reported in the Eureka County dropped from 101 to 86 farms.⁹¹ Total reported farm acreage in 2012 was 638,848 acres, with the average farm being 6,325 acres. The total market value, or products sold, in 2017 for farms in Eureka County was \$36.4 million. This was comprised of \$10.8 million from animals and animal product and \$29.6 million from crops.^{92 93}

Figure 134: Number of farms by value of annual sales



Source: USDA, NASS 2020

Eureka County historically has had a strong livestock and animal product industry. The 2017 production can be seen in Figure 135.

Eureka County additionally produces several crops. 2017 data can be seen in Figure 136.

Figure 135: Eureka County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	55	17,092
Beef cattle	52	11,907
Layers (egg production)	5	57

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

Figure 136: Eureka County crop production in 2017

Industry	Farms	Production
All hay including alfalfa	66	182,177 tons, dry
Alfalfa hay	52	144,171 tons, dry
Other hay	46	38,006 tons, dry
Asparagus	3	15 acres

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

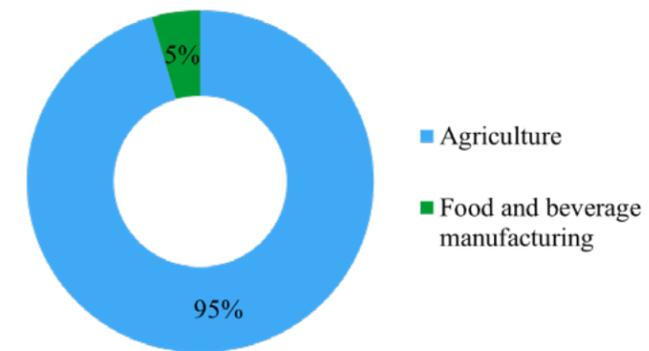
NEVADA FOOD AND AGRICULTURE AT A GLANCE

HUMBOLDT COUNTY

Economic output of the food and agriculture sector in Humboldt County:

- Humboldt County had a total economic output of **\$138.8 million** in 2018.
- Humboldt County had a total economic output of **\$117.5 million** in 2020.
- In total, the food and agriculture sector represents **6.54%** of Humboldt County's total economic output of \$2.1 billion.

HUMBOLDT COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

⁹⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁹¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

⁹² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

⁹³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

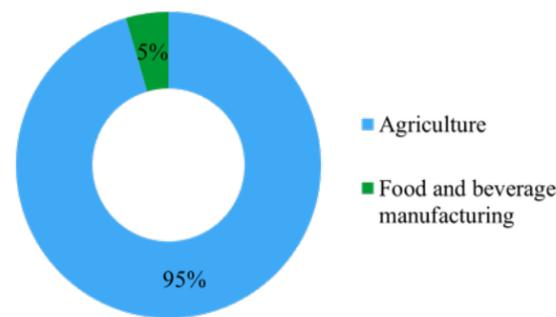
THE FOOD AND AGRICULTURE SECTOR IN HUMBOLDT COUNTY

Economic output of the food and agriculture sector:

- \$138.8 million was the total economic output of the food and agriculture sector in 2018.
- \$117.5 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 6.54% of Humboldt County's total economic output of \$2.1 billion.⁹⁴

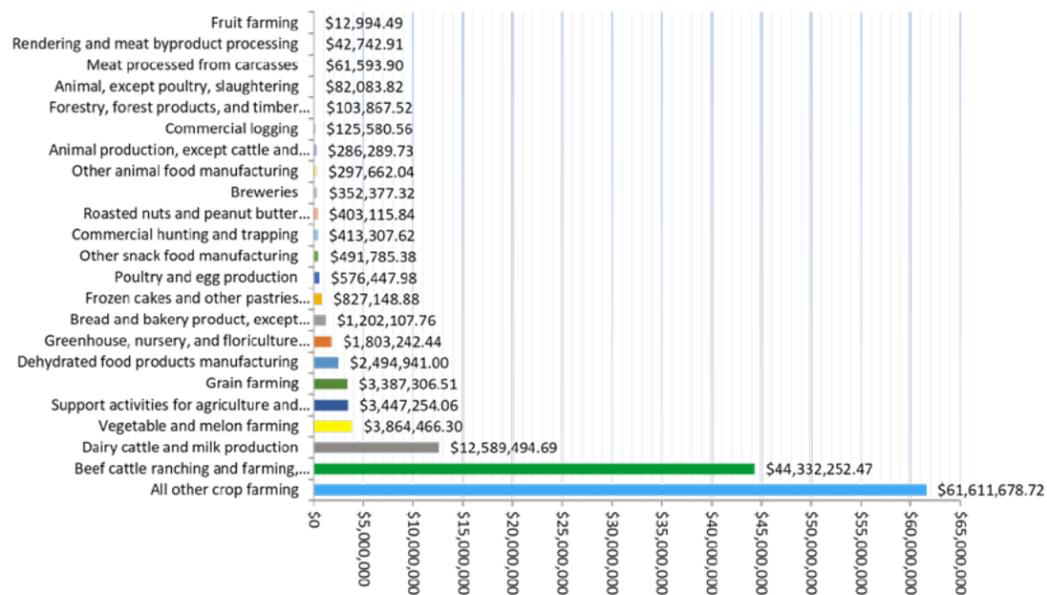
Humboldt County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$132.5 million in 2018. In 2020, the economic output of agriculture declined to \$111.4 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Humboldt County, the crop sector declined by \$10.7 million. The beef cattle industry's economic output declined by \$7.7 million. In addition to these declines, the dairy cattle and milk production industry declined by \$2.2 million. In 2018, food and beverage manufacturing had a total economic output of \$6.3 million and contracted to \$6.1 million in 2020.⁹⁵

Figure 137: Humboldt County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 138: Humboldt County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

94 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 95 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Humboldt County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 139, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.48. This means that for every dollar of production this business produces, there will be over \$0.48 in additional regional economic activity from business to business transactions.⁹⁶ Each industry's multiplier can be seen in Figure 139.

Figure 139: Humboldt County output multipliers by industry

Industry	Direct Multiplier
Grain farming	1.23
Vegetable and melon farming	1.24
Fruit farming	1.18
Greenhouse, nursery and floriculture	1.16
All other crop farming	1.19
Beef cattle ranching and farming, including feedlots, dual purpose	1.48
Dairy cattle and milk production	1.26
Poultry and egg production	1.18
Animal production, except cattle and poultry and eggs	1.15
Forestry, forest products and timber tract production	1.06
Commercial logging	1.13
Commercial hunting and trapping	1.22
Support activities for agriculture and forestry	1.05
Other animal food manufacturing	1.24
Dehydrated food products manufacturing	1.12
Frozen cakes and other pastries manufacturing	1.09
Animal, except poultry, slaughtering	1.67
Meat processed from carcasses	1.27
Rendering and meat byproduct processing	1.34
Bread and bakery product, except frozen, manufacturing	1.17
Roasted nuts and peanut butter manufacturing	1.20
Other snack food manufacturing	1.23
Breweries	1.24

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 817.03 total jobs in 2018
- 723.60 total jobs in 2020 (projected)
- 8.46% of Humboldt County's total employment of 9,657 jobs in 2018⁹⁷

Agriculture Industry (2018):

- 409.37 agriculture jobs with employee compensation totaling \$18.5 million*
- \$20.75 was the average hourly wage in 2018.⁹⁸

Food and beverage manufacturing (2018):

- 24.40 jobs with employee compensation totaling \$878,00*
- \$15.54 was the average hourly wage in 2018.⁹⁹

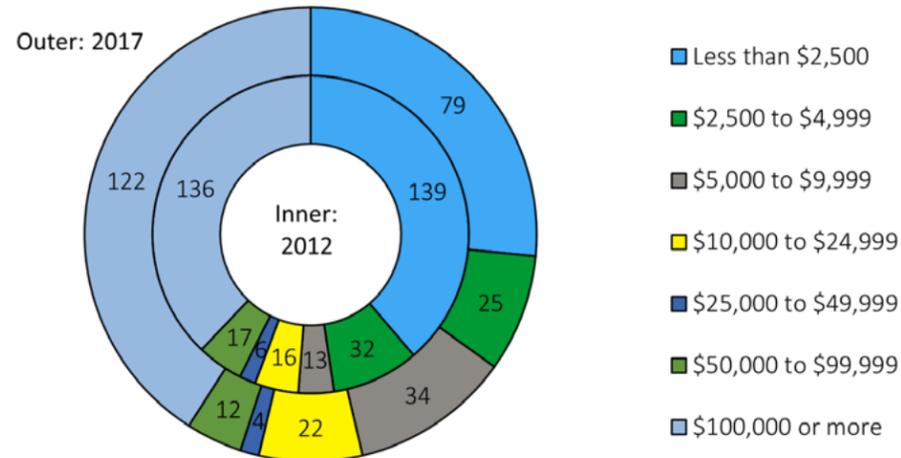
*Not reflective of total employment. Granular level data not available for specific job categories.

96 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 97 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 98 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 99 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 298 farms in Humboldt County covering 990,113 acres.¹⁰⁰ The average farm size was 3,323 acres, while the median farm size was 270 acres. Between 2012 and 2017, the number of farms reported in Humboldt County dropped from 359 to 298 farms.¹⁰¹ Total reported farm acreage in 2012 was 808,672 acres, with the average farm being 2,253 acres. While the number of farms decreased, the acreage of farming land increased. The total market value, or products sold, in 2017 for farms in Humboldt County was \$105.6 million. This was comprised of \$30.4 million from animals and animal products, and \$75.2 million from crops.^{102 103}

Figure 140: Number of farms by value of annual sales



Source: USDA, NASS 2020

Humboldt County historically has had a strong livestock and animal product industry. Production data for 2017 can be seen in Figure 141.

Humboldt County additionally produces several crops. Production data for 2017 can be seen in Figure 142.

Figure 141: Humboldt County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	146	64,349
Beef cattle	133	42,912
Dairy Cattle	3	18
Sheep and lambs	38	442
Layers (egg production)	26	433

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

Figure 142: Humboldt County crop production in 2017

Industry	Farms	Production
Corn for silage	4	4,840 tons
Field and grass seed crops, all	3	3,530 acres
Alfalfa Seed	3	3.4 million lbs.
Hay-all hay	149	437,010 tons, dry
Alfalfa hay	127	376,737 tons, dry
Other hay	59	60,273 tons, dry

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

¹⁰⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁰¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

¹⁰² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁰³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

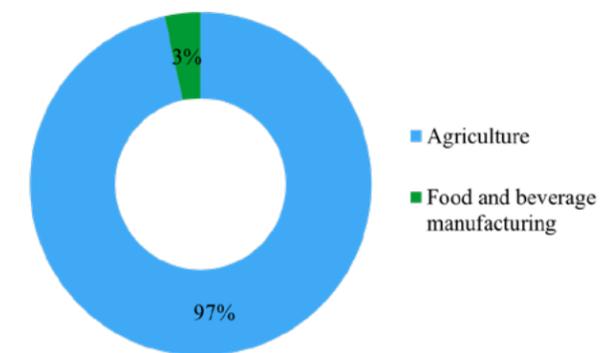
NEVADA FOOD AND AGRICULTURE AT A GLANCE

LANDER COUNTY

Economic output of the food and agriculture sector in Lander County:

- Lander County had a total economic output of **\$36.1 million** in 2018.
- Lander County had a total economic output of **\$30 million** in 2020.
- In total, the food and agriculture sector represents **2.78%** of Lander County's total economic output of \$1.3 billion.

LANDER COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

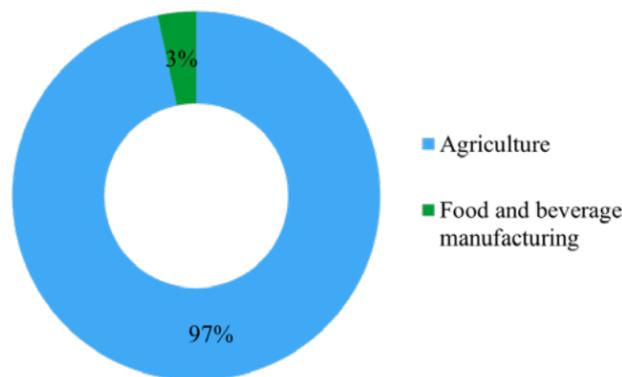
THE FOOD AND AGRICULTURE SECTOR IN LANDER COUNTY

Economic output of the food and agriculture sector:

- \$36.1 million was the total economic output of the food and agriculture sector in 2018.
- \$30 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.78% of Lander County’s total economic output of \$1.3 billion.¹⁰⁴

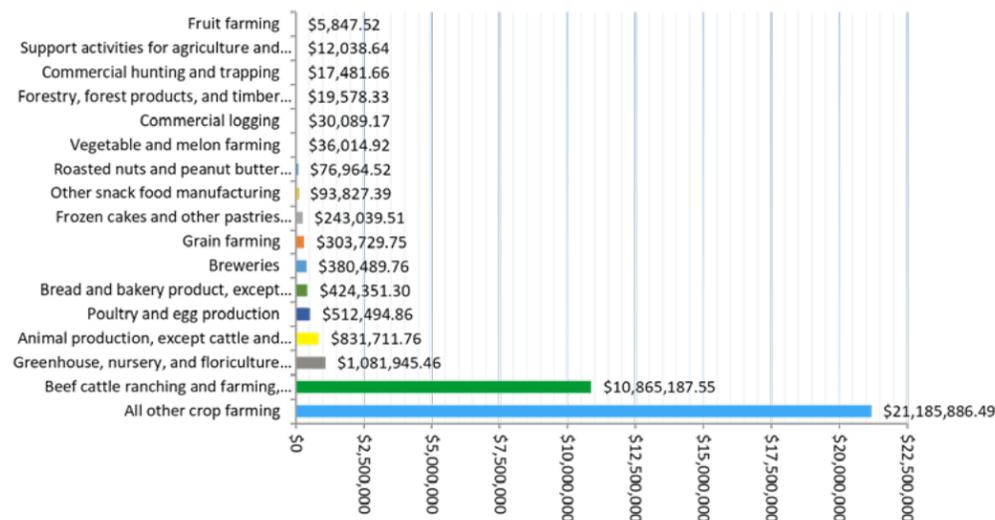
Lander County’s agriculture industry (ranching, farming, agriculture support) had a total economic output of \$34.9 million in 2018. In 2020, the economic output of agriculture declined to \$28.8 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Lander County, the crop sector declined by \$3.7 million. The beef cattle industry economic output declined by \$1.9 million. In 2018, food and beverage manufacturing had a total economic output of \$1.2 million and contracted to \$1.1 million in 2020.¹⁰⁵

Figure 143: Lander County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 144: Lander County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Lander County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 145, \$1.00 of production by a crop farming operation is going to have an economic multiplier of 1.07. This means that for every dollar of production this business produces, there will be over \$0.07 in additional regional economic activity from business to business transactions.¹⁰⁶

Figure 145: Lander County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.10
Vegetable and melon farming	1.07
Fruit farming	1.05
Greenhouse, nursery and floriculture	1.08
All other crop farming	1.07
Beef cattle ranching and farming, including feedlots, dual purpose	1.42
Poultry and egg production	1.05
Animal production, except cattle and poultry and eggs	1.16
Forestry, forest products, and timber tract production	1.01
Commercial logging	1.16
Frozen cakes and other pastries manufacturing	1.03
Bread and bakery product, except frozen, manufacturing	1.07
Roasted nuts and peanut butter manufacturing	1.15
Other snack food manufacturing	1.11
Breweries	1.13

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 222.77 total jobs in 2018
- 199.53 total jobs in 2020 (projected)
- 5.36% of Lander County’s total employment of 4,158 jobs in 2018¹⁰⁷

Agriculture Industry (2018):

- 92.90 agriculture jobs with employee compensation totaling \$3.3 million*
- \$16.13 was the average hourly wage in 2018.¹⁰⁸

Food and beverage manufacturing (2018):

- 6.77 jobs with employee compensation totaling \$156,000*
- \$10.18 was the average hourly wage in 2018.¹⁰⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

104 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

105 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

106 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

107 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

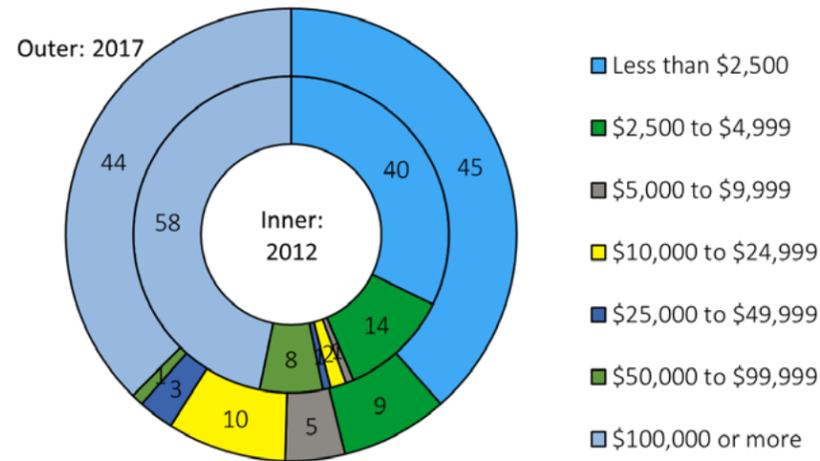
108 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

109 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 117 farms in Lander County comprising 329,373 acres.¹¹⁰ The average farm size was 2,815 acres, while the median farm size was 190 acres. Between 2012 and 2017, the number of farms reported in the Lander County dropped from 124 to 117 farms.¹¹¹ Total reported farm acreage in 2012 was 313,957 acres, with the average farm being 2,253 acres. The total market value, or products sold, in 2017 for farms in Lander County was \$39.5 million. This was comprised of \$12.2 million from animals and animal product and \$27 million from crops.^{112 113}

Figure 146: Number of farms by value of annual sales



Source: USDA, NASS 2020

Lander County historically has had a strong livestock and animal product industry. Production data for 2017 can be seen in Figure 147.

Lander County additionally produces several crops. Production data for 2017 can be seen in Figure 148.

Figure 147: Lander County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	40	20,051
Beef cattle	37	13,034
Sheep and lambs	6	38
Layers (egg production)	225	433

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 148: Lander County crop production in 2017

Industry	Farms	Production
Barley for grain	3	52,646 bushels
Forage- Hay and haylage, grass silage	51	153,278 tons, dry
Hay- all hay	51	151,774 tons, dry
Alfalfa- hay	46	143,889 tons, dry
Garlic	6	4 acres

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

¹¹⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹¹¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

¹¹² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹¹³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

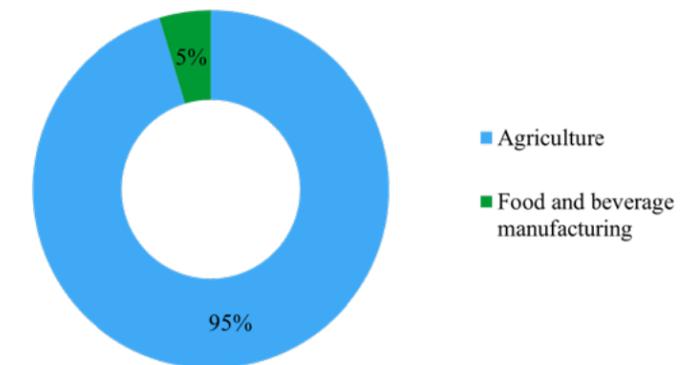
NEVADA FOOD AND AGRICULTURE AT A GLANCE

LINCOLN COUNTY

Economic output of the food and agriculture sector in Lincoln County:

- Lincoln County had a total economic output of **\$27.9 million** in 2018.
- Lincoln County had a total economic output of **\$23.3 million** in 2020.
- In total, the food and agriculture sector represents **8.86%** of Lincoln County's total economic output of \$315.3 million.

LINCOLN COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

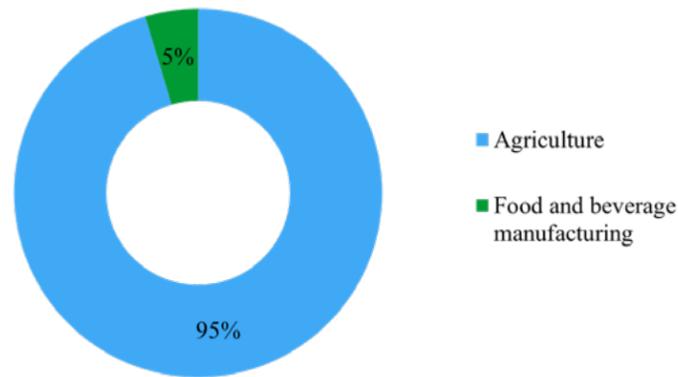
THE FOOD AND AGRICULTURE SECTOR IN LINCOLN COUNTY

Economic output of the food and agriculture sector:

- \$27.9 million was the total economic output of the food and agriculture sector in 2018.
- \$23.3 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 8.86% of Lincoln County's total economic output of \$315.3 million.¹¹⁴

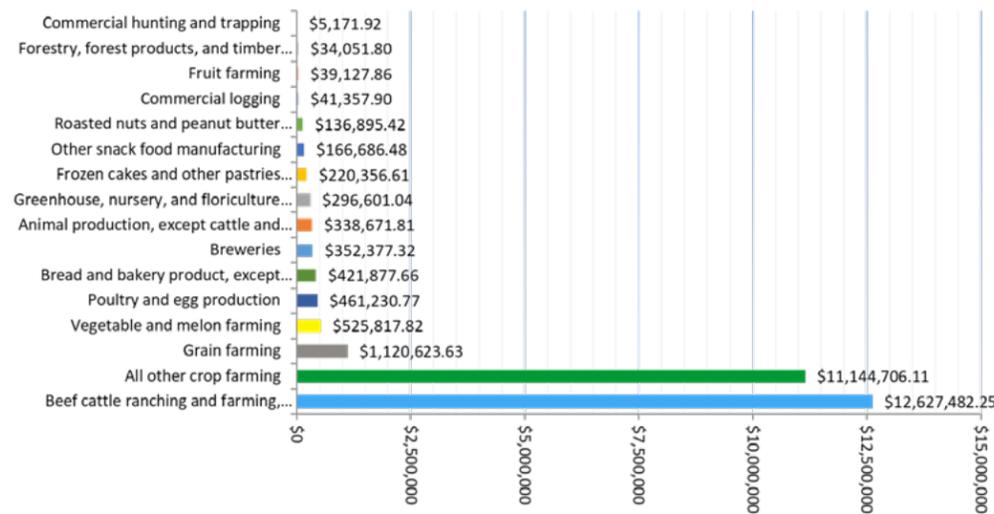
Lincoln County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$26.6 million in 2018. In 2020, the economic output of agriculture declined to \$22 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Lincoln County, the crop sector declined by \$1.9 million. The beef cattle industry economic output declined by \$2.2 million. In 2018, food and beverage manufacturing had a total economic output of \$1.3 million and contracted to \$1.2 million in 2020.¹¹⁵

Figure 149: Lincoln County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 150: Lincoln County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

114 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

115 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Lincoln County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 151, \$1.00 of production by a grain farming operation is going to have an economic multiplier of 1.16. This means that for every dollar of production this business produces, there will be over \$0.16 in additional regional economic activity from business to business transactions.¹¹⁶

Figure 151: Lincoln County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.16
Vegetable and melon farming	1.10
Fruit farming	1.06
Greenhouse, nursery and floriculture	1.07
All other crop farming	1.10
Beef cattle ranching and farming, including feedlots, dual purpose	1.34
Poultry and egg production	1.06
Animal production, except cattle and poultry and eggs	1.06
Forestry, forest products and timber tract production	1.01
Commercial logging	1.04
Commercial hunting and trapping	1.46
Frozen cakes and other pastries manufacturing	1.07
Bread and bakery product, except frozen, manufacturing	1.18
Roasted nuts and peanut butter manufacturing	1.13
Other snack food manufacturing	1.14
Breweries	1.18

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 296.73 total jobs in 2018
- 266.36 total jobs in 2020 (projected)
- 14.36% of Lincoln County's total employment of 2,065 jobs in 2018¹¹⁷

Agriculture Industry (2018):

- 115.84 agriculture jobs with employee compensation totaling \$5.4 million*
- \$21.35 was the average hourly wage in 2018.¹¹⁸

Food and beverage manufacturing (2018):

- 6.12 jobs with employee compensation totaling \$181,000*
- \$13.06 was the average hourly wage in 2018.¹¹⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

AGRICULTURE FARM DATA

116 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

117 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

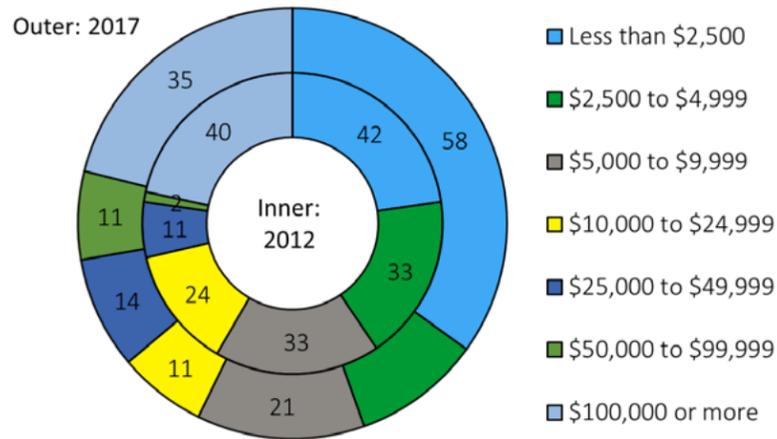
118 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

119 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

In 2017, there were 166 farms in Lincoln County comprising 66,257 acres.¹²⁰ The average farm size was 399 acres, while the median farm size was 60 acres. Between 2012 and 2017, the number of farms reported in Lincoln County dropped from 185 to 166 farms.¹²¹ The total market value, or products sold, in 2017 for farms in Lincoln County was \$21.9 million. This was comprised of \$9 million from animals and animal product and \$12.8 million from crops.^{122 123}

Lincoln County historically has had a strong livestock and animal product industry. Figure 153 shows

Figure 152: Number of farms by value of annual sales



Source: USDA, NASS 2020

production data from 2017.

Lincoln County additionally produces several crops. Figure 154 shows production data from 2017.

Figure 153: Lincoln County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	115	18,329
Beef cattle	100	12,249
Sheep and lambs	4	192
Layers (egg production)	21	255

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 154: Lincoln County crop production in 2017

Industry	Farms	Production
Corn for grain	3	261,000 bushels
Forage- Hay and haylage, grass silage	75	76,931 tons, dry
Hay- all hay	74	76,006 tons, dry
Alfalfa- hay	52	132,598 tons, dry

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

120 USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA
 121 USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA
 122 USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA
 123 USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

NEVADA FOOD AND AGRICULTURE AT A GLANCE

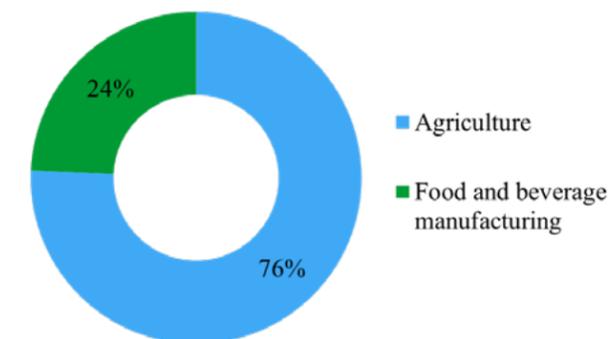
LYON COUNTY



Economic output of the food and agriculture sector in Lyon County:

- Lyon County had a total economic output of **\$137.8 million** in 2018.
- Lyon County had a total economic output of **\$123.1 million** in 2020.
- In total, the food and agriculture sector represents **4.34%** of Lyon County's total economic output of \$3.2 billion.

LYON COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

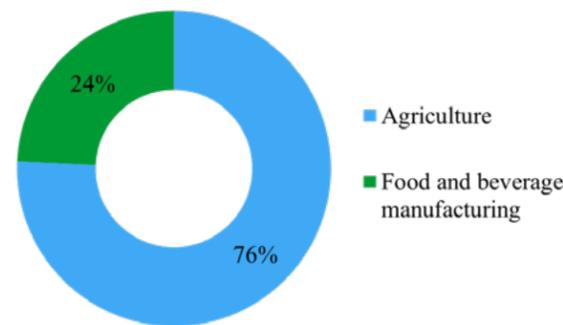
THE FOOD AND AGRICULTURE SECTOR IN LYON COUNTY

Economic output of the food and agriculture sector:

- \$137.8 million was the total economic output of the food and agriculture sector in 2018.
- \$123.1 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 4.34% of Lyon County’s total economic output of \$3.2 billion.¹²⁴

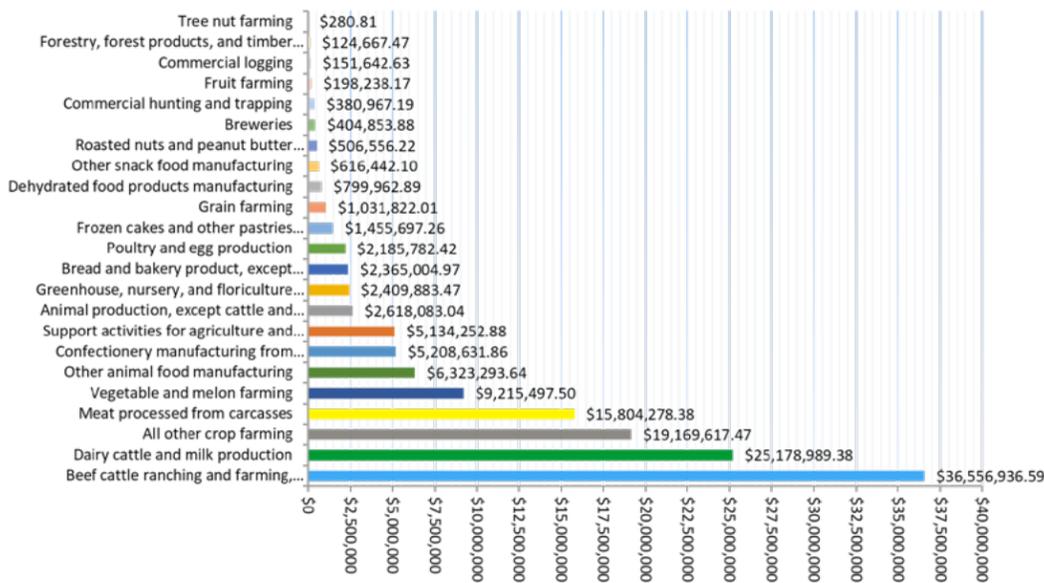
Lyon County’s agriculture industry (ranching, farming, agriculture support) had a total economic output of \$104.4 million in 2018. In 2020, the economic output of agriculture declined to \$88.9 million. A large portion of this contraction was caused by declines in agriculture commodity prices, impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Lyon County, the crop sector declined by \$5 million. The beef cattle industry’s economic output declined by \$6.3 million and the dairy sector declined by \$4.3 million. In 2018, food and beverage manufacturing had a total economic output of \$33.5 million and increased to \$34.1 million in 2020.¹²⁵

Figure 155: Lyon County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 156: Lyon County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

124 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

125 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Lyon County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 157, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.62. This means that for every dollar of production this business produces, there will be roughly \$0.62 in additional regional economic activity from business to business transactions.¹²⁶

Figure 157: Lyon County output multiplier by industry

Industry	Direct Multiplier
Grain farming	1.45
Vegetable and melon farming	1.42
Fruit farming	1.35
Tree nut farming	1.17
Greenhouse, nursery and floriculture	1.24
All other crop farming	1.33
Beef cattle ranching and farming, including feedlots, dual purpose	1.62
Dairy cattle and milk production	1.35
Poultry and egg production	1.22
Animal production, except cattle and poultry and eggs	1.29
Forestry, forest products, and timber tract production	1.15
Commercial logging	1.19
Commercial hunting and trapping	1.31
Support activities for agriculture and forestry	1.08
Other animal food manufacturing	1.12
Confectionery manufacturing from purchased chocolates	1.14
Dehydrated food products manufacturing	1.11
Frozen cakes and other pastries manufacturing	1.06
Meat processed from carcasses	1.38
Bread and bakery product, except frozen, manufacturing	1.13
Roasted nuts and peanut butter manufacturing	1.16
Other snack food manufacturing	1.21
Breweries	1.16

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 1,169.66 total jobs in 2018
- 1,039.84 total jobs in 2020 (projected)
- 6.54% of Lyon County’s total employment of 17,873 jobs in 2018¹²⁷

Agriculture Industry (2018):

- 614.67 agriculture jobs with employee compensation totaling \$23.5 million*
- \$17.51 was the average hourly wage in 2018.¹²⁸

Food and beverage manufacturing (2018):

- 85.94 jobs with employee compensation totaling \$3.2 million*
- \$15.46 was the average hourly wage in 2018.¹²⁹

*Not reflective of total employment. Granular level data not available for specific job categories.

126 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

127 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

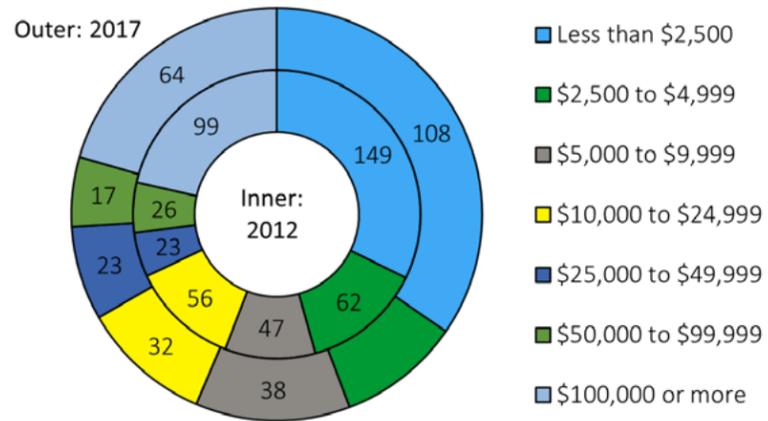
128 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

129 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 312 farms in Lyon County comprising 181,354 acres.¹³⁰ The average farm size was 581 acres, while the median farm size was 35 acres. Between 2012 and 2017, the number of farms reported in Lyon County dropped from 462 to 312 farms.¹³¹ Total reported farm acreage in 2012 was 366,006 acres, with the average farm being 792 acres. The total market value, or products sold, in 2017 for farms in Lyon County was \$133 million. This was comprised of \$74.8 million from animals and animal products and \$58.2 million from crops.^{132 133}

Figure 158: Number of farms by value of annual sales



Source: USDA, NASS 2020

Lyon County historically has had a strong livestock and animal product industry. Figure 159 shows production data from 2017.

Lyon County additionally produces several crops. Figure 160 shows production data from 2017.

Figure 159: Lyon County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	109	53,063
Hogs and pigs	8	104
Sheep and lambs	36	23,317
Layers (egg production)	61	1,556

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

Figure 160: Lyon County crop production in 2017

Industry	Farms	Production
Corn for silage	8	56,330 bushels
Wheat for silage	6	41,437 bushels
Alfalfa Seed	3	3.4 million lb.
Hay-all hay	145	163,927 tons, dry
Alfalfa hay	125	132,598 tons, dry
Garlic	7	490 acres

*Note: Data omitted by USDA, NASS not included.

Source: 2017 Census of Agriculture – County Data, Nevada

¹³⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹³¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

¹³² USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹³³ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

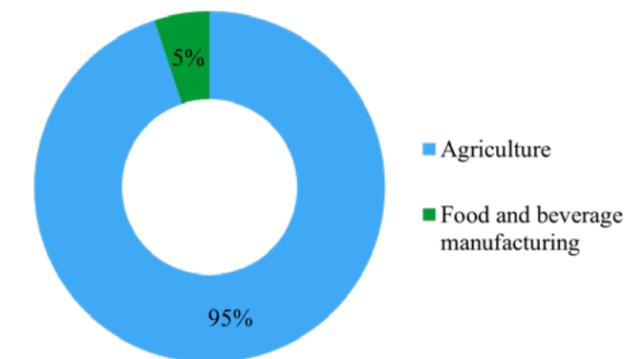
NEVADA FOOD AND AGRICULTURE AT A GLANCE

MINERAL COUNTY

Economic output of the food and agriculture sector in Mineral County:

- Mineral County had a total economic output of **\$10.6 million** in 2018.
- Mineral County had a total economic output of **\$8.8 million** in 2020.
- In total, the food and agriculture sector represents **2.89%** of Mineral County's total economic output of \$369 million.

MINERAL COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

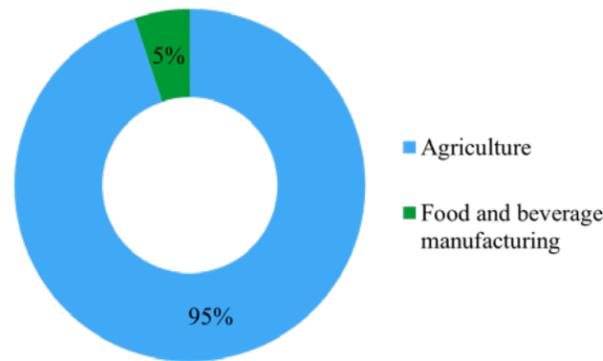
THE FOOD AND AGRICULTURE SECTOR IN MINERAL COUNTY

Economic output of the food and agriculture sector:

- \$10.6 million was the total economic output of the food and agriculture sector in 2018.
- \$8.8 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.89% of Mineral County's total economic output of \$369 million.¹³⁴

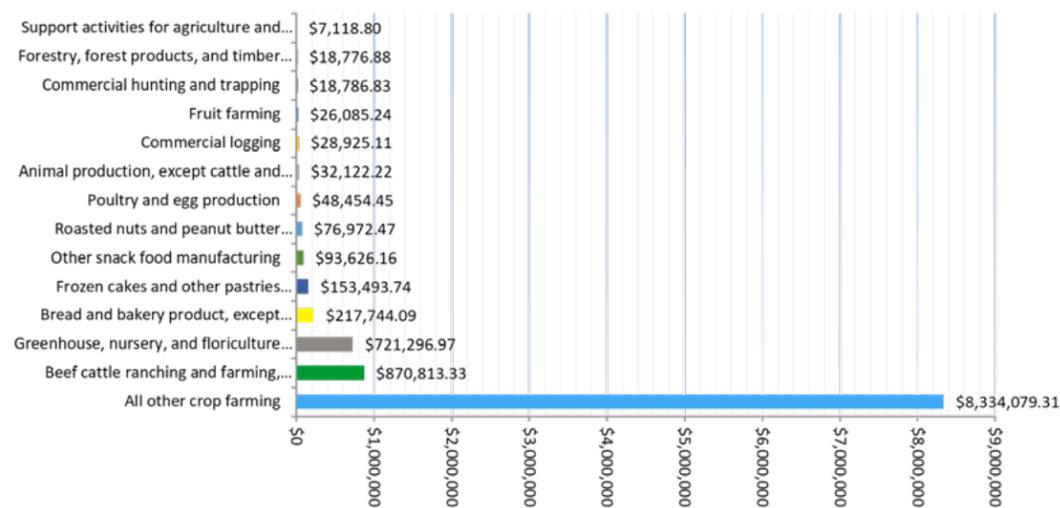
Mineral County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$10.6 million in 2018. In 2020, the economic output of agriculture declined to \$8.4 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Mineral County, the crop sector declined by \$1.5 million. The beef cattle industry's economic output declined by \$152,000. In 2018, food and beverage manufacturing had a total economic output of \$542,000 and decreased to \$508,000 in 2020.¹³⁵

Figure 161: Mineral County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 162: Mineral County economic output of food & agriculture Sector in 2018



Source: Implan Group, LLC. Implan (2020)

¹³⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹³⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Mineral County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 163, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.30. This means that for every dollar of production this business produces, there will be roughly \$0.30 in additional regional economic activity from business to business transactions.¹³⁶

Figure 163: Mineral County output multiplier by industry

Industry	Direct Multiplier
Fruit farming	1.05
Greenhouse, nursery, and floriculture	1.06
All other crop farming	1.06
Beef cattle ranching and farming, including feedlots, dual purpose	1.30
Poultry and egg production	1.03
Animal production, except cattle and poultry and eggs	1.07
Forestry, forest products and timber tract production	1.01
Commercial logging	1.18
Commercial hunting and trapping	1.10
Support activities for agriculture and forestry	1.33
Frozen cakes and other pastries	1.07
Bread and bakery product, except frozen, manufacturing	1.14
Roasted nuts and peanut butter manufacturing	1.10
Other snack food manufacturing	1.13

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 104.51 total jobs in 2018
- 98.44 total jobs in 2020 (projected)
- 5.13% of Mineral County's total employment of 2,037 jobs in 2018¹³⁷

Agriculture Industry (2018):

- 4.39 agriculture jobs with employee compensation totaling \$399,000*
- \$41.60 was the average hourly wage in 2018.¹³⁸

Food and beverage manufacturing (2018):

- 3.6 jobs with employee compensation totaling \$144,000*
- \$17.68 was the average hourly wage in 2018.¹³⁹

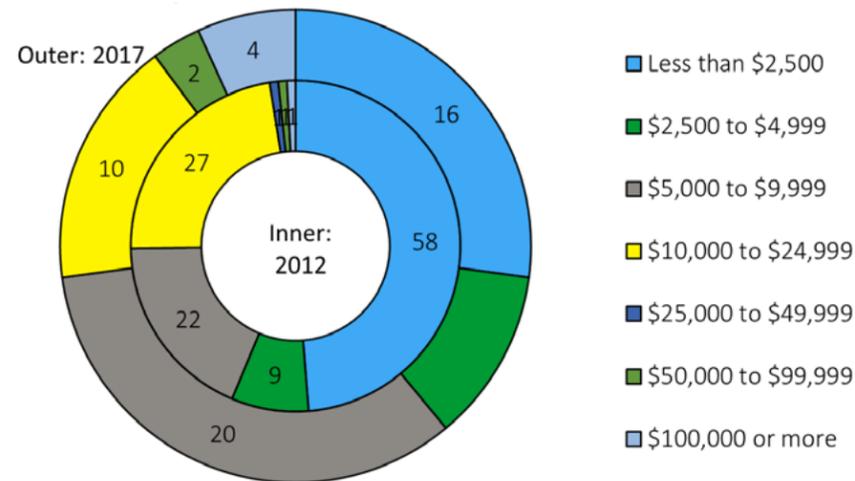
*Not reflective of total employment. Granular level data not available for specific job categories.

¹³⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹³⁷ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹³⁸ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹³⁹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 59 farms in Mineral County.¹⁴⁰ The total acres and average farm size for Mineral County are not available from the USDA NASS to maintain confidentiality. In 2017, 42 farms were 10 to 49 acres, 13 farms were 50 to 179 acres, 3 farms were 180 to 499 acres and 1 farm was over 1,000 acres. The total market value, or products sold, in 2012 for farms in Mineral County was \$884,000, or \$7,426 per farm. This totaled \$385,000 from animals and animal products and \$499,000 from crops.^{141 142}

Figure 164: Number of farms by value of annual sales



Source: USDA, NASS 2020

Cattle and calf production is the major industry represented in livestock production. Figure 165 shows production data from 2017.

Feed crops make up the crop industry in Mineral County. Figure 166 shows production data from 2017.

Figure 165: Mineral County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	65	2,221
Layers (egg production)	6	54

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 166: Mineral County crop production in 2017

Industry	Farms	Production
Alfalfa hay	49	1,947 acres

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

140 USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

141 USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

142 USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

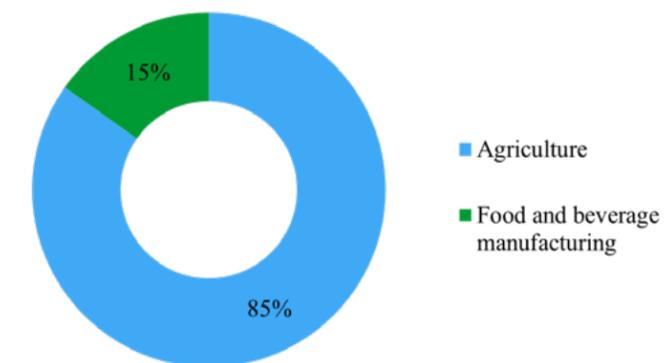
NEVADA FOOD AND AGRICULTURE AT A GLANCE

NYE COUNTY

Economic output of the food and agriculture sector in Nye County:

- Nye County had a total economic output of **\$57.8 million** in 2018.
- Nye County had a total economic output of **\$50.4 million** in 2020.
- In total, the food and agriculture sector represents **2.02%** of Nye County's total economic output of \$2.86 billion.

NYE COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

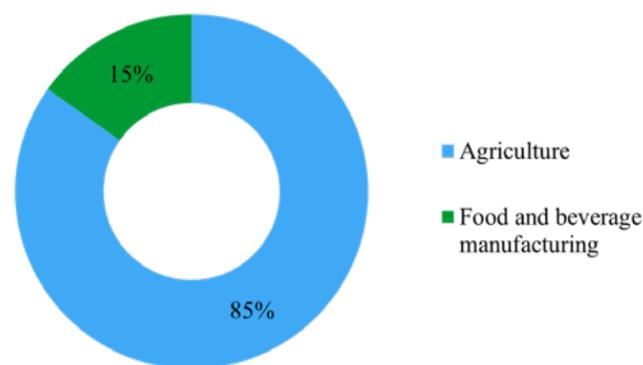
THE FOOD AND AGRICULTURE SECTOR IN NYE COUNTY

Economic output of the food and agriculture sector:

- \$57.8 million was the total economic output of the food and agriculture sector in 2018.
- \$50.4 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.02% of Nye County's total economic output of \$2.86 billion.¹⁴³

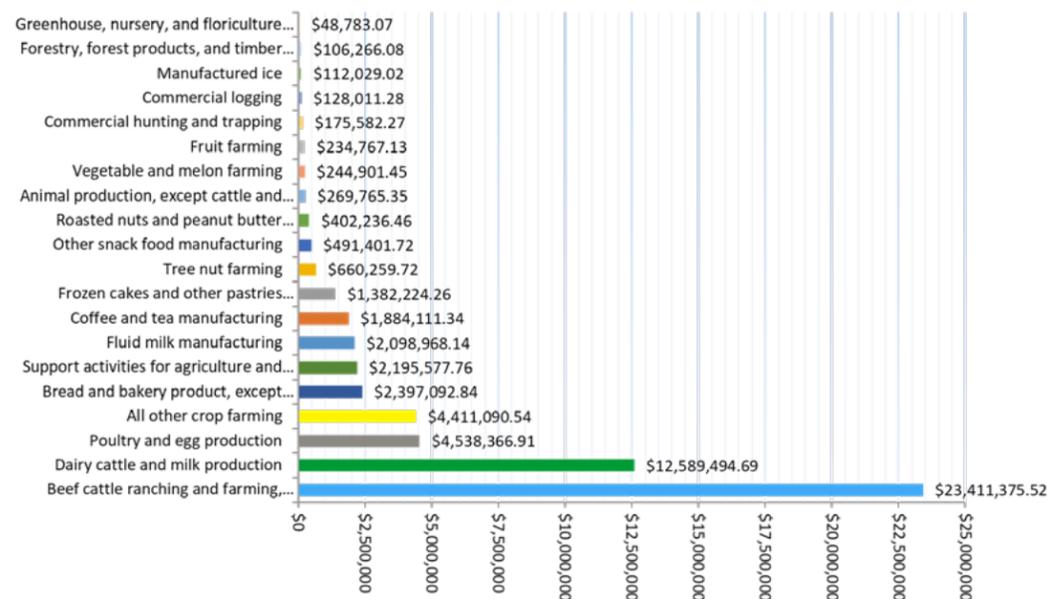
Nye County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$49 million in 2018. In 2020, the economic output of agriculture declined to \$41 million. A large portion of this contraction was caused by declines in commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Nye County, the crop sector declined by \$770,000. The cattle industry's economic output declined by \$6 million. In 2018, food and beverage manufacturing had a total economic output of \$8.77 million and increased to \$8.65 million in 2020.¹⁴⁴

Figure 167: Nye County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 168: Nye County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

143 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 144 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Nye County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 169, \$1.00 of production by a beef cattle operation is going to have an economic multiplier of 1.57. This means that for every dollar of production this business produces, there will be roughly \$0.57 in additional regional economic activity from business to business transactions.¹⁴⁵

Figure 169: Nye County output multiplier by industry

Industry	Direct Multiplier
Vegetable and melon farming	1.36
Fruit farming	1.34
Tree nut farming	1.17
Greenhouse, nursery and floriculture	1.22
All other crop farming	1.33
Beef cattle ranching and farming, including feedlots, dual purpose	1.57
Dairy cattle and milk production	1.27
Poultry and egg production	1.15
Animal production, except cattle and poultry and eggs	1.16
Forestry, forest products, and timber tract production	1.13
Commercial logging	1.19
Commercial hunting and trapping	1.34
Support activities for agriculture and forestry	1.05
Fluid milk manufacturing	1.62
Frozen cakes and other pastries manufacturing	1.06
Bread and bakery product, except frozen, manufacturing	1.13
Roasted nuts and peanut butter manufacturing	1.27
Other snack food manufacturing	1.17
Coffee and tea manufacturing	1.24
Manufactured ice	1.31

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 343.39 total jobs in 2018
- 311.56 total jobs in 2020 (projected)
- 2.14% of Nye County's total employment of 16,048 jobs in 2018¹⁴⁶

Agriculture Industry (2018):

- 121 agriculture jobs with employee compensation totaling \$4.7 million*
- \$17.99 was the average hourly wage in 2018.¹⁴⁷

Food and beverage manufacturing (2018):

- 39.78 jobs with employee compensation totaling \$1.5 million*
- \$16.65 was the average hourly wage in 2018.¹⁴⁸

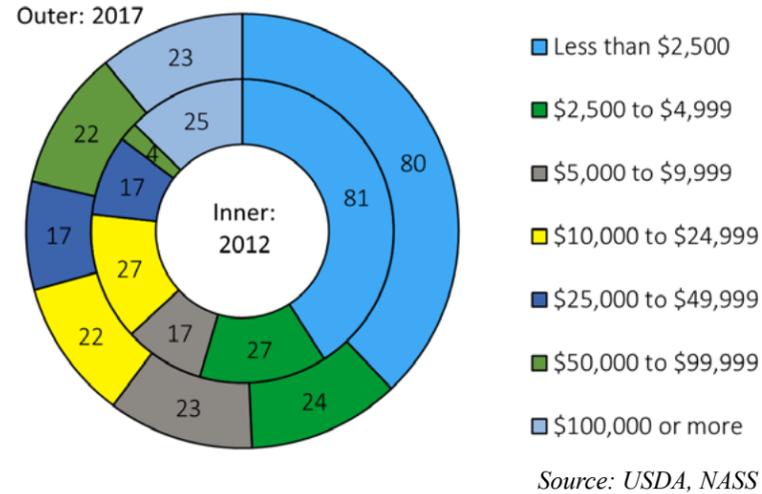
*Not reflective of total employment. Granular level data not available for specific job categories.

145 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 146 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 147 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 148 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 211 farms in Nye County comprising 93,344 acres.¹⁴⁹ The average farm size was 442 acres, while the median farm size was 40 acres. Between 2012 and 2017, the number of farms reported in Nye County increased from 198 to 211 farms. Total reported farm acreage in 2012 was 65,116 acres, with the average farm being 329 acres. The total market value, or products sold, in 2017 for farms in Nye County was \$64.9 million. This was comprised of \$59.7 million from animals and animal products and \$5.1 million from crops.^{150 151}

Figure 170: Number of farms by value of annual sales



Animal industry makes up a large portion of agriculture in Nye County. Figure 171 shows production data from 2017.

Nye County additionally produces several crops. Figure 172 shows production data from 2017.

Figure 171: Nye County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	88	28,672
Hogs and pigs	12	54
Sheep and lambs	36	1,359
Layers (egg production)	53	1,466

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 172: Nye County crop production in 2017

Industry	Farms	Production
All Hay	65	41,033 tons, dry
Alfalfa Hay	57	33,964 tons, dry
Other hay	37	7,069 tons, dry
Squash	12	17 acres

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

¹⁴⁹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁵⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁵¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

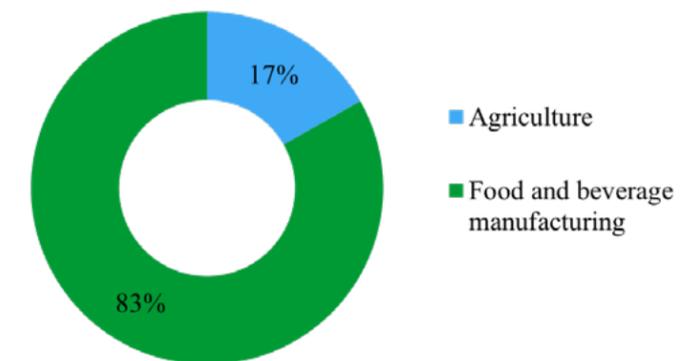
NEVADA FOOD AND AGRICULTURE AT A GLANCE

PERSHING COUNTY

Economic output of the food and agriculture sector in Pershing County:

- Pershing County had a total economic output of **\$213.6 million** in 2018.
- Pershing County had a total economic output of **\$206.7 million** in 2020.
- In total, the food and agriculture sector represents **31.44%** of Pershing County's total economic output of \$679 million.

PERSHING COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

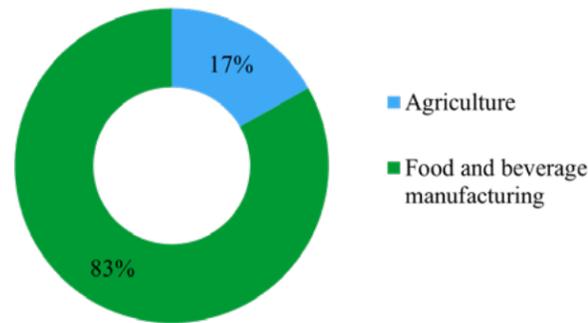
THE FOOD AND AGRICULTURE SECTOR IN PERSHING COUNTY

Economic output of the food and agriculture sector:

- \$213.6 million was the total economic output of the food and agriculture sector in 2018.
- \$206.7 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 31.44% of Pershing County's total economic output of \$679 million.¹⁵²

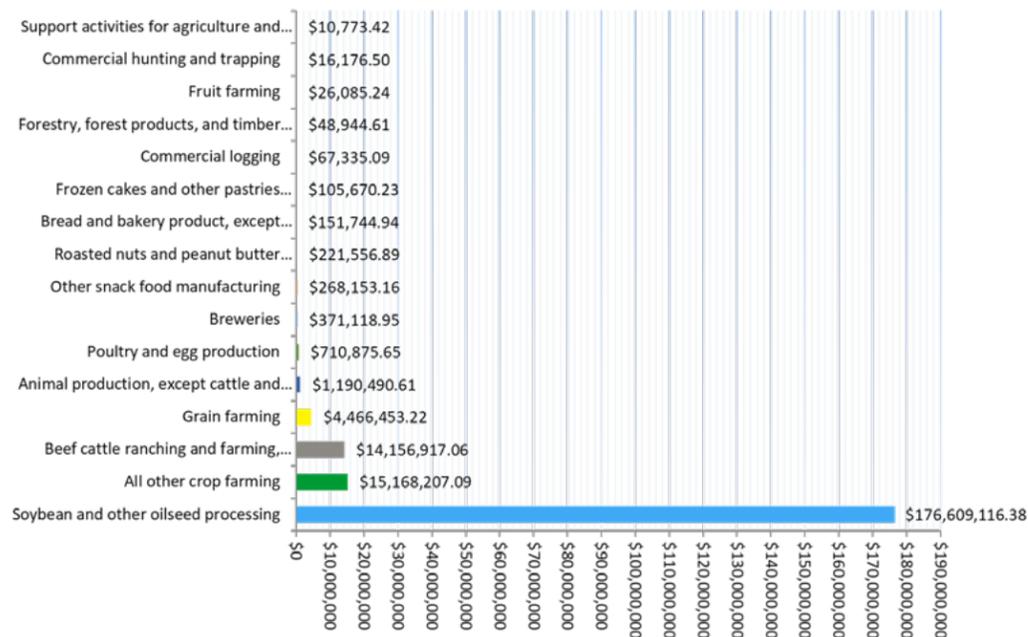
Pershing County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$35.8 million in 2018. In 2020, the economic output of agriculture declined to \$29.7 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Pershing County, the crop sector declined by \$3.4 million. The cattle industry's economic output declined by \$2.5 million. In 2018, food and beverage manufacturing had a total economic output of \$177.7 million and declined to \$177.1 million in 2020.¹⁵³

Figure 173: Pershing County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 174: Pershing County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

152 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 153 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Pershing County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 175, \$1.00 of production by a soybean and oilseed processing operation is going to have an economic multiplier of 1.05. This means that for every dollar of production this business produces, there will be roughly \$0.05 in additional regional economic activity from business to business transactions.¹⁵⁴

Figure 175: Pershing County output multipliers by industry

Industry	Direct Multiplier
Grain Farming	1.11
Fruit farming	1.04
All other crop farming	1.06
Beef cattle ranching and farming, including feedlots, dual purpose	1.12
Poultry and egg production	1.04
Animal production, except cattle and poultry and eggs	1.04
Forestry, forest products and timber tract production	1.01
Commercial logging	1.04
Commercial hunting and trapping	1.06
Support activities for agriculture and forestry	1.02
Soybean and other oilseed processing	1.05
Frozen cakes and other pastries manufacturing	1.04
Bread and bakery product, except frozen, manufacturing	1.09
Roasted nuts and peanut butter manufacturing	1.07
Other snack food manufacturing	1.13
Breweries	1.11

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 315.60 total jobs in 2018
- 285.01 total jobs in 2020 (projected)
- 12.47% of Pershing County's total employment of 2,530 jobs in 2018¹⁵⁵

Agriculture Industry (2018):

- 13.34 agriculture jobs with employee compensation totaling \$8.8 million*
- \$28.85 was the average hourly wage in 2018.¹⁵⁶

Food and beverage manufacturing (2018):

- 40.05 jobs with employee compensation totaling \$3.2 million*
- \$31.43 was the average hourly wage in 2018.¹⁵⁷

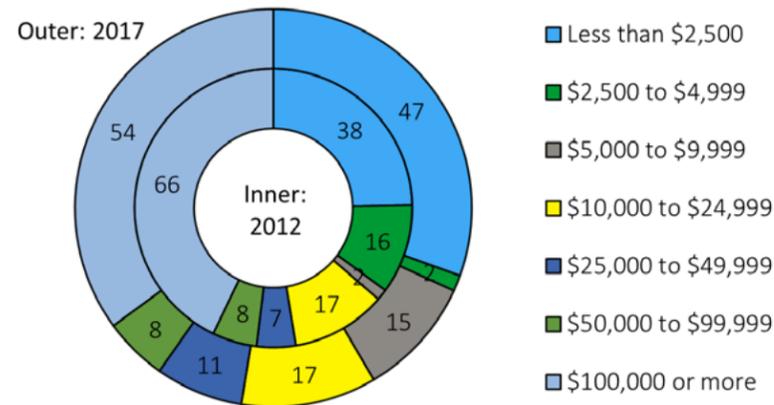
*Not reflective of total employment. Granular level data not available for specific job categories.

154 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 155 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 156 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
 157 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 154 farms in Pershing County comprising 330,294 acres.¹⁵⁸ The average farm size was 2,145 acres, while the median farm size was 240 acres. Between 2012 and 2017, the number of farms reported in Pershing County remained stable at 154 farms.¹⁵⁹ Total reported farm acreage in 2012 was 299,290 acres, with the average farm being 1,943 acres. The total market value, or products sold in 2017 for farms in Pershing County was \$33.8 million. This was comprised of \$14.1 million from animals and animal products, and \$19.7 million from crops.^{160 161}

Figure 176: Number of farms by value of annual sales



Source: USDA, NASS 2020

Animal industry makes up a large portion of agriculture in Pershing County. Figure 177 shows production data from 2017.

Pershing County additionally produces several crops. Figure 178 shows production data from 2017.

Figure 177: Pershing County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	75	26,525
Layers (egg production)	18	265
Broilers chickens for meat	3	15

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 178: Pershing County crop production in 2017

Industry	Farms	Production
Alfalfa Seed	3	415,000 lbs.
All hay	71	132,385 tons, dry
Alfalfa hay	57	82,574 tons, dry
Other hay	40	49,811 tons, dry
Corn for silage	4	19,671 tons

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

¹⁵⁸ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁵⁹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

¹⁶⁰ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁶¹ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

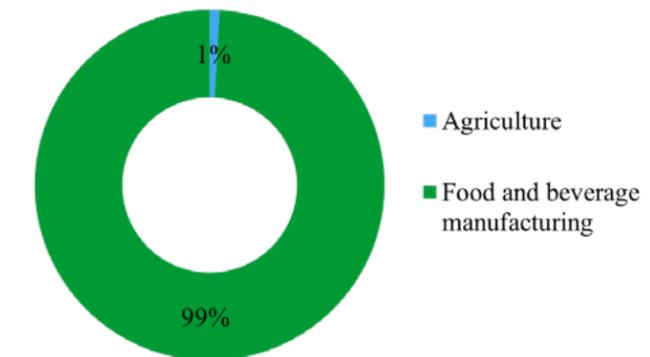
NEVADA FOOD AND AGRICULTURE AT A GLANCE

STOREY COUNTY

Economic output of the food and agriculture sector in Storey County:

- Storey County had a total economic output of **\$178.5 million** in 2018.
- Storey County had a total economic output of **\$187.1 million** in 2020.
- In total, the food and agriculture sector represents **4.8%** of Storey County's total economic output of \$3.7 billion.

STOREY COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

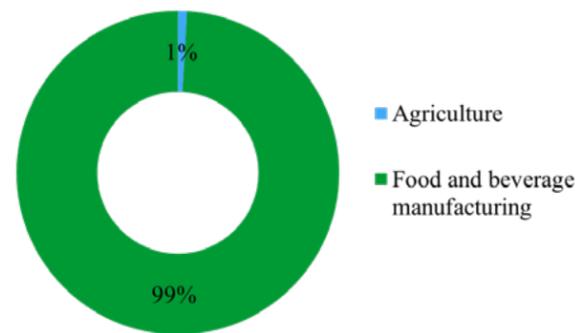
THE FOOD AND AGRICULTURE SECTOR IN STOREY COUNTY

Economic output of the food and agriculture sector:

- \$178.5 million was the total economic output of the food and agriculture sector in 2018.
- \$187.1 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 4.8% of Storey County's total economic output of \$3.7 billion.¹⁶²

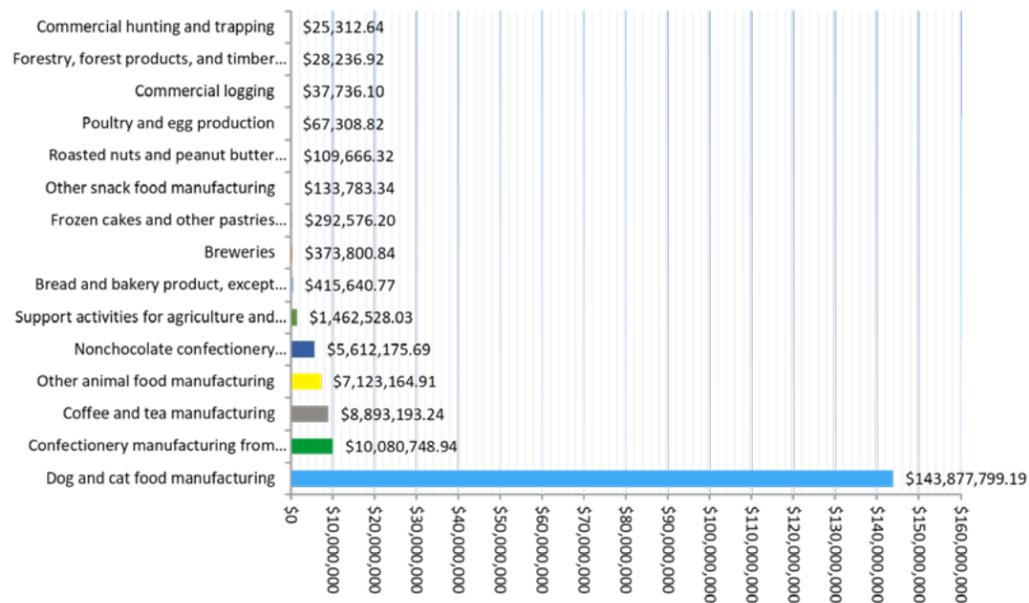
Storey County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$1.6 million in 2018. In 2020, the economic output of agriculture increased to \$2.2 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In 2018, food and beverage manufacturing had a total economic output of \$176.9 million and increased to \$184.9 million in 2020. A substantial source of growth in the food and beverage manufacturing sector came from dog and cat food manufacturing, growing to \$6.87 million between 2018-2020.¹⁶³

Figure 179: Storey County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 180: Storey County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

¹⁶² Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

¹⁶³ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Storey County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 181, \$1.00 of production by dog and cat food manufacturing operations are going to have an economic multiplier of 1.12. This means that for every dollar of production this business produces, there will be roughly \$0.12 in additional regional economic activity from business to business transactions.¹⁶⁴

Figure 181: Storey County output multiplier

Industry	Direct Multiplier
Poultry and egg production	1.36
Forestry, forest products and timber tract production	1.17
Commercial logging	1.22
Commercial hunting and trapping	1.13
Support activities for agriculture and forestry	1.06
Dog and cat food manufacturing	1.12
Other animal food manufacturing	1.07
Nonchocolate confectionery manufacturing	1.10
Confectionery manufacturing from purchased chocolate	1.08
Frozen cakes and other pastries manufacturing	1.04
Bread and bakery product, except frozen, manufacturing	1.06
Roasted nuts and peanut butter manufacturing	1.15
Other snack food manufacturing	1.06
Coffee and snack food manufacturing	1.06
Breweries	1.24

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 231.87 total jobs in 2018
- 238.98 total jobs in 2020 (projected)
- 1.7% of Storey County's total employment of 13,591 jobs in 2018¹⁶⁵

Agriculture Industry (2018):

- 34.41 agriculture jobs with employee compensation totaling \$2.1 million*
- \$27.80 was the average hourly wage in 2018.¹⁶⁶

Food and beverage manufacturing (2018):

- 165.49 jobs with employee compensation totaling \$12.9 million*
- \$31.02 was the average hourly wage in 2018.¹⁶⁷

*Not reflective of total employment. Granular level data not available for specific job categories.

¹⁶⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

¹⁶⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

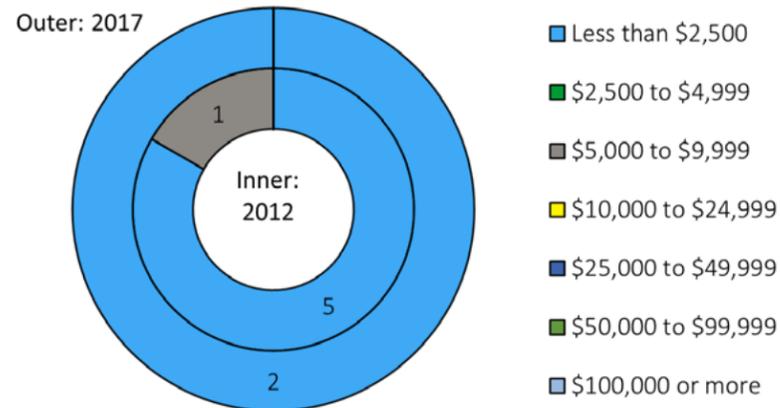
¹⁶⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

¹⁶⁷ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 2 farms in Storey County. The acreage for these farms is not available.¹⁶⁸ Looking back at the 2012 Census of Agriculture, there were 6 farms in Storey County with 86 acres of farmland. On average, these farms were 14 acres. The total market value, or products sold, in 2017 for farms in Storey County was unknown due to the low number of farms, making data on revenue confidential and unavailable from USDA NASS.¹⁶⁹ ¹⁷⁰ In 2020, the NDA did not receive industry survey responses for livestock or crop operations in Storey County. Utilizing the limited NASS data available it can be extrapolated that farms in Storey County typically are smaller than 9 acres and generate less than \$2,500 in annual sales.

Figure 182: Number of farms by value of annual sales



Source: USDA, NASS 2020

Figure 183 shows animal production data from 2017. Figure 184 shows crop production data from 2017.

Figure 183: Storey County livestock and animal product production in 2017

Industry	Farms	Number of animals
Sheep and lambs	2	Omitted
Layers (egg production)	2	Omitted

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 184: Storey County crop production in 2017

Industry	Farms	Production
Forage haylage and silage	1	Omitted

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

¹⁶⁸ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁶⁹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁷⁰ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

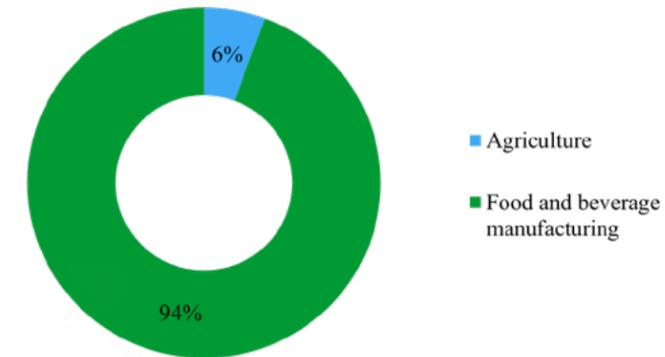
NEVADA FOOD AND AGRICULTURE AT A GLANCE

WASHOE COUNTY

Economic output of the food and agriculture sector in Washoe County:

- Washoe County had a total economic output of **\$991 million** in 2018.
- Washoe County had a total economic output of **\$1 billion** in 2020.
- In total, the food and agriculture sector represents **2.05%** of Washoe County's total economic output of \$48.2 billion.

WASHOE COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

THE FOOD AND AGRICULTURE SECTOR IN WASHOE COUNTY

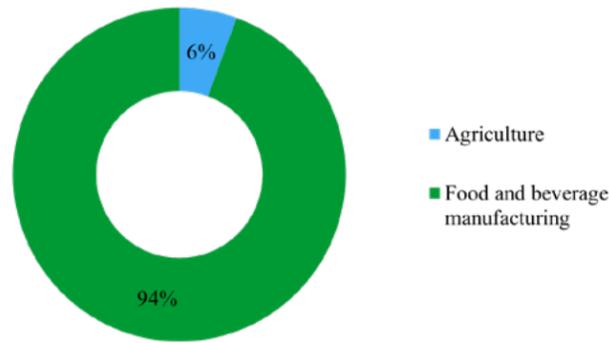
Economic output of the food and agriculture sector:

- \$991 million was the total economic output of the food and agriculture sector in 2018.
- \$1 billion is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.05% of Washoe County's total economic output of \$48.2 billion.¹⁷¹

Washoe County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$55.6 million in 2018. In 2020, the economic output of agriculture declined to \$52.4 million.

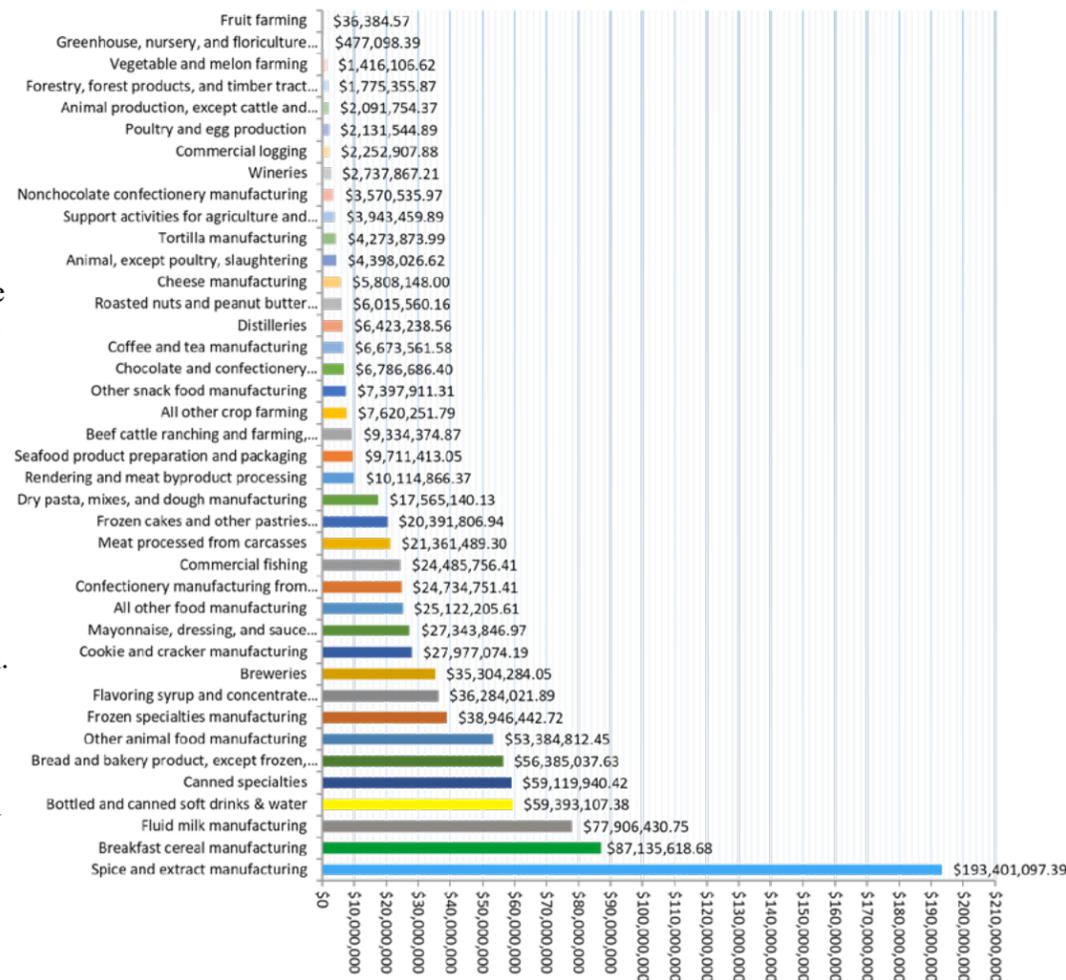
A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In Washoe County, the crop sector declined by \$1.5 million. The beef cattle industry's economic output declined by \$1.6 million. In 2018, food and beverage manufacturing had a total economic output of \$935.7 million and increased to \$949 million in 2020.¹⁷² This sectors growth was led by increases of \$6.9 million in breakfast

Figure 185: Washoe County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 186: Washoe County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

¹⁷¹ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹⁷² Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

cereal, \$4.6 million in fluid milk production, and \$3.4 million in spice and extract manufacturing. Contractions included a decline in output of \$1.8 million to breweries, wineries and distilleries. The largest contraction was to bread and bakery manufacturing, which saw a decline of \$5.6 million.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for Washoe County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 187, \$1.00 of production by vegetable and melon farming is going to have an economic multiplier of 1.56. This means that for every dollar of production this business produces, there will be roughly \$0.56 in additional regional economic activity from business to business transactions.¹⁷³

EMPLOYMENT

Food and agriculture sector:

- 3,041.94 total jobs in 2018
- 3,040.70 total jobs in 2020 (projected)
- 1.03% of Washoe County's total employment of 294,334 jobs in 2018¹⁷⁴

Agriculture Industry (2018):

- 260.60 agriculture jobs with employee compensation totaling \$13.3 million*
- \$23.36 was the average hourly wage in 2018.¹⁷⁵

Figure 187: Washoe County output multipliers by industry

Industry	Direct Multiplier
Vegetable and melon farming	1.56
Fruit farming	1.46
Greenhouse, nursery and floriculture production	1.38
All other crop farming	1.50
Beef cattle ranching and farming, including feedlots, dual purpose	1.52
Poultry and egg production	1.48
Animal production, except cattle and poultry and eggs	1.33
Forestry, forest products and timber tract production	1.09
Commercial logging	1.14
Commercial fishing	1.27
Support activities for agriculture and forestry	1.24
Other animal food manufacturing	1.25
Breakfast cereal manufacturing	1.26
Nonchocolate confectionery manufacturing	1.38
Chocolate and confectionery manufacturing from cacao beans	1.41
Confectionery manufacturing from purchased chocolate	1.37
Frozen specialties manufacturing	1.20
Canned specialties	1.14
Cheese manufacturing	1.26
Fluid milk manufacturing	1.30
Frozen cakes and other pastries manufacturing	1.20
Animal, except poultry, slaughtering	1.36
Meat processed from carcasses	1.26
Rendering and meat byproduct processing	1.58
Seafood production preparation and packaging	1.40
Bread and bakery product manufacturing, except frozen, manuf.	1.34
Cookie and cracker manufacturing	1.31
Dry pasta, mixes, and dough manufacturing	1.37
Tortilla manufacturing	1.34
Roasted nuts and peanut butter manufacturing	1.32
Other snack food manufacturing	1.28
Coffee and tea manufacturing	1.43
Flavoring syrup and concentrate manufacturing	1.25
Mayonnaise, dressing, and sauce manufacturing	1.24
Spice and extract manufacturing	1.40
All other food manufacturing	1.37
Bottled and canned soft drinks & water	1.25
Breweries	1.30
Wineries	1.43
Distilleries	1.29

Source: Implan Group, LLC. Implan (2020).

¹⁷³ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹⁷⁴ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹⁷⁵ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

Food and beverage manufacturing (2018):

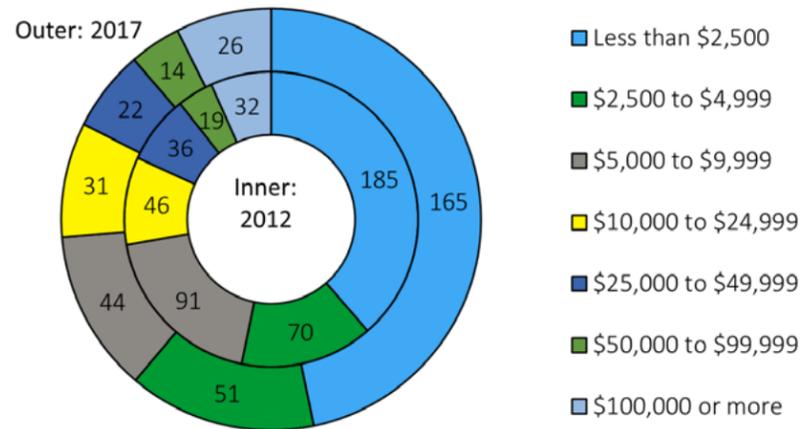
- 1,979.21 jobs with employee compensation totaling \$109 million.*
- \$23.15 was the average hourly wage in 2018.¹⁷⁶

*Not reflective of total employment. Granular level data not available for specific job categories.

AGRICULTURE FARM DATA

In 2017, there were 353 farms in Washoe County comprising 501,310 acres.¹⁷⁷ The average farm size was 1,420 acres, while the median farm size was 20 acres. Between 2012 and 2017, the number of farms reported in Washoe County declined from 479 to 353 farms.¹⁷⁸ However, total farm acreage increased to 442,697 acres, with the average farm being 924 acres. The total market value, or products sold, in 2017 for farms in Washoe County was \$19.9 million. This was comprised of \$10.8 million from animals and animal products, and \$9.1 million from crops.^{179 180}

Figure 188: Number of farms by value of annual sales



Source: USDA, NASS 2020

Animal industry makes up a large portion of agriculture in Washoe County. Figure 189 shows production data from 2017. Washoe County additionally produces several crops. Figure 190 shows production data from 2017.

Figure 189: Washoe County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	121	13,549
Beef cattle	96	10,089
Sheep and lambs	27	5,658
Layers (egg production)	57	1,751

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 190: Washoe County crop production in 2017

Industry	Farms	Production
All hay	77	60,967 tons, dry
Alfalfa hay	57	55,318 tons, dry
Vegetables harvested	22	261 acres
Pumpkins	11	135 acres

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

¹⁷⁶ Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.
¹⁷⁷ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA
¹⁷⁸ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA
¹⁷⁹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA
¹⁸⁰ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

NEVADA FOOD AND AGRICULTURE AT A GLANCE

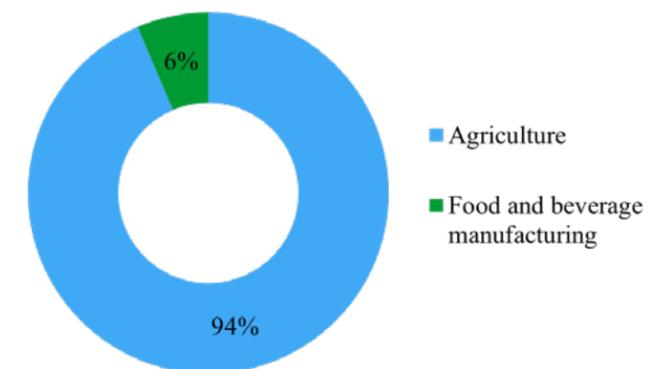
WHITE PINE COUNTY



Economic output of the food and agriculture sector in White Pine County:

- White Pine County had a total economic output of **\$39.5 million** in 2018.
- White Pine County had a total economic output of **\$33.4 million** in 2020.
- In total, the food and agriculture sector represents **2.21%** of White Pine County's total economic output of \$1.79 billion.

WHITE PINE COUNTY FOOD & AGRICULTURE SECTOR ECONOMIC OUTPUT IN 2020



Source: Implan Group, LLC. Implan (2020)

THE FOOD AND AGRICULTURE SECTOR IN WHITE PINE COUNTY

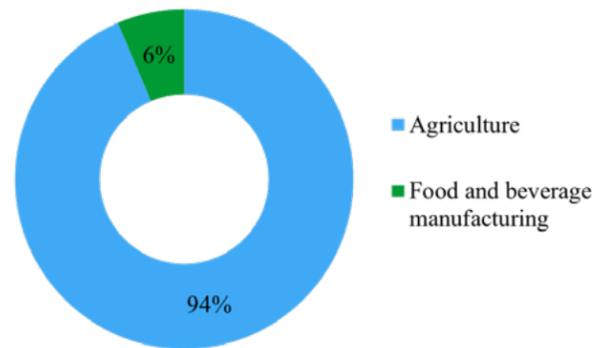
Economic output of the food and agriculture sector:

- \$39.5 million was the total economic output of the food and agriculture sector in 2018.
- \$33.4 million is the projected economic output of the food and agriculture sector for 2020.
- The food and agriculture sector makes up 2.21% of White Pine County's total economic output of \$1.79 billion in 2018.¹⁸¹

White Pine County's agriculture industry (ranching, farming, agriculture support) had a total economic output of \$36.9 million in 2018. In 2020, the economic output of agriculture declined to \$30.9 million. A large portion of this contraction was caused by declines in agriculture commodity prices impacted by trade conflicts and COVID-19. This decline impacted portions of the sector producing raw commodities like cattle and crops significantly. In White Pine County, the crop sector declined by \$1.96 million.

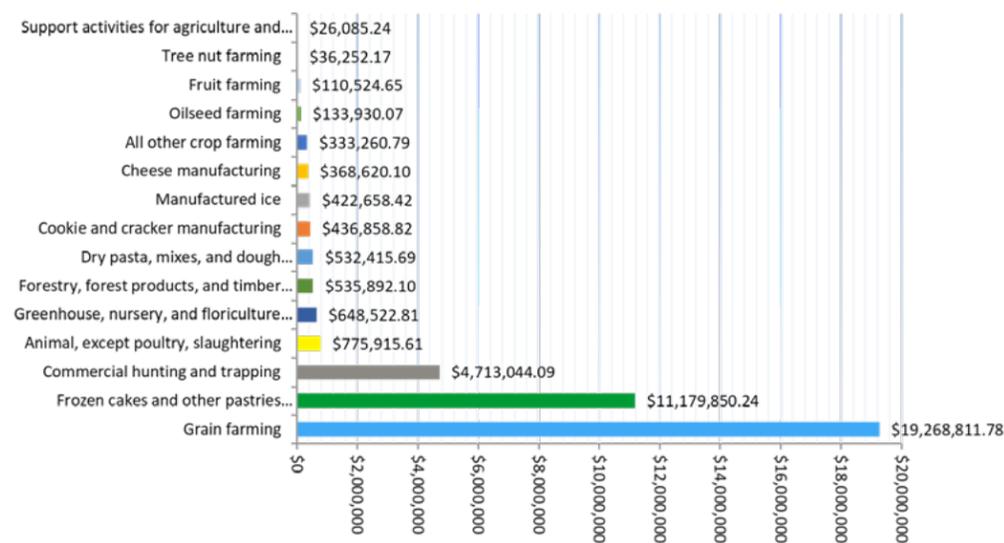
The beef cattle industry's economic output declined by \$3.36 million. In 2018, food and beverage manufacturing had a total economic output of \$2.5 million and declined to \$2.4 million in 2020.¹⁸²

Figure 191: White Pine County food & agriculture sector breakdown



Source: Implan Group, LLC. Implan (2020)

Figure 192: White Pine County economic output of food & agriculture sector in 2018



Source: Implan Group, LLC. Implan (2020)

181 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

182 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

ECONOMIC MULTIPLIERS OF FOOD AND AGRICULTURE

The following is an analysis of output multipliers for White Pine County by individual food and agriculture industry category. These multipliers represent the economic impact of a dollar of production by an industry. For example, in Figure 193, \$1.00 of production by grain farming is going to have an economic multiplier of 1.22. This means that for every dollar of production this business produces, there will be more than \$0.22 in additional regional economic activity from business to business transactions. This does not include the additional economic impact created from induced impacts like household spending.¹⁸³

Figure 193: White Pine County output multipliers by industry

Industry	Direct Multiplier
Grain farming	1.22
Fruit farming	1.16
All other crop farming	1.15
Beef cattle ranching and farming, including feedlots, dual purpose	1.34
Poultry and egg production	1.05
Animal production, except cattle and poultry and eggs	1.14
Forestry, forest products and timber tract production	1.05
Commercial logging	1.08
Commercial hunting and trapping	1.24
Support activities for agriculture and forestry	1.03
Frozen cakes and other pastries manufacturing	1.06
Bread and bakery product, except frozen, manufacturing	1.16
Roasted nuts and peanut butter manufacturing	1.09
Other snack food manufacturing	1.14
Breweries	1.10

Source: Implan Group, LLC. Implan (2020).

EMPLOYMENT

Food and agriculture sector:

- 281.80 total jobs in 2018
- 254.46 total jobs in 2020 (projected)
- 5.55% of White Pine County's total employment of 5,075 jobs in 2018¹⁸⁴

Agriculture Industry (2018):

- 87.75 agriculture jobs with employee compensation totaling \$4.3million*
- \$22.34 was the average hourly wage in 2018¹⁸⁵

Food and beverage manufacturing (2018):

- 10.91 jobs with employee compensation totaling \$470,000*
- \$20.15 was the average hourly wage in 2018¹⁸⁶

*Not reflective of total employment. Granular level data not available for specific job categories.

183 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

184 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

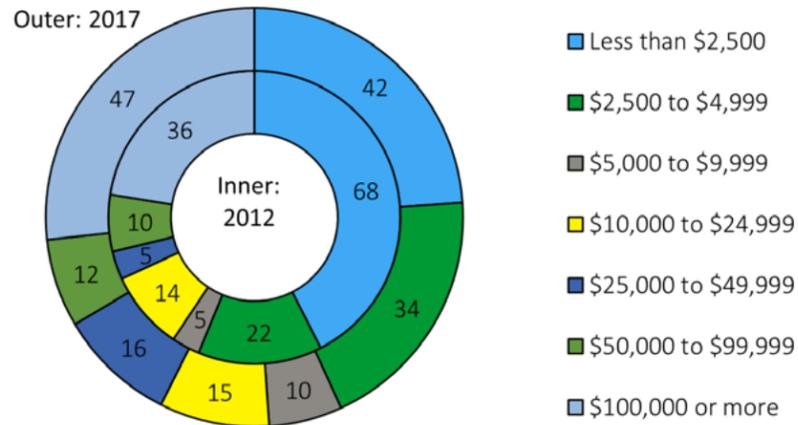
185 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

186 Implan Group, LLC. Implan(2020). Huntersville, NC. Implan.com.

AGRICULTURE FARM DATA

In 2017, there were 176 farms in White Pine County comprising 165,308 acres.¹⁸⁷ The average farm size was 939 acres, while the median farm size was 95 acres. Between 2012 and 2017, the number of farms reported in White Pine County increased from 160 to 176 farms.¹⁸⁸ However, total reported farm acreage declined from 193,315 acres, with the average farm being 1,208 acres in 2012. The total market value, or products sold, in 2017 for farms in White Pine County was \$30.1 million. This was comprised of \$18.4 million from animals and animal products, and \$11.7 million from crops.^{189 190}

Figure 194: Number of farms by value of annual sales



Source: USDA, NASS 2020

Animal industry production can be seen in Figure 195 from 2017. White Pine County additionally produces a number of crops. Figure 196 shows production data from 2017.

Figure 195: White Pine County livestock and animal product production in 2017

Industry	Farms	Number of animals
Cattle and calf	88	27,969
Beef cattle	84	18,072
Dairy cattle	5	7
Hogs and pigs	5	25
Sheep and lambs	36	15,325
Layers (egg production)	39	521

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada

Figure 196: White Pine County livestock and animal product production in 2017

Industry	Farms	Production
All hay	105	95,489 tons, dry
Alfalfa hay	105	85,698 tons, dry
Other hay	19	9,791 tons, dry
Vegetables harvested	22	261 acres
Pumpkins	11	135 acres

*Note: Data omitted by USDA, NASS not included.
Source: 2017 Census of Agriculture – County Data, Nevada



APPENDIX I: METHODOLOGY

Data for this report was collected from several federal and state resources including the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), IMPLAN, Euromonitor, the Census Bureau, the USDA Economic Research Service and through surveys conducted by the NDA.

Economic modeling was primarily generated utilizing IMPLAN's 2018 model year. Additional data was utilized from IMPLAN's 2020 COVID-19 model year to provide insight into 2020. Due to the release date of IMPLAN's 2019 model year only a small portion of this report utilized this economic model.

All trade data has been generated from the Census Bureau and Euromonitor Passport. Overarching export data utilized Census Bureau-USA Trade data through October 2020. Commodity level data was generated utilizing Euromonitor through September 2020.

In 2020, the NDA conducted a series of industry-specific surveys of Nevada's agriculture and food manufacturing sectors. These surveys were conducted to help supplement federal agriculture data and industry economic modeling. Historically, Nevada has been reliant on data from the USDA NASS, which has helped the state formulate policy and identify trends in Nevada's agriculture sector. Publicly reported NASS data has become less reliable due to federal confidentiality rules and issues with data collection. This causes many counties to be omitted from USDA datasets. Seeing these issues and hearing from stakeholders throughout the state, the NDA began conducting its own surveys of Nevada's food and agriculture industries. The surveys were posted on July 17, 2020 and closed on Aug. 21, 2020. In total, the NDA received 777 responses across all industry surveys. This represents a relatively small sample of the food and agriculture sector in Nevada. That being said, this data source allows the NDA to develop a better picture of larger trends in the sector. The NDA will continue to improve access to reliable and timely agriculture data by coordinating with stakeholders and improving our data collection and analytics to provide more reliable agriculture data to industry, local government officials, advocacy groups and Nevadans.

¹⁸⁷ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁸⁸ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA

¹⁸⁹ USDA, NASS 2017 Census of Agriculture for Nevada State Agriculture (April 2019) National Agriculture Statistics Service, USDA

¹⁹⁰ USDA, NASS 2012 Census of Agriculture for Nevada State Agriculture (May 2014) National Agriculture Statistics Service, USDA



APPENDIX II: GLOSSARY OF ECONOMIC TERMS

Agriculture production – Agriculture production describes a specific group of industry primarily engaged in the activities of cultivating soil; planting, raising and harvesting crops; and rearing, feeding and managing animals.

Animal production, except cattle and poultry - This industry category under the livestock industry is comprised of establishments primarily engaged in raising bees for honey, farmed fish, aquaculture (finfish, shellfish, crawfish), dairy goats, sheep, lambs, hogs and pigs, horses and other equines, and other fur-bearing animals.

All other crop production – This industry category under the crop production industry is comprised of establishments primarily engaged in growing hay alfalfa, grass, hay and sorghum seeds, hop farming, herbs and spices, etc.

Direct impacts - Direct impacts are the economic impacts of an industry due to changes to front end businesses that receive expenses or operating revenue as a direct consequence of an industry. Direct impacts are related to original purchases or direct sales from primary suppliers.

Economic contribution – Economic contribution is defined as the gross changes in a region’s existing economy that can be attributed to a given industry, event or policy. The contribution analysis looks at the actual regional data and the current linkages that exist within the economy.

Employment - A job in IMPLAN equals the annual average of monthly jobs in that industry. This is the same definition used by Quarterly Census of Employment and Wages (QCEW), U.S. Bureau of Labor Statistics (BLS), and Bureau of Economic Analysis (BEA). A job can be either full-time or part-time and will be listed as a decimal to represent that ratio.

Farm - USDA defines a farm as any place that produced and sold—or normally would have produced and sold—at least \$1,000 of agricultural products during a given year. USDA uses acres of crops and head of livestock to determine if a place with sales less than \$1,000 could normally produce and sell at least that amount. (Note: Previous reports have distinguished between farms and ranches. For the purpose of this report, “farm” refers to any establishment producing crops or livestock.)

Farm cash receipts - The gross income from sales of crops, livestock and livestock products during a calendar year. The USDA, Economic Research Service (ERS) uses USDA, National Agricultural Statistics Service (NASS) estimates to develop state level cash receipts.

Food and agriculture sector – Food and agriculture sector refers to a larger segment of the economy comprised of a large group of establishments primarily engaged in agriculture production and food manufacturing which make up the food manufacturing industries and the agriculture industries.

Food manufacturing – Food manufacturing industries transform raw agricultural products into products for consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

Indirect impacts - Indirect impacts are the economic impacts of an industry due to changes in the activity of an industry’s suppliers. Indirect impacts include the spending that cattle producer’s suppliers make when purchasing goods and services from their own suppliers (i.e. secondary suppliers) to meet the demand generated by the cattle industry.

Induced impacts - Induced impacts are the economic impacts of an industry due to shifts in spending on goods and services because of the payroll of the directly and indirectly affected businesses. In the case of cattle production, induced impacts reflect the additional spending by the employees of the cattle producers’ suppliers (primary suppliers) and their suppliers’ suppliers (secondary suppliers).

Labor income - All forms of employment income, including employee compensation (wages and benefits) and proprietor income.

Output - Output represents the value of industry production. In IMPLAN, these are annual production estimates for the year of the data set and are in producer prices. For manufacturers, this would be sales plus/minus change in inventory. For service sectors, production equals sales. For retail and wholesale trade, output equals gross margin and not gross sales.

Output multipliers – Describes the total output generated as a result of 1 dollar of output in the target industry.

Support activities for agriculture and forestry - These industries provide support services essential to agriculture and forestry production. These support activities may be performed by the agriculture or forestry producing establishment, or conducted independently as an alternative source of inputs required for the production process for a given crop, animal or forestry industry.



Nevada Department
of Agriculture