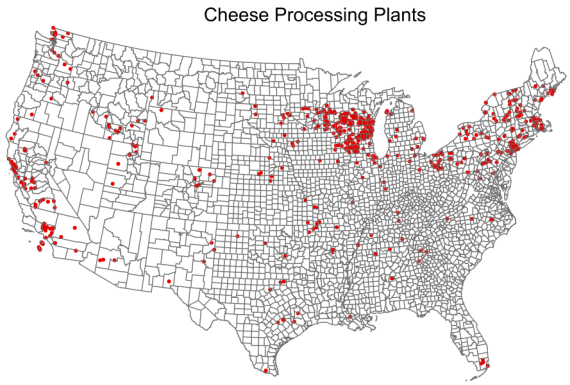
Agricultural Processing in Wisconsin

Agricultural Processing: Cheese Processing

When one thinks of food or agricultural processing in Wisconsin the first sector that comes to mind is cheese processing. In 2010 there were 525 cheese processing plants within the U.S. and 33.1% of those are located in Wisconsin. A simple mapping of cheese plants reveals that there is a strong spatial clustering or concentration in the upper Midwest, specifically Wisconsin. There is a smaller scattering in parts of the Northeast and California and a more random scattering in other parts of the U.S.

But from other analysis presented in this series of agricultural processing fact sheets we know that cheese processing is a strength for Wisconsin, but that strength is weakening. This is not because the cheese processing sector is not declining, but rather the rate of growth in other parts of the U.S. is stronger than in Wisconsin. The question then becomes how can the industry expand and capture a larger share of the growing national and international market for cheese.



The natural response would be to expand the number of cheese processing plants and/or expand the size of the existing plants. For Wisconsin this could be focusing on the small but growing artisan cheese industry.

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.

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An alternative approach would be to examine the input supply chain for the existing industry. A viable economic cluster is more than a large spatial concentration of similar businesses it is also an accompanying concentration of firms that fill the input supply chain. Firms, or in this case cheese plants, 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 cheese 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 cheese 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.

In 2012, the Wisconsin cheese manufacturing industry purchased about $11.9 billion worth of input supplies with nearly 70% of those inputs being either milk or products from other cheese producers. Labor (employee compensation) accounts for only seven percent of all purchases. Only 17.1% of total inputs for cheese manufacturing is imported into Wisconsin. This low level of imports speaks to the vertical integration of the cheese processing industry in Wisconsin. There are some inputs which tend to be imported. For example, 64.8% of plastic containers (bottles), worth some $215.6 million, are imported. Or 58.0% of the machinery used in cheese processing, about $159.4 million, is imported into Wisconsin. Could these be regionally sources?

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 Cheese Manufacturing ($000)

	Gross Inputs ($)	Share of Inputs (%)	Regional Inputs ($)	Share Imported (%)	Imports ($)
Total Commodity Demand	11,887,561		9,851,915	17.1	2,035,646
Milk (fliud, dry, condensed and evaporated) productds and Butter	4,272,613	35.9	4,100,366	4.0	172,247
Cheese	4,145,931	34.9	3,474,261	16.2	671,670
Employee Compensation	830,210	7.0	830,210	n.a.	n.a.
Wholesale trade distribution services	800,818	6.7	631,184	21.2	169,634
Business Services	592,368	5.0	452,602	23.6	139,767
Transportation Services	422,874	3.6	365,045	13.7	57,830
Plastics bottles	332,825	2.8	117,179	64.8	215,646
Electriciy and fossil fuels	265,500	2.2	168,688	36.5	96,812
Machinary	274,859	2.3	115,474	58.0	159,385
Paper Products	228,408	1.9	152,854	33.1	75,554
Other Food	224,059	1.9	55,035	75.4	169,024
Real Estate	162,540	1.4	136,283	16.2	26,258
Other	63,358	0.5	19,723	68.9	43,635
Soaps and cleaning compounds	32,056	0.3	17,641	45.0	14,415
Relay and industrial controls	22,600	0.2	8,924	60.5	13,675
Retail Services	17,816	0.1	15,226	14.5	2,590
Telecommunications	17,393	0.1	11,893	31.6	5,500
Water Services	11,542	0.1	9,537	17.4	2,005

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/

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