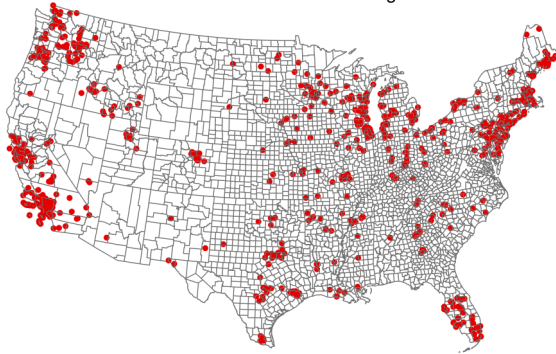


## Agricultural Processing: Frozen Foods

In 2010 there were 659 firms across the U.S. in the frozen food processing industry of which 33, or five percent, were located in Wisconsin. There are clear spatial clusters or geographic “hotspots” of frozen food processors including much of Washington State, parts of California, southern Florida, a region of the Northeast centered around New Jersey and the Chicago metro area including much of southern and eastern Wisconsin. Indeed, in 2012, frozen food manufacturing employed about 5,900 persons paying total labor income (wages, salaries and proprietor income) of almost \$310 million with just over \$2 billion in industry sales.

Frozen Food Manufacturing Plants



If frozen food processing is to be part of the larger food processing economic cluster for Wisconsin one needs to think about how to reinforce the industry. A natural response might be to encourage new frozen food processors to locate or start within Wisconsin. This could be through small business development or recruitment.

An alternative way to think about economic clusters is to examine the input supply chain for the existing industry. A viable economic cluster is more than a large geographic concentration of similar businesses. It is also an

In a 2009 study of the Wisconsin agricultural economy Deller and Williams documented that the food processing industry generates about 252,000 jobs and \$15.5 billion in income. This represents just over seven percent of all employment and just less than seven percent of all income in Wisconsin. In addition, the economic activity associated with food processing generated just over \$1 billion in state and local government revenues. This series of factsheets is aimed at helping better understand the food processing industry in Wisconsin and identify policies that may enhance the competitiveness of the industry.

Agricultural process manufacturing, such as cheese making, vegetable canning and freezing and breweries as well as wineries, remains an important part of the Wisconsin economy. Equally important, the products that are associated with food processing, in particular cheese and beer, are an integral part of the Wisconsinites self-identity. Curly Lambeau, one of the founders of the Green Bay Packers, used funding from his employer, the Indian Packing Company, a meat canning processor, to fund the early operations of the team. The Milwaukee Brewers are named in recognition of the city and state’s long tradition in making beer.

accompanying concentration of firms that fill the input supply chain. Firms, or in this frozen food processors, can buy input supplies from local/regional businesses or input from firms outside the area. Ideally, a viable cluster maximizes inputs from local/regional suppliers and minimizes those that are imported.

Firms could import supplies for one of two reasons. It may be the case that input suppliers are located within the region but food processors elect to import; this can be called a “disconnect” in the market. It could be that cheese plants are simply not aware of those regional suppliers or the specific needs and pricing required by cheese plants cannot be met with regional suppliers. Alternatively it could be that regional suppliers are not available or are too small to meet the needs of the frozen food processing industry; this can be called a “gap”. The question is if the “gap” is sufficiently large to encourage firms to enter hence creating economic growth and development opportunities within Wisconsin.

For frozen food processing in Wisconsin, nearly 44% of all inputs used are imported into the region (i.e., state). Some of these imports make sense, such as nuts from trees where growing conditions in Wisconsin are less than ideal. Many of the inputs could be regionally sourced, such as grains, flour and malt or processed animal meats among others. The question is why are not more of these regionally available inputs not being used? Further, if the inputs are not available regionally, does this represent a new business opportunity?

It could be that frozen food processes need to diversify their input chains to guard against seasonality of production in Wisconsin or poor growing conditions in any given year. But by examining the input supply chain we can better understand the level of vertical integration. Further, by identifying “gaps” and “disconnects” in the supply chain we can identify potential industries that could be promoted to strengthen that supply chain and building a stronger economic cluster.

Inputs to Frozen Food Manufacturing (\$000)					
	Gross Inputs (\$)	Share of Inputs (%)	Regional Inputs (\$)	Share Imported (%)	Imports (\$)
Total Commodity Demand	1,599,441		894,208	44.1	705,233
Employee Compensation	294,369	18.4	294,369	n.a.	n.a.
Grains, Flour, Malt	249,508	15.6	14,996	94.0	234,512
Processed Animal meat, rendered by products and eggs	243,585	15.2	135,304	44.5	108,280
Wholesale trade distribution services	179,652	11.2	141,597	21.2	38,055
Fruits, Vegetables, and Melons	174,118	10.9	81,491	53.2	92,627
Management of companies and enterprises	108,725	6.8	92,753	14.7	15,972
Cheese	105,730	6.6	88,601	16.2	17,129
Paper Products	94,956	5.9	66,977	29.5	27,979
Frozen foods	87,708	5.5	64,132	26.9	23,576
Transportation Services	69,249	4.3	53,601	22.6	15,647
Business Services	61,949	3.9	43,637	29.6	18,312
Electricity and Fossil Fuel	59,763	3.7	40,930	31.5	18,832
Shortening and margarine and other fats and oils products	33,673	2.1	546	98.4	33,128
Real Estate	31,361	2.0	26,484	15.6	4,878
Other	26,503	1.7	13,365	49.6	13,138
Plastics and Petroleum /Chemical products	23,980	1.5	8,488	64.6	15,492
Machinery	16,662	1.0	8,916	46.5	7,746
Fish and Seafood Product	6,204	0.4	480	92.3	5,725
Metal cans, boxes, and other metal containers (light gauge)	5,460	0.3	3,277	40.0	2,183
Soaps and cleaning compounds	5,041	0.3	2,774	45.0	2,267
Waste management and remediation services	4,449	0.3	3,267	26.6	1,182
Sugar and Corn Sweeteners	3,934	0.2	32	99.2	3,902
Telecommunications	3,742	0.2	2,559	31.6	1,183
Tree nuts	3,489	0.2	1	100.0	3,488

References: Deller, Steven C. and Williams, David. 2009. “The Contribution of Agriculture to the Wisconsin Economy.” Department of Agricultural and Applied Economics Staff Paper No. 541. University of Wisconsin-Madison/Extension. (August). [www.aae.wisc.edu/pubs/sps/pdf/](http://www.aae.wisc.edu/pubs/sps/pdf/)