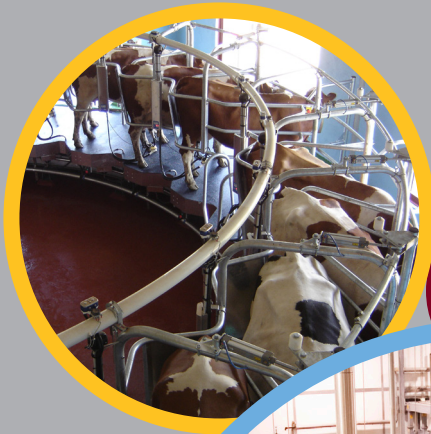




Department of
Job and Family Services

TO STRENGTHEN OHIO'S FAMILIES WITH SOLUTIONS TO TEMPORARY CHALLENGES

Food Processing Industry Cluster



Ohio Employment Trends

September 2015

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Executive Summary

- The food processing cluster consists of 10 industries responsible for processing raw materials into food products and drinks.
- In 2013, the food processing industry cluster's employment of more than 63,000 accounted for 1.5 percent of total Ohio employment. During the 2007 to 2009 recession, employment in the food processing industry cluster declined 1.0 percent (-621), compared to a decline of 7.8 percent (-356,221) in total Ohio employment.
- Animal food manufacturing, fruit and vegetable preserving and specialty food manufacturing, dairy product manufacturing, bakeries and tortilla manufacturing, and other food manufacturing industries have higher employment concentrations in Ohio, compared to the U.S. as a whole.
- Within the food processing cluster, the bakeries and tortilla manufacturing industry has the largest number of establishments (425) and the largest workforce, with employment exceeding 12,000.
- Two industries in the food processing cluster are expected to have job growth from 2012 to 2022: fruit and vegetable preserving and specialty food manufacturing (530), and animal slaughtering and processing (380).
- About 46 percent of workers in the food processing cluster are age 45 or older, compared to 45 percent for all Ohio workers. Retirements within the cluster should be similar to retirements in other industries.
- Typical education at entry for 22 of the 25 largest occupations in the food processing cluster is a high school diploma or less, and most of these occupations require on-the-job training.

Introduction

Food processing is the processing of raw materials into food products and drinks. The food processing industry cluster has 10 industries. Figure 1 shows employment figures for eight industries in the food processing cluster, displayed according to their North American Industry Classification System (NAICS) codes. Industries 3112, grain and oilseed milling, and 3117, seafood product preparation and packaging, are not presented due to limited data. In 2013, the food processing cluster employed more than 63,930 workers, about 1.5 percent of Ohio's total employment.

Figure 1. Food Processing Cluster Industries

NAICS Code	Industry Title	2013 Employment
3111	Animal Food Manufacturing	2,690
3113	Sugar and Confectionery Product Manufacturing	2,310
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	12,226
3115	Dairy Product Manufacturing	7,244
3116	Animal Slaughtering and Processing	10,717
3118	Bakeries and Tortilla Manufacturing	12,627
3119	Other Food Manufacturing	7,431
3121	Beverage Manufacturing	6,926

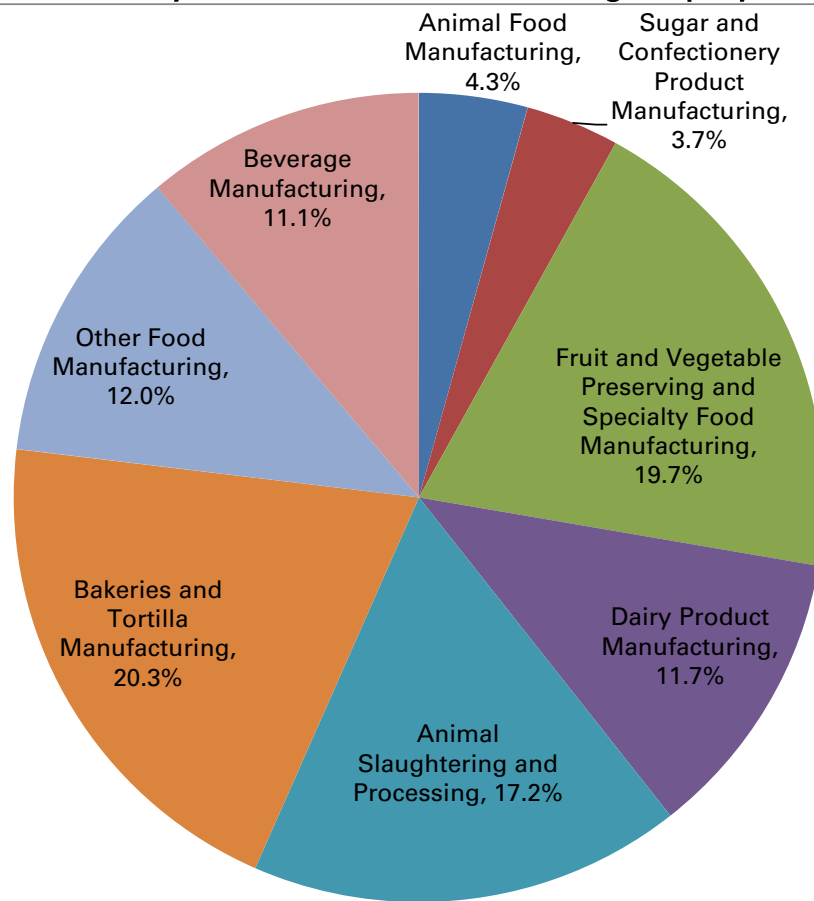
Source: Quarterly Census of Employment and Wages

Ohio is a good location for food processing because of its accessibility to the grain belt and the populous Eastern markets. Ohio is within 600 miles of half of the U.S. population and within 61 percent of all U.S. and Canadian manufacturing locations. Ohio has a strong transportation infrastructure and a low-cost business environment, making it one of the best locations to access suppliers and customers.

Cluster Composition

Figure 2 shows each industry's share of the food processing cluster's total private employment in 2013. Bakeries and tortilla manufacturing had the largest share of food processing employment, at 20.3 percent. It was followed by fruit and vegetable preserving and specialty food manufacturing with 19.7 percent, animal slaughtering and processing with 17.2 percent, other food manufacturing with 12.0 percent, dairy product manufacturing with 11.7 percent, and beverage manufacturing with 11.1 percent. The remaining industries each had less than five percent of total food processing employment.

Figure 2. Industry Shares of Food Processing Employment, 2013



Source: Quarterly Census of Employment and Wages

Industry Employment Concentration

An industry's location quotient (LQ) is a measure of how significant that industry is to a particular region's economy. Figure 3 lists the food processing industries and their location quotients for Ohio. Values greater than 1.2 mean the industry's concentration of employment in Ohio is significantly greater than the U.S. average. This suggests that these establishments serve food processing needs beyond their local areas. In 2013, three food processing industries had location quotients greater than 1.2: fruit and vegetable preserving and specialty food manufacturing (LQ 1.83), dairy product manufacturing (LQ 1.39), and animal food manufacturing (LQ 1.29).

Figure 3. Industry Location Quotients, 2013

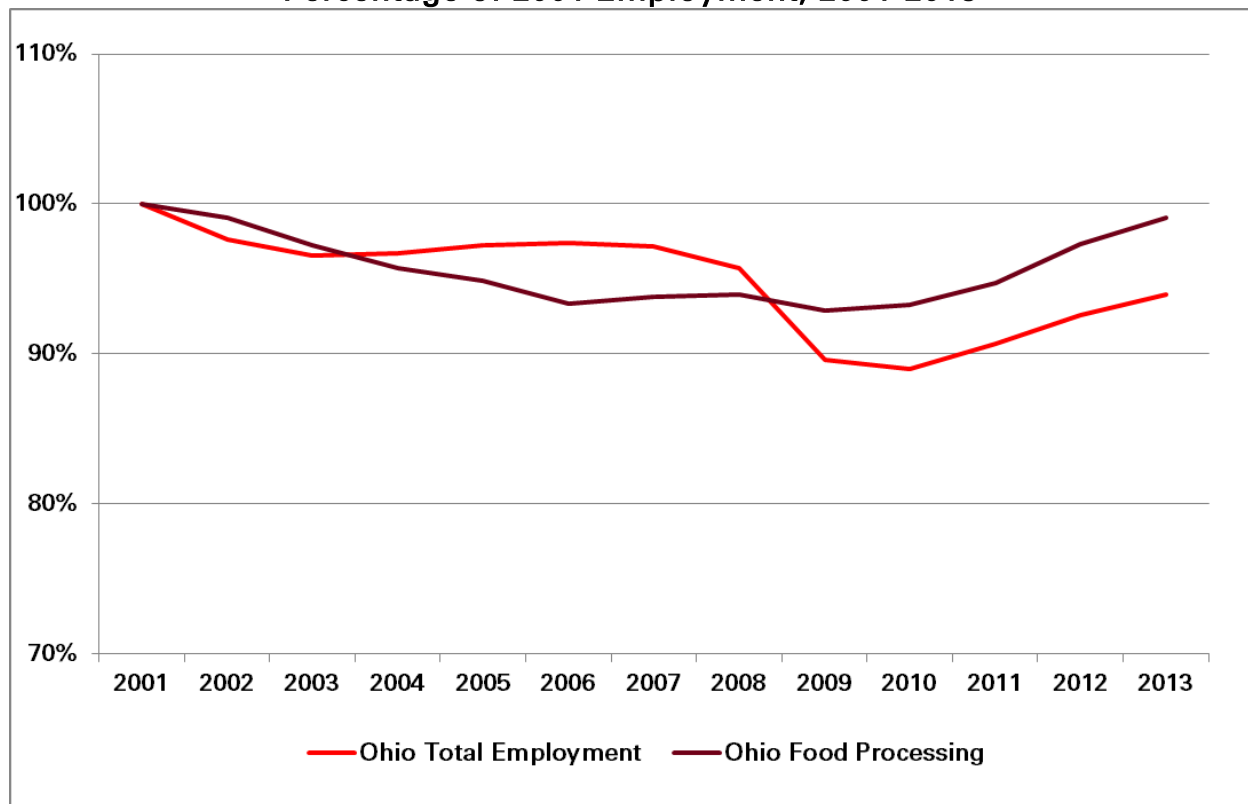
NAICS Code	NAICS Title	Location Quotient
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	1.83
3115	Dairy Product Manufacturing	1.39
3111	Animal Food Manufacturing	1.29
3118	Bakeries and Tortilla Manufacturing	1.14
3119	Other Food Manufacturing	1.07
3121	Beverage Manufacturing	0.96
3113	Sugar and Confectionery Product Manufacturing	0.88
3116	Animal Slaughtering and Processing	0.57

Source: U.S. Bureau of Labor Statistics

Cluster Employment Trends

Figure 4 shows the percent change in annual employment for the food processing cluster and Ohio total employment from 2001 to 2013. Both had similar declines following the 2001 recession. From 2004 to 2007, however, the food processing industry continued to decline while Ohio's total employment was flat. The 2007 to 2009 recession had a greater impact on Ohio's total employment than on the food processing cluster. Food processing cluster employment declined 2.6 percent from 2007 to 2009, but Ohio total employment declined 7.8 percent. From 2010 to 2013, both Ohio total employment and the food processing cluster began recovering from the recession. In 2013, Ohio total employment was 94.0 percent of its 2001 employment level; the food processing cluster was 101.5 percent of its 2001 employment.

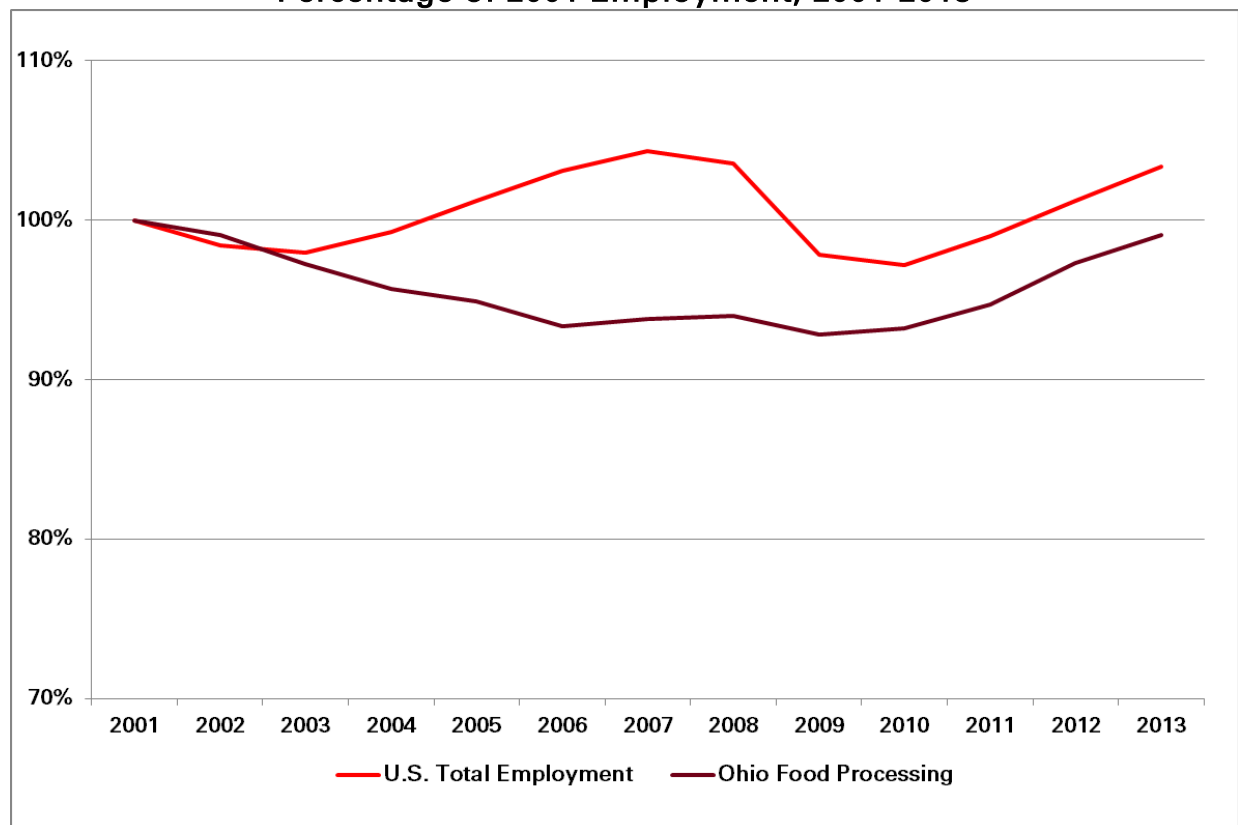
Figure 4. Ohio Food Processing Cluster and Ohio Total Employment as a Percentage of 2001 Employment, 2001-2013



Source: Quarterly Census of Employment and Wages

Figure 5 shows the percent change in annual Ohio food processing cluster employment and U.S. total employment from 2001 to 2013. From 2003 through 2007, U.S. total employment grew while Ohio food processing employment declined. From 2010 to 2013, both the Ohio food processing cluster and U.S. total employment were in similar recoveries from the 2007 to 2009 recession.

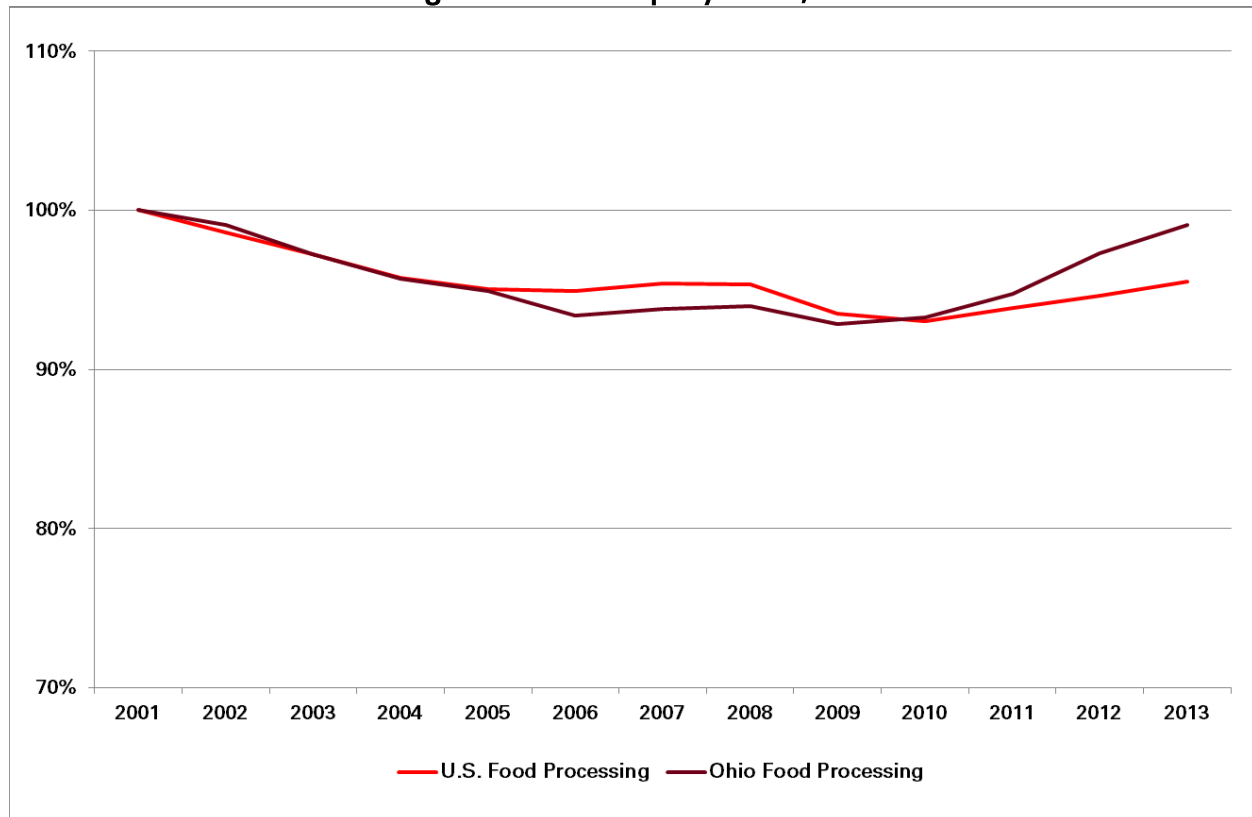
Figure 5. U.S. Total Employment and Ohio Food Processing Employment as a Percentage of 2001 Employment, 2001-2013



Source: U.S. Bureau of Labor Statistics

Figure 6 shows the percent change in annual employment from 2001 to 2013 for the Ohio food processing cluster and the U.S. food processing cluster. Both experienced similar growth and decline within the timeframe. During the 2007 to 2009 recession, Ohio food processing cluster employment declined 1.0 percent while U.S. food processing industries declined 2.0 percent. From 2010 to 2012, both were in similar recoveries from the 2007 to 2009 recession.

Figure 6. U.S. Food Processing and Ohio Food Processing Employment as a Percentage of 2001 Employment, 2001-2013



Source: U.S. Bureau of Labor Statistics

Industry Employment Trends

This section presents annual employment data from 2000 through 2013, when appropriate, for each of the industries in the food processing cluster. The nation experienced two recessions during this period, in 2001 and from late 2007 to mid-2009. Each cluster industry responded to the recessions differently.

Animal Food Manufacturing, NAICS 3111

This industry manufactures food and feed for animals from such ingredients as grains, oilseed mill products and meat products. Industry employment peaked in 2001 at 3,648 jobs, then declined to 2,622 in 2011. From 2000 to 2013, the industry lost 873 jobs (-24.5 percent) and gained 11 establishments (15.1 percent).

Figure 7. Animal Food Manufacturing

Year	Establishments	Employment
2000	73	3,563
2001	73	3,648
2002	70	3,314
2003	70	2,778
2004	70	2,782
2005	71	2,831
2006	74	2,765
2007	79	2,822
2008	80	2,734
2009	80	2,698
2010	82	2,685
2011	84	2,622
2012	85	2,678
2013	84	2,690
Net Change	11	(873)
Percent Change	15.1%	-24.5%

Source: Quarterly Census of Employment and Wages

Sugar and Confectionery Product Manufacturing, NAICS 3113

This industry processes agricultural inputs — such as sugarcane, beets or cacao — to create a new product, such as sugar or chocolate. It also further processes sugar and chocolate. Employment and establishment data from 2000 to 2006 are not available. However, from 2007 to 2013, the industry gained 91 jobs (4.1 percent) and two establishments (2.4 percent).

Figure 8. Sugar and Confectionery Product Manufacturing

Year	Establishments	Employment
2007	83	2,219
2008	86	2,221
2009	85	2,035
2010	85	2,020
2011	83	2,122
2012	79	2,171
2013	85	2,310
Net Change	2	91
Percent Change	2.4%	4.1%

Source: Quarterly Census of Employment and Wages

Fruit and Vegetable Preserving and Specialty Manufacturing, NAICS 3114

Fruit and vegetable preserving and specialty manufacturing involve establishments that freeze food and those that use such preservation processes as pickling, canning and dehydrating. Both types begin their production process with inputs of vegetable or animal origin. In 2013, industry employment peaked at 12,226 jobs. The number of establishments fluctuated but did not change significantly from 2000 to 2013.

Figure 9. Fruit and Vegetable Preserving and Specialty Manufacturing

Year	Establishments	Employment
2000	71	11,595
2001	67	11,687
2002	70	11,630
2003	68	12,114
2004	66	11,825
2005	68	11,568
2006	74	11,431
2007	74	11,524
2008	73	11,468
2009	73	11,518
2010	71	11,802
2011	71	11,958
2012	71	11,986
2013	72	12,226
Net Change	1	631
Percent Change	1.4%	5.4%

Source: Quarterly Census of Employment and Wages

Dairy Product Manufacturing, NAICS 3115

This industry manufactures dairy products from raw milk, processed milk and dairy substitutes. From 2000 to 2013, the industry lost 842 jobs (-10.4 percent) and gained one establishment (1.5 percent).

Figure 10. Dairy Product Manufacturing

Year	Establishments	Employment
2000	68	8,086
2001	65	8,268
2002	61	8,241
2003	68	8,176
2004	61	7,874
2005	58	7,876
2006	69	7,758
2007	69	7,573
2008	70	7,509
2009	71	7,409
2010	68	7,457
2011	66	7,365
2012	67	7,351
2013	69	7,244
Net Change	1	(842)
Percent Change	1.5%	-10.4%

Source: Quarterly Census of Employment and Wages

Animal Slaughtering and Processing, NAICS 3116

Animal slaughtering and processing involves slaughtering animals; preparing processed meats and meat byproducts; and rendering and/or refining animal fat, bones and meat scraps. This industry includes assembly cutting and packing of meats from purchased carcasses. Employment peaked in 2013, with 10,717 workers. The industry had 2,362 more workers and six fewer establishments in 2013 than in 2007.

Figure 11. Animal Slaughtering and Processing

Year	Establishments	Employment
2000	176	9,266
2001	172	9,201
2002	174	9,442
2003	178	9,413
2004	170	9,045
2005	170	8,965
2006	162	8,519
2007	159	8,355
2008	159	8,946
2009	156	9,052
2010	152	8,977
2011	148	9,386
2012	152	10,504
2013	153	10,717
Net Change	(23)	1451
Percent Change	-13.1%	15.7%

Source: Quarterly Census of Employment and Wages

Bakeries and Tortilla Manufacturing, NAICS 3118

In 2013, bakeries and tortilla manufacturing had the highest employment in the food processing cluster, at 12,627. This accounted for 20.3 percent of cluster employment. Employment peaked in 2006, with 12,876 workers. The industry had 249 fewer workers and 11 more establishments in 2013 than in 2006.

Figure 12. Bakeries and Tortilla Manufacturing

Year	Establishments	Employment
2000	508	13,356
2001	480	13,167
2002	460	12,740
2003	444	12,588
2004	421	12,456
2005	425	12,844
2006	414	12,876
2007	413	12,854
2008	422	12,716
2009	414	12,251
2010	407	12,216
2011	415	12,464
2012	426	12,508
2013	425	12,627
Absolute Change	(83)	(729)
Percent Change	-16.3%	-5.5%

Source: Quarterly Census of Employment and Wages

Other Food Manufacturing, NAICS 3119

This industry manufactures food not made by the other food processing industries (NAICS 3111, 3113, 3114, 3115, 3116 and 3118). Employment peaked in 2002 at 7,749. Its decline was relatively small during the recession, and there has been some recovery. The industry saw a net gain of 250 jobs from 2000 to 2013; the number of establishments decreased by 11 over the same period.

Figure 13. Other Food Manufacturing

Year	Establishments	Employment
2000	120	7,181
2001	118	7,624
2002	113	7,749
2003	102	7,343
2004	106	7,002
2005	105	6,421
2006	111	6,357
2007	114	6,457
2008	111	6,592
2009	113	6,660
2010	112	6,880
2011	114	7,071
2012	113	7,268
2013	109	7,431
Net Change	(11)	250
Percent Change	-9.2%	3.5%

Source: Quarterly Census of Employment and Wages

Beverage Manufacturing, NAICS 3121

The beverage manufacturing industry involves the manufacture of nonalcoholic beverages, the manufacture of alcoholic beverages through the fermentation process, and the production of distilled alcoholic beverages. Ice manufacturing is included in this industry, even though it is not a beverage. Establishment data for 2000 to 2008 and employment data for 2000, 2007 and 2008 are not available. From 2009 to 2013, employment grew by 208 jobs, and the industry gained 48 establishments.

Figure 14. Beverage Manufacturing

Year	Establishments	Employment
2000	NA	NA
2001	NA	6,817
2002	NA	6,872
2003	NA	6,751
2004	NA	7,328
2005	NA	7,287
2006	NA	7,094
2007	NA	NA
2008	NA	NA
2009	95	6,718
2010	105	6,556
2011	120	6,603
2012	129	6,553
2013	143	6,926
Net Change	NA	NA
Percent Change	NA	NA

Source: Quarterly Census of Employment and Wages

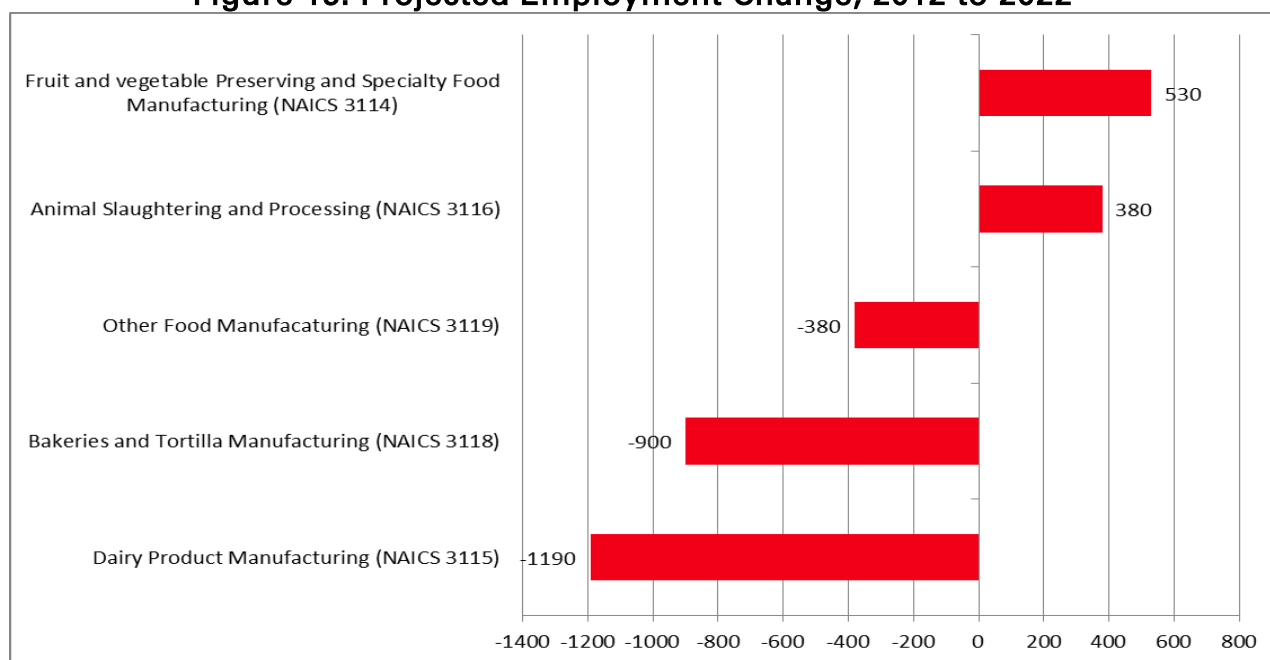
The Food Processing Workforce

Three factors affect the workforce needs of an industry: industry growth or decline, the need to replace workers who leave for other industries or other purposes (such as retirement), and the availability of trained workers or workers who can be trained. The following section examines projected industry employment, worker age, educational distributions and occupational needs for the food processing cluster.

Projected Employment Change, Ohio 2012 to 2022

Figure 15 shows the long-term employment projections for five industries in the food processing cluster¹. Although the food processing cluster is expected to decrease by more than 2,000 jobs from 2012 to 2022, a few industries within the cluster are projected to grow. The largest and fastest growth is expected to occur in the fruit and vegetable preserving and specialty food manufacturing industry, with as many as 530 jobs added (4.4 percent). Growth is also projected for animal slaughtering and processing (380 jobs). Dairy product manufacturing is expected to continue shrinking, with a decline of 1,190 jobs (-16.2 percent).

Figure 15. Projected Employment Change, 2012 to 2022



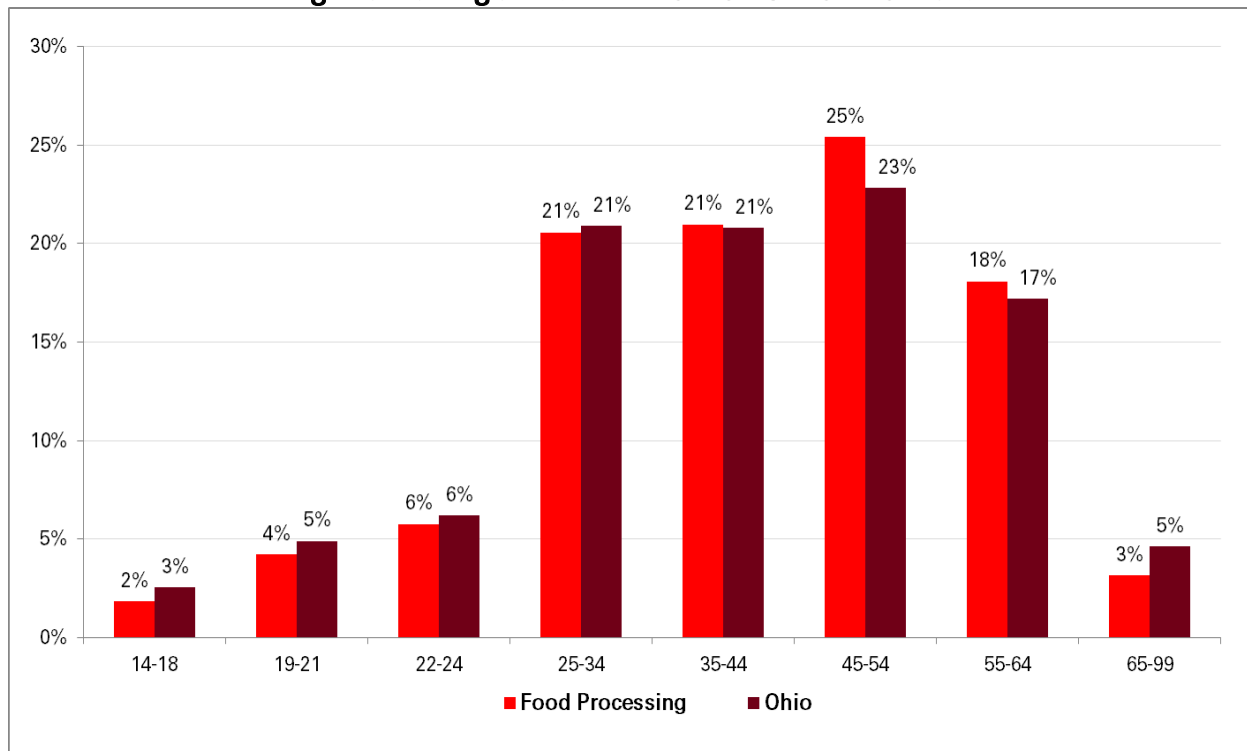
Source: Ohio Bureau of Labor Market Information

Age Distribution of Ohio Workers

Figure 16 shows the age distribution of workers in the food processing cluster compared to all Ohio workers for the fourth quarter of 2013. On average, workers in the food processing cluster are comparable in age to workers in other Ohio industries. About 46 percent of cluster workers are age 45 or older, compared to 45 percent for all Ohio workers. Replacement needs of retiring workers should be similar in the food processing cluster and other Ohio businesses.

¹ The employment projections for the other industries are very small.

Figure 16. Age Distribution of Ohio Workers



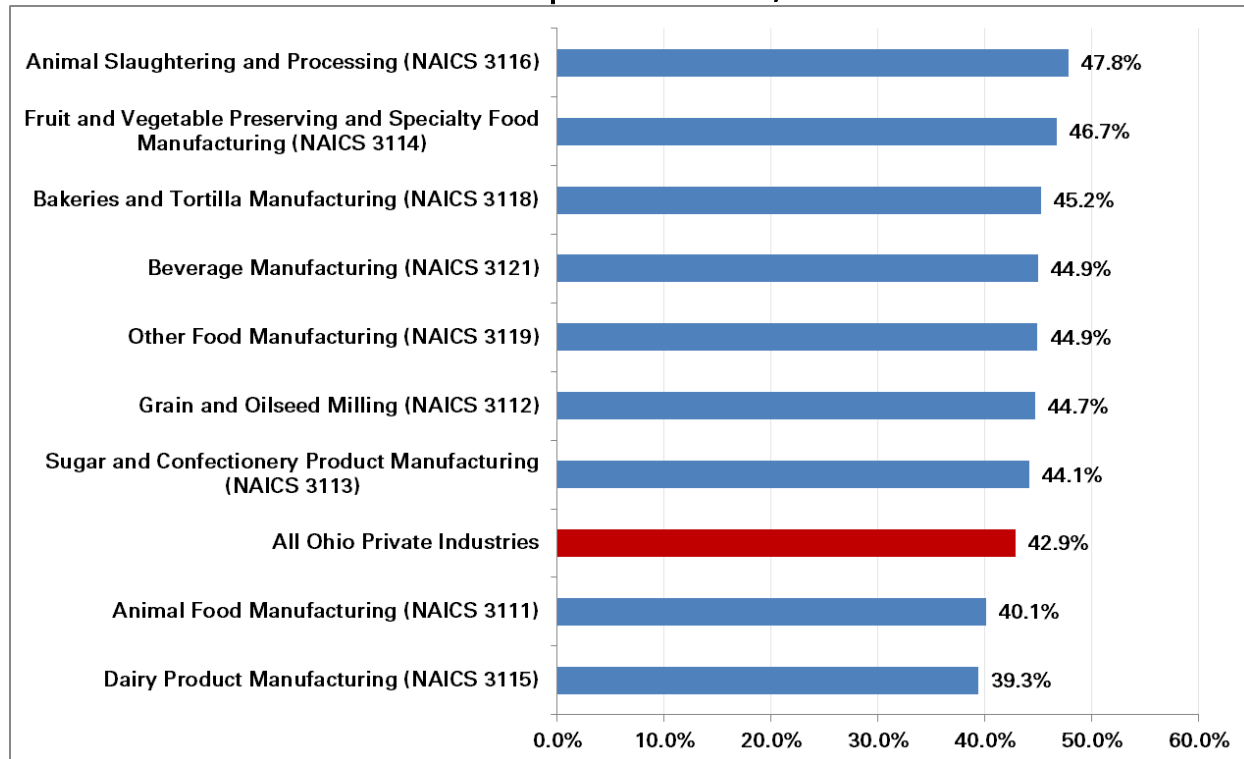
Source: U.S. Census Quarterly Workforce Indicators, 2013 Q4

Food Processing Cluster Education and Training Needs

Because of projected growth and an aging workforce, food processing cluster industries need to recruit workers. As Figure 17 shows, many occupations in this cluster have minimal training and education requirements.

Across all Ohio private industries, an average of 42.9 percent of workers 25 and older had a high school diploma or less in 2013. Among the food processing cluster industries, only animal food manufacturing and dairy product manufacturing had a lower percentage of these workers, at 40.1 and 39.3 percent, respectively. Seven industries had more than 40 percent of workers 25 and older with a high school diploma or less.

Figure 17. Percent of Food Processing Workers 25 and Older with a High School Diploma or Less, 2013



Source: U.S. Census Quarterly Workforce Indicators, 2013

Although every business has a unique set of jobs, businesses in the same industry and related industries tend to employ similar occupations. Figure 18 shows the typical education levels, on-the-job training (OJT) and related work experience associated with the 25 occupations that make up the largest share of employment in the food processing cluster. Entrants to 23 of these top 25 occupations typically have a high school diploma or less. Twenty-three of those occupations require only short-, moderate- or long-term OJT¹.

Many jobs in the food processing cluster have basic education and training needs. This should make it relatively easy to fill vacant positions.

² Short-term OJT lasts less than one month. Moderate-term OJT lasts one to 12 months and may include informal training. Long-term OJT lasts more than 12 months combined work experience and formal classroom instruction.

Figure 18. Typical Entry Education, On-the-Job Training and Related Work Experience Needs for the 25 Largest Food Processing Occupations

SOC Code	Occupational Title	Typical Education Level at Entry	OJT/Related Experience
51-9111	Packaging and Filling Machine Operators and Tenders	High school diploma or equivalent	Moderate-term OJT
51-3092	Food Batchmakers	High school diploma or equivalent	Moderate-term OJT
51-3011	Bakers	Less than high school	Long-term OJT
53-7064	Packers and Packagers, Hand	Less than high school	Short-term OJT
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	Less than high school	Short-term OJT
51-3023	Slaughterers and Meat Packers	Less than high school	Short-term OJT
51-2092	Team Assemblers	High school diploma or equivalent	Moderate-term OJT
53-7051	Industrial Truck and Tractor Operators	Less than high school	Short-term OJT
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 yrs exp.
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	Less than high school	Short-term OJT
49-9071	Maintenance and Repair Workers, General	High school diploma or equivalent	Long-term OJT
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	High school diploma or equivalent	Moderate-term OJT
51-9198	Helpers--Production Workers	Less than high school	Short-term OJT
49-9041	Industrial Machinery Mechanics	High school diploma or equivalent	Long-term OJT
53-3032	Heavy and Tractor-Trailer Truck Drivers	Postsecondary non-degree award	Short-term OJT
51-3093	Food Cooking Machine Operators and Tenders	High school diploma or equivalent	Moderate-term OJT
53-3031	Driver/Sales Workers	High school diploma or equivalent	Short-term OJT
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	Moderate-term OJT
53-7061	Cleaners of Vehicles and Equipment	Less than high school	Short-term OJT
41-2031	Retail Salespersons	Less than high school	Short-term OJT
43-5081	Stock Clerks and Order Fillers	Less than high school	Short-term OJT
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	Moderate-term OJT
43-5071	Shipping, Receiving, and Traffic Clerks	High school diploma or equivalent	Short-term OJT
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	Less than high school	Moderate-term OJT

Source: U.S. Bureau of Labor Statistics

Food Processing Cluster Industry Staffing Patterns

A staffing pattern refers to the number and types of occupations typically needed by an industry. The following tables show the most common occupations in each industry's staffing pattern, listed by their Standard Occupational Classification (SOC) codes, and each occupation's projected employment. Some industries are not presented here due to limited data.

Animal Food Manufacturing, NAICS 3111

Mixing and blending machine setters, operators, and tenders (SOC 51-9023) is the largest occupation in this industry. Nearly all animal food manufacturing occupations listed below are expected to decline by more than 8 percent through 2022. Industrial machinery mechanics (SOC 49-9041) are expected to grow by 8.5 percent.

Figure 19. Ohio Staffing Pattern for Animal Food Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	515	466	(49)	-9.5%
51-9111	Packaging and Filling Machine Operators and Tenders	308	278	(30)	-9.7%
53-7051	Industrial Truck and Tractor Operators	196	160	(36)	-18.4%
49-9041	Industrial Machinery Mechanics	129	140	11	8.5%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	105	96	(9)	-8.6%
51-1011	First-Line Supervisors of Production and Operating Workers	85	77	(8)	-9.4%
43-9061	Office Clerks, General	74	63	(11)	-14.9%

Source: Ohio Bureau of Labor Market Information

Sugar and Confectionery Product Manufacturing, NAICS 3113

The largest occupation in the sugar and confectionery product manufacturing industry is food batchmakers (SOC 51-3092). All sugar and confectionery product manufacturing occupations are expected to decline by more than 10 percent through 2022.

Figure 20. Ohio Staffing Pattern for Sugar and Confectionery Product Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-3092	Food Batchmakers	490	418	(72)	-14.7%
53-7064	Packers and Packagers, Hand	339	289	(50)	-14.7%
51-9111	Packaging and Filling Machine Operators and Tenders	322	259	(63)	-19.6%
41-2031	Retail Salespersons	92	79	(13)	-14.1%
41-2011	Cashiers	81	65	(16)	-19.8%
51-1011	First-Line Supervisors of Production and Operating Workers	80	68	(12)	-15.0%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	38	33	(5)	-13.2%
49-9071	Maintenance and Repair Workers, General	36	31	(5)	-13.9%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaner	32	28	(4)	-12.5%

Source: Ohio Bureau of Labor Market Information

Fruit and Vegetable Preserving and Specialty Food Manufacturing, NAICS 3114

The largest occupation in the fruit and vegetable preserving and specialty food manufacturing industry is team assemblers (SOC 51-2092). With the exception of industrial truck and tractor operators (SOC 53-7051), occupations in this industry are expected to grow between 3.7 and 25.2 percent from 2012 to 2022. Overall, this industry is expected to add more than 380 jobs from 2012 to 2022.

Figure 21. Ohio Staffing Pattern for Fruit and Vegetable Preserving and Specialty Food Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-2092	Team Assemblers	1,594	1,653	59	3.7%
51-9111	Packaging and Filling Machine Operators and Tenders	1,543	1,601	58	3.8%
51-3092	Food Batchmakers	808	838	30	3.7%
53-7051	Industrial Truck and Tractor Operators	595	557	(38)	-6.4%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	577	599	22	3.8%
53-7061	Cleaners of Vehicles and Equipment	524	545	21	4.0%
51-3093	Food Cooking Machine Operators and Tenders	374	389	15	4.0%
51-1011	First-Line Supervisors of Production and Operating Workers	369	384	15	4.1%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	330	413	83	25.2%
49-9071	Maintenance and Repair Workers, General	297	308	11	3.7%
49-9041	Industrial Machinery Mechanics	292	364	72	24.7%
43-5071	Shipping, Receiving, and Traffic Clerks	260	270	10	3.8%
53-7063	Machine Feeders and Offbearers	205	213	8	3.9%
51-3099	Food Processing Workers, All Other	163	170	7	4.3%
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	151	157	6	4.0%
51-9023	Mixing and Blending Machine Setters, Operators and Tenders	135	140	5	3.7%

Source: Ohio Bureau of Labor Market Information

Dairy Product Manufacturing, NAICS 3115

Packaging and filling machine operators and tenders (SOC 51-9111) is the largest occupation in this industry. Occupations in the dairy product manufacturing industry are expected to decline by more than 7 percent through 2022. Industrial machinery mechanics (SOC 49-9041) is expected to grow by 0.6 percent.

Figure 22. Ohio Staffing Pattern for Dairy Product Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-9111	Packaging and Filling Machine Operators and Tenders	871	727	(144)	-16.5%
53-3031	Drivers/Sales Workers	466	389	(77)	-16.5%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	410	342	(68)	-16.6%
51-2092	Team Assemblers	351	294	(57)	-16.2%
51-3092	Food Batchmakers	307	257	(50)	-16.3%
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	278	233	(45)	-16.2%
51-1011	First-Line Supervisors of Production and Operating Workers	257	216	(41)	-16.0%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	175	147	(28)	-16.0%
49-9041	Industrial Machinery Mechanics	168	169	1	0.6%
49-9071	Maintenance and Repair Workers, General	152	127	(25)	-16.4%
11-3051	Industrial Production Managers	105	88	(17)	-16.2%
43-4051	Customer Service Representatives	96	80	(16)	-16.7%
43-5071	Shipping, Receiving, and Traffic Clerks	92	77	(15)	-16.3%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	85	71	(14)	-16.5%
49-9043	Maintenance Workers, Machinery	80	74	(6)	-7.5%

Source: Ohio Bureau of Labor Market Information

Animal Slaughtering and Processing, NAICS 3116

The largest occupation in the animal slaughtering and processing industry is slaughterers and meat packers (SOC 51-3023). Overall, this industry is expected to add more than 230 jobs from 2012 to 2022. Inspectors, testers, sorters, samplers and weighers (SOC 51-9061) has the largest projected growth (25.8 percent), and most other occupations will have about 6 percent growth. Meat, poultry, and fish cutters and trimmers (SOC 51-3022) will add the most jobs, at 107.

Figure 23. Ohio Staffing Pattern for Animal Slaughtering and Processing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-3023	Slaughterers and Meat Packers	2,718	2,596	(122)	-4.5%
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	1,767	1,874	107	6.1%
51-3093	Food Cooking Machine Operators and Tenders	534	566	32	6.0%
49-9071	Maintenance and Repair Workers, General	441	468	27	6.1%
51-9111	Packaging and Filling Machine Operators and Tenders	402	426	24	6.0%
51-2092	Team Assemblers	345	366	21	6.1%
51-1011	First-Line Supervisors of Production and Operating Workers	321	341	20	6.2%
53-7064	Packers and Packagers, Hand	277	294	17	6.1%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	255	271	16	6.3%
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	250	265	15	6.0%
51-3092	Food Batchmakers	230	244	14	6.1%
53-7061	Cleaners of Vehicles and Equipment	187	198	11	5.9%
51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	163	205	42	25.8%
11-3051	Industrial Production Managers	134	142	8	6.0%

Source: Ohio Bureau of Labor Market Information

Bakeries and Tortilla Manufacturing, NAICS 3118

Bakers (SOC 51-3011) is the largest occupation in this industry. Industrial machinery mechanics (SOC 49-9041) is expected to grow by 11.8 percent. Declines ranging from 6.3 to 15.9 percent are expected in the remaining occupations.

Figure 24. Ohio Staffing Pattern for Bakeries and Tortilla Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-3011	Bakers	2,726	2,548	(178)	-6.5%
51-3092	Food Batchmakers	1,160	1,085	(75)	-6.5%
51-9198	Helpers--Production Workers	714	667	(47)	-6.6%
51-9111	Packaging and Filling Machine Operators and Tenders	703	617	(86)	-12.2%
41-2031	Retail Salespersons	561	524	(37)	-6.6%
53-7064	Packers and Packagers, Hand	520	486	(34)	-6.5%
49-9071	Maintenance and Repair Workers, General	385	360	(25)	-6.5%
51-1011	First-Line Supervisors of Production and Operating Workers	333	311	(22)	-6.6%
43-5081	Stock Clerks and Order Fillers	327	275	(52)	-15.9%
53-7062	Laborers and Freight Stock and Material Movers, Hand	313	292	(21)	-6.7%
51-9023	Mixing and Blending Machine Setters Operators and Tenders	311	290	(21)	-6.8%
35-3021	Combined Food Preparation and Serving Workers Including Fast Food	300	281	(19)	-6.3%
53-3032	Heavy and Tractor-Trailer Truck Drivers	282	264	(18)	-6.4%
53-3031	Driver/Sales Workers	280	262	(18)	-6.4%
41-2011	Cashiers	247	215	(32)	-13.0%
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	210	196	(14)	-6.7%
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	194	181	(13)	-6.7%
51-2092	Team Assemblers	170	158	(12)	-7.1%
53-7051	Industrial Truck and Tractor Operators	147	124	(23)	-15.6%
49-9041	Industrial Machinery Mechanics	136	152	16	11.8%
53-3033	Light Truck or Delivery Services Drivers	134	125	(9)	-6.7%

Source: Ohio Bureau of Labor Market Information

Other Food Manufacturing, NAICS 3119

The largest occupation in the other food manufacturing industry is packaging and filling machine operators and tenders (SOC 51-9111). Industrial machinery mechanics (SOC 49-9041) has an expected growth of 13.3 percent. The remaining occupations are expected to decline by more than 5.1 percent.

Figure 25. Ohio Staffing Pattern for Other Food Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-9111	Packaging and Filling Machine Operators and Tenders	861	814	(47)	-5.5%
53-7064	Packers and Packagers, Hand	843	798	(45)	-5.3%
51-3092	Food Batchmakers	643	607	(36)	-5.6%
53-7062	Laborers and Freight Stock and Material Movers, Hand	555	525	(30)	-5.4%
51-3093	Food Cooking Machine Operators and Tenders	308	291	(17)	-5.5%
51-1011	First-Line Supervisors of Production and Operating Workers	247	234	(13)	-5.3%
49-9041	Industrial Machinery Mechanics	241	273	32	13.3%
53-3032	Heavy and Tractor-Trailer Truck Drivers	211	200	(11)	-5.2%
53-7063	Machine Feeders and Offbearers	171	161	(10)	-5.8%
53-7051	Industrial Truck and Tractor Operators	160	136	(24)	-15.0%
11-3051	Industrial Production Managers	147	139	(8)	-5.4%
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	115	109	(6)	-5.2%
43-5071	Shipping, Receiving, and Traffic Clerks	111	105	(6)	-5.4%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	105	99	(6)	-5.7%
53-7061	Cleaners of Vehicles and Equipment	104	98	(6)	-5.8%
43-9061	Office Clerks, General	100	90	(10)	-10.0%
43-4051	Customer Service Representatives	79	75	(4)	-5.1%
49-9071	Maintenance and Repair Workers, General	79	75	(4)	-5.1%
19-4031	Chemical Technicians	78	74	(4)	-5.1%
11-1021	General and Operations Managers	73	69	(4)	-5.5%

Source: Ohio Bureau of Labor Market Information

Beverage Manufacturing, NAICS 3121

The largest occupation in this industry is packaging and filling machine operators and tenders (SOC 51-9111). Occupations most prevalent in the beverage manufacturing industry are expected to grow between 0.9 and 21.9 percent from 2012 to 2022.

Figure 26. Ohio Staffing Pattern for Beverage Manufacturing

SOC Code	Occupational Title	2012	2022	Numeric Change	Percent Change
51-9111	Packaging and Filling Machine Operators and Tenders	725	691	(34)	-4.7%
53-7051	Industrial Truck and Tractor Operators	401	366	(35)	-8.7%
53-3032	Heavy and Tractor-Trailer Truck Drivers	399	405	6	1.5%
53-7062	Laborers and Freight, Stock and Material Movers, Hand	384	389	5	1.3%
49-9041	Industrial Machinery Mechanics	247	301	54	21.9%
35-3031	Waiters and Waitresses	239	242	3	1.3%
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	193	196	3	1.6%
51-1011	First-Line Supervisors of Production and Operating Workers	190	192	2	1.1%
49-9091	Coin Vending and Amusement Machine Servicers and Repairers	169	171	2	1.2%
51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	113	114	1	0.9%
49-1011	First-Line Supervisors of Mechanics Installers and Repairers	78	79	1	1.3%
49-9071	Maintenance and Repair Workers, General	76	77	1	1.3%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	70	71	1	1.4%
51-9023	Mixing and Blending Machine Setters Operators and Tenders	69	70	1	1.4%

Source: Ohio Bureau of Labor Market Information

Summary

Ohio is located within 600 miles of half the U.S. population and more than half of the manufacturing facilities in the U.S. and Canada. Employment in the state's food processing cluster industries and Ohio's total employment experienced similar declines before the recession of 2007 to 2009 but experienced smaller employment declines during the recession. Several industries within the food processing cluster are projected to add jobs. The cluster's workforce is comparable in age to workers in other Ohio industries, which should mean replacement needs will be similar. In general, the educational requirements for the largest occupations in the cluster are basic: a high school diploma or less and some on-the-job training.

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