INDUSTRY CLUSTER PROFILE:

# Agribusiness, Food Processing, and Technology

## CLUSTER SUMMARY

The *Agribusiness, Food Processing and Technology* industry cluster enhances the food production value chain by increasing the economic value of raw commodities as they move through the stages of production to consumers. This report concentrates on two distinct but complementary subsectors that share common inputs--value-added agriculture and food manufacturing.

Value-added agriculture is defined as changes made to primary agriculture products (crops and livestock) that increase the product's value and create new economic activity and jobs. These could include process activities that create value for the product and/or introduce the product to new markets; diversification and/or modification of primary agriculture products; or pre-production modifications that increase yields, quality, and uses.

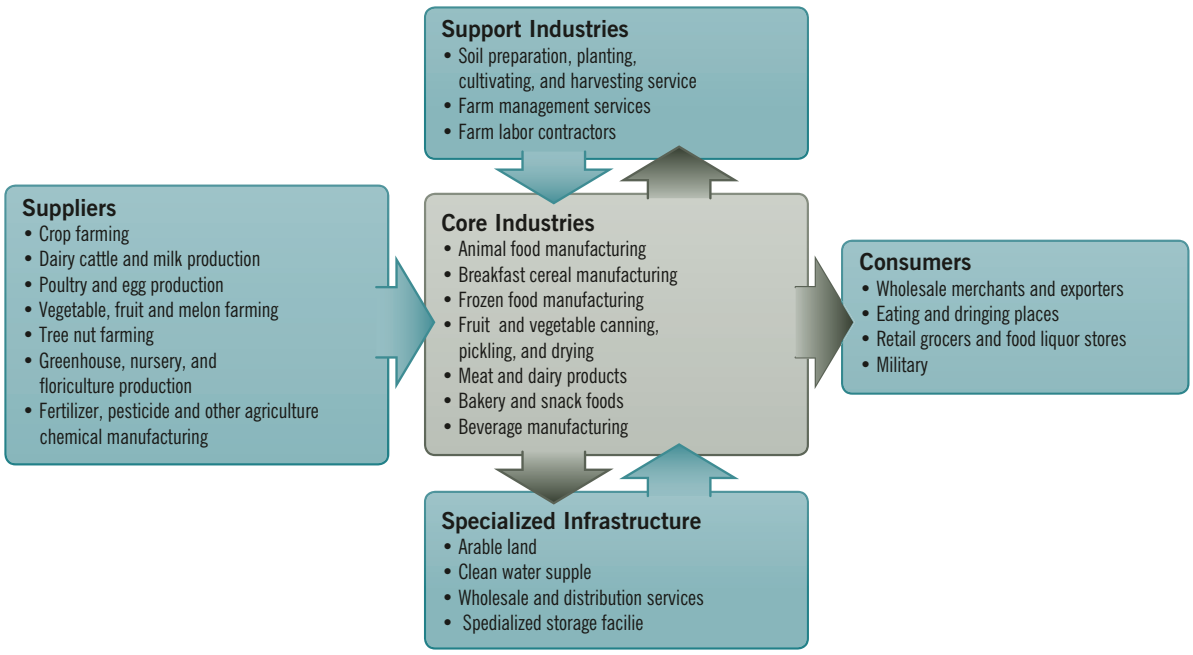
The first component is value added agriculture which may also include the production of innovative crop or livestock based commodities (e.g., organic or heirloom meats or fruits, vegetables, or grains), as well as regionally branded products that increase consumer appeal and willingness to pay a premium over similar but undifferentiated products. Currently, traditional agriculture has a strong presence in the five-county region while innovative value added activities are a small, but growing subsector of the industry.

The second component is food manufacturing or processing agricultural produce including meat, dairy products, fruits and vegetables, milled grains and oilseeds, baked goods, and candy. The Region supports a few large processors and several smaller firms specializing in dairy products (such as cheese), snack foods, and processed meats. Food manufacturing also supports the agricultural sector through the production of livestock feed components.

## CLUSTER DEFINITION

An industry cluster is a group of related industries which are connected by supply chains and/or common labor pools within the same region. The core strength of the Agribusiness, Food Processing, and Technology industry cluster comes from the manufacturing of food from raw produce either sold as finished products or incorporated into other manufactured goods. These core industries drive employment and inputs in other industries which supply them (e.g., crop or livestock production, farm equipment manufacturing, and food processing machinery manufacturing), as well as those which support the core industries by providing business finance and various business services (Figure 1).

**Figure 1:** Agribusiness, Food Processing and Technology, Cluster Components




*Source: The Purdue Center for Regional Development (cluster definitions), 2012.*

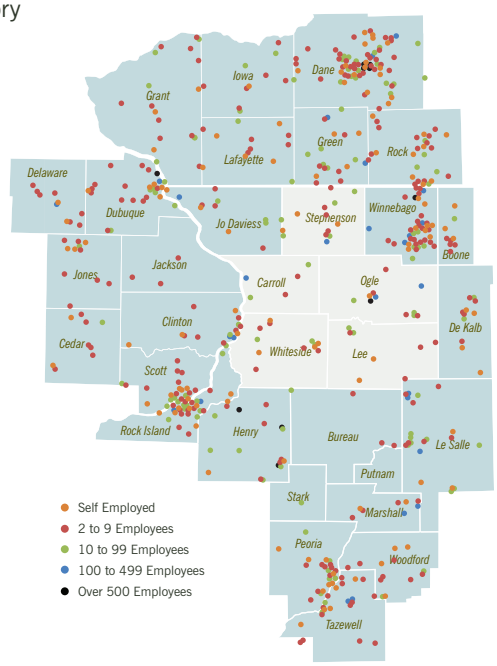
# REGIONAL OVERVIEW

The Agribusiness, Food Processing, and Technology cluster in the Reference Region, a group of 32 counties in northwest Illinois, northeast Iowa, and southwest Wisconsin including the five-county region, had 1,807 establishments in 2010 and employed 42,159 people. The average annual wage in this cluster was $45,086.

The Agribusiness component of this cluster comprised 87.0% of the total business establishments in the Reference Region, but only 38.0% of the total employment. This reflects the capital intensive nature of modern agriculture with extensive investments in machinery and other infrastructure, but with relatively few workers directly employed in farming activities. Agriculture support activities, which include farm machinery and equipment manufacturing and distribution, as well as the production and wholesale distribution of ag chemicals (fertilizer and pesticides), represents approximately 9.0% of total business establishments but 28.0% of total cluster employment.

The Food Processing component accounts for less than 4.0% of the firms operating in the Reference Region, but has approximately one-third of total cluster employment. The majority of Food Processing firms are small in employment (68.0% of firms have fewer than 10 employees) with the 22 largest companies (those with 100 or more employees) representing about 56.0% of total employment. Food processors are dispersed throughout the Region with many larger firms concentrated near metro areas (Figure 2).

**Figure 2:** Food Processing Subsector: Firms by Employment Size Category




*Source: DecisionData.net, 2011.*

The cluster also has had a consistently high concentration of employment in the five-county region with location quotients (LQ) of 2.6 in 2001, 2.2 in 2007, and 2.5 in 2010. Many industry subsectors are represented in the five-county region. Five subsectors have a strong presence in the Region based on the concentration of employment. The top five are listed in Figure 3.

**Figure 3:** Agribusiness, Food Processing, and Technology: Subsectors Based on Employment Concentration

| Indicator | Location Quotient (2010) |
|---|---|
| Flavoring syrup and concentrate manufacturing | 37.0 |
| Cheese manufacturing | 16.0 |
| Grain farming | 11.0 |
| Soybean and other oilseed processing | 9.8 |
| Farm machinery and equipment manufacturing | 7.7 |

*Source: IMPLAN, 2010.*

In the five-county region, the cluster had 239 establishments and employed 4,117 people in direct cluster jobs in 2010. The average annual wage for direct cluster jobs is $41,709. This cluster has a higher than average concentration of economic activity, as defined by firm and employment LQ, in both the Reference Region and the five-county region,when compared to the nation's economic activity in this cluster overall (Figure 4).

The Agribusiness component of this cluster comprises 87.0% of the total business establishments in the Region, but only 38.0% of the total employment. This reflects the capital intensive nature of modern agriculture with heavy use of machinery and other infrastructure, but with relatively few workers directly employed in farming activities. Agriculture support activities, which include farm machinery and equipment manufacturing and distribution, as well as the production and wholesale distribution of ag chemicals (fertilizer and pesticides) represents about 9.0% of total business establishments but 28.0% of the total cluster employment.

**Location Quotients** (LQ) are used to evaluate local development opportunities and find businesses which are especially suited for the Region. A LQ is the ratio of the employment percentage represented by a given industry in the county to the percentage which the industry represents in the state or a representative area of interest. A ratio greater than 1.0 indicates a higher local concentration and a likelihood of exports from the county; a ratio less than 1.0 may suggest that goods or services are imported into the Region.

The Food Processing component accounts for 2.2% of the firms operating in the Region, but has 28.0% of total cluster employment. The majority of food processors are small in employment (half of the firms in the Region have fewer than 10 employees) with the six largest employers (those with 100 or more employees) representing about 69.0% of total employment.

Although there are few large employers in the industry cluster within the five-county region, most are engaged in Food Processing. The surrounding metropolitan areas also host several major national and global food processors (Hormel, Tyson Foods, and Kraft) and farm machinery and equipment manufacturers (Deere & Company) in this industry cluster (Figure 5).

**Figure 4:** Agribusiness, Food Processing, and Technology: Economic Activity Summary

| Indicator | Five-County Region | Reference Region (32 Counties ) |
|---|---|---|
| **Number of Firms (2010)** | **239** | **1,807** |
| *Percent Change in Number of Firms (2007-2010)* | *8.6* | *2.7* |
| *Firm Location Quotient (LQ)* | *3.2* | *1.9* |
| **Employment (2010)** | **4,117** | **42,159** |
| *Percent Change in Employment (2007-2010)* | *7.1* | *2.5* |
| *Employment Location Quotient (LQ)* | *2.5* | *1.6* |
| **Average Annual Wage (2010)** | **$41,709** | **$45,086** |
| *Percent Change in Average Annual Wage (2007-2010)* | *3.4* | *7.1* |

*Sources: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and the Purdue Center for Regional Development (cluster definitions), 2012.*

**Figure 5:** Agribusiness, Food Processing, and Technology: Major Employers, Five-County Region

| Company Name | # of Employees | NAICS Industry Description* | City |
|---|---|---|---|
| **Rochelle Foods LLC** | 600 | Processed meats manufacturing | Rochelle |
| **Genwoods Holdco LLC** | 550 | Farm Machinery and Equipment Manufacturing | Oregon |
| **Colony Brands, Inc.** | 250 | Commercial Bakeries | Savanna |
| **Berner Food & Beverage, Inc.** | 195 | Processed Cheese Products Manufacturing | Dakota |
| **C.J. Vitner Company** | 140 | Snack Foods Manufacturing | Freeport |
| **Del Monte Corporation** | 135 | Dog and Cat Food Manufacturing | Rochelle |
| **Louis Berkman Company** | 102 | Farm Machinery and Equipment Manufacturing | Lindenwood |
| **Bay Valley Foods LLC** | 100 | Food Condiments Manufacturing | Dixon |

**North American Industry Classification System.*
*Source: Dun & Bradstreet, Inc., 2012.*

## INDUSTRY TRENDS[1]

### Volatile Commodity Prices:

The price of critical commodity inputs such as corn, soybeans, wheat, dairy, coffee beans, beef, poultry, vegetables, sugars, and oils can change significantly due to farm yields, unpredictable weather patterns, and market reactions to government farm subsidies. Commodity price increases raise raw material and operating costs, which can be difficult to pass on to consumers in higher product prices. Many companies hedge against commodity price increases to limit volatility.

### Dependence on Large Customers:

Consolidation in the grocery and restaurant industries and the rise of mass food merchandisers such as Costco and Walmart have funneled demand through fewer but larger customers. Local and regional processors may depend on just a few customers for the bulk of their business. Even national processors depend on large national accounts for much of their business.

[1] Source: Hoovers, Inc., 2013. (www.hoovers.com)

### Highly Competitive Industry:

Due to the proliferation of product choices in many food segments, competition in the manufacturing industry is intense. Companies compete over products within their specific industry. For example, seafood processors compete with cheaper proteins like chicken; cereal makers compete with breakfast alternatives which can be easily consumed on-the-go. Food companies vie for shelf space and compete on value and brand reputation. Pressure from competitors and consumers can force manufacturers to lower prices or increase marketing expenditures. Branded items compete with private-label products which are generally sold at lower prices.

### Shifting Consumer Tastes:

Manufacturers must stay informed about continually changing consumer preferences in the highly competitive food industry. Companies often spend millions of dollars to reformulate products or develop new brands to capitalize on dietary fads (low carb, fat free, sugar free). Dietary trends can quickly become passé or be overtaken by new health concerns, which may conflict with a manufacturer's health claims. Customers often embrace a brand and concept only to abandon it within a few years.

### Private-Label Products:

The private-label food business has grown rapidly in the past decade, as grocers have found private-label products profitable. Grocers frequently stock just one or two branded products in a food category along with their own private-label product. Private labels have benefited by going upscale with gourmet offerings, blurring the traditional distinction between private-label and branded products. For some foods, the price gap between branded and private-label goods is also shrinking, as branded products struggle to compete with more competitively priced private-label products. Some manufacturers have capitalized on this trend by making both branded and private-label goods, sometimes in the same plant.

## MARKET OPPORTUNITIES[2]

### Healthier Offerings:

Many manufacturers are reformulating products to include healthier ingredients or those perceived as healthier by consumers. New offerings are often made with organic wheat flour, cane sugar, rice syrup, and corn starch, for example. Dairy products are one of the fastest growing segments of the organic food industry. Low-sodium, whole wheat, and gluten-free product options have gained in popularity. To attract consumers, manufacturers often advertise the heart-healthy or low-cholesterol benefits of their products.

[2] Source: Hoovers, Inc., 2013. (www.hoovers.com)

### New Packaging:

New food packaging often focuses on convenience and eco-friendly designs. Meat processors now cut, package, price, and label fresh meat products for immediate display on supermarket shelves. Manufacturers also sell premeasured meal kits with the necessary ingredients and seasonings included. Resealable and single-serving packages have also become common. Many smaller packages, such as 100-calorie sizes, are designed to help dieting consumers with portion control.

### International Expansion:

Large U.S. food processors are expanding into international markets. Emerging markets like Latin America and Asia have consumers with rising incomes and growing interest in Western foods. Companies have forged joint ventures with European and Asian food manufacturers intending to take advantage of strong local consumer brands. U.S. manufacturers often tweak ingredients, flavors, and brand messaging to appeal to the culture of a target market.

## SUPPLY CHAIN

The supply chain analysis provides insight into the value of supply chain inputs, the amount of inputs produced in a region for the industry clusters studied (represented in most cases by an absorption rate), and the stages along the supply chain which stand out as areas of competitive advantage. Areas of high absorption represent areas along the Food Processing supply chain which allow the Region to capture the most value from a specific stage in the production or delivery of products and services within the supply chain. This may inform strategy by indicating where along the value chain an investment will have the highest impact on the regional economy and may indicate opportunities for business retention or expansion. Again, several of the industries have similar suppliers because of the similarities in their supply needs.

### Supply Chain

An essential component for an industry cluster is the local supply chain. While not all inputs (goods or services) that an industry cluster needs can be produced in the local economy, it is desirable to meet as many of the cluster's needs locally as possible. This analysis reveals the source and amount of purchases among the unique niches within an industry. By identifying the total industry economic outputs and areas where goods and services are purchased from outside the regional economy, one may be in a better position to determine which areas of the industry supply chains are strongest, as well as those that present the best opportunities for growth within the five-county region.

Conversely, stages along the supply chain which are underperforming also offer opportunities for business attraction and/or entrepreneurship. When reviewing data relating to industry inputs, comparing both the absorption rate and the total value of inputs is important because certain services or components which maintain a high absorption rate may be of low value to the regional economy. Similarly, certain inputs, regardless of value or absorption, may be of high strategic importance to the Region in efforts to build a stronger industry cluster.

The supply chain information provided shows the flows of trade which support the Agribusiness, Food Processing, and Technology-related cluster both within the five-county region and from outside the Region. The key sectors that may be appropriate targets for expansion appear as imports (gaps) from outside the Region, but still within the industry cluster (Figure 6). These gaps are then analyzed in terms of regional strengths and potential areas for targeting and support and are placed into a supply chain framework to determine the stages of the supply chain which enjoy the strongest regional presence. In order to fully develop an Agribusiness, Food Processing, and Technology cluster, the five-county region can best achieve progress by focusing on those sectors without a strong regional presence, but which have significant development potential for the Region.

**Regional Supply Gap**

Difference between Gross and Regional Inputs: a large gap value indicates that a large amount of inputs are imported into the region, rather than produced within the five-county Region.

**Regional Inputs**

The dollar value of gross inputs which are produced within the Region.

**Gross Inputs**

Total dollar amount of inputs used by the industry within each sector.

**Figure 6:** Food Processing Component: Largest Supply Chain Gaps, Five-County Region

| Industry | Regional Supply Gap | Regional Inputs | Gross Inputs | % Purchased Outside Region |
|---|---|---|---|---|
| Oilseeds | -$116,127,493 | $11,479,942 | $127,607,434 | 91.0% |
| Processed animal meat and rendered byproducts (except poultry) | -71,135,787 | 2,255,589 | 73,391,376 | 96.9 |
| Soybean oil, cakes and other oilseed products | -42,532,405 | 56,966 | 42,589,371 | 99.9 |
| Fruit | -25,834,327 | 1,508,974 | 27,343,301 | 94.5 |
| Other basic organic chemicals | -23,741,083 | 55,781 | 23,796,864 | 99.8 |
| Canned, pickled and dried fruits and vegetables | -11,629,367 | 5,887 | 11,635,254 | 99.9 |
| Motor vehicle parts | -13,239,328 | 124,676 | 13,364,005 | 99.1 |
| Other engine equipment | -9,502,151 | 55,561 | 9,557,712 | 99.4 |
| Plastics bottles | -9,363,026 | 0 | 9,363,026 | 100.0 |

*Source: IMPLAN, 2010.*

For example, the regional Food Processing component requires $127.6 million in inputs (i.e., the products or services required to create a finished product) from the "oilseeds" production. However, only $11.5 million of this material is produced in the Region with the balance being purchased elsewhere. This suggests an opportunity for an existing firm or new business to satisfy the regional demand for this crop. Another closely related opportunity is "soybean oil, cakes, and other oilseed products." Companies in this sector mill soybeans and other oilseeds (such as cottonseeds, linseeds, peanuts, and sunflower seeds) into oil, cakes, or meal products.

**Oilseeds Farming**
**(NAICS Sector 111110, 1111120)**

This industry comprises establishments engaged primarily in growing soybeans and/or producing soybean seeds. It also includes the production of fibrous oilseed producing plants and/or producing oilseed seeds, such as sunflower, safflower, flax, rape, canola, and sesame.

## WORKFORCE REQUIREMENTS, SUPPLY AND DEMAND

Even as employment in the cluster has declined during the past decades (a trend that is projected to continue) the supply of potential new workers is comparatively low because of demographic trends and the propensity of younger workers to pursue careers outside of manufacturing. There are significant differences in age and wage profiles of the agribusiness and Food Processing components of the cluster. The Agribusiness component has a high proportion of younger (15.3% are under age 25), as well as older workers (9.4% are age 65 or older) (Figure 7). Wages also vary from the Food Processing sector due in part to a higher number of part-time and seasonal workers employed in agriculture. Also, many of those engaged in Agribusinesses are either self-employed or operate as a business, receiving compensation in the form of business income or profits, rather than from wages.

**Figure 7:** Agribusiness Component: Employment and Wages by Age Group, Five-County Region

| Age Group | Employment (Percent of Total) | Average Annual Wage |
|---|---|---|
| Under 25 Years | 15.3% | $11,966 |
| 25-44 Years | 41.3 | 34,513 |
| 45-64 Years | 34.0 | 33,627 |
| 65 Years & Older | 9.4 | 18,409 |

*Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2011.*

The age profile in food processing more closely resembles manufacturing in general, but with below average wages. This may reflect more part-time, seasonal, or contract workers. Over half of the workers in the sector are 45 years of age or older, but only 6.8% are under the age of 25 (Figure 8).

**Figure 8:** Food Processing Component: Employment and Wages by Age Group, Five-County Region

| Age Group | Employment (Percent of Total) | Average Annual Wage |
|---|---|---|
| Under 25 Years | 6.8% | $19,861 |
| 25-44 Years | 41.1 | 42,900 |
| 45-64 Years | 45.1 | 51,085 |
| 65 Years & Older | 7.0 | 40,966 |

*Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2011.*

Over 58.0% of the employment and 48.0% of the wages in the cluster are in Production; Installation, Maintenance, and Repair; or Transportation and Material Moving occupations (Figure 9). Production and related employment classifications account for the largest single share of the jobs in the Region. Ensuring that appropriately skilled production workers are available at competitive compensation rates will be critical to maintaining the manufacturing sector in the Region[3].

A challenge for employers is the looming demand for replacement workers as older workers retire. The Illinois Department of Employment Security claims that 196 openings for production workers will become available per year between 2008 and 2018, mostly replacement workers (Figure 10).

**Figure 9:** Agribusiness, Food Processing, and Technology: Staffing Patterns, Five-County Region

| Occupational Classification | Share or Employment | Share of Wages | Average Annual Wage |
|---|---|---|---|
| Production | 35.2% | 28.0% | $31,329 |
| Transportation and Material Moving | 16.9 | 12.6 | 29,489 |
| Office and Administrative Support | 14.2 | 11.6 | 32,350 |
| Sales and Related Occupations | 10.7 | 14.3 | 52,619 |
| Installation, Maintenance, and Repair | 6.8 | 7.3 | 42,448 |
| Management | 4.5 | 12.2 | 107,551 |
| Business and Financial Operations | 2.7 | 4.1 | 61,024 |
| Farming, Fishing, and Forestry | 2.6 | 1.6 | 24,326 |
| Architecture and Engineering | 2.2 | 3.7 | 67,216 |

*Sources: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and the Purdue Center for Regional Development (cluster definitions), 2012.*

[3] In 2008, Production, Installation, Maintenance, Repair or Transportation and Material Moving occupations were 23.0% of all occupational employment in Workforce Investment Board Region #4.

**Figure 10:** Occupational Employment, Projected Demand by Worker Classification Workforce Investment Board Region #4, 2008-2018*

| Occupational Classification | Employment | | Employment Change 2008-2018 | | Average Annual Job Openings | | |
|---|---|---|---|---|---|---|---|
| | 2008 | 2018 | Number | % | Growth | Replacement | Total |
| Production | 9,653 | 8,806 | -847 | -8.8 | 5 | 191 | 196 |
| Transportation and Material Moving | 6,297 | 6,479 | 182 | 2.9 | 25 | 153 | 178 |
| Office and Administrative Support | 11,256 | 11,371 | 115 | 1.0 | 46 | 242 | 288 |
| Sales and Related Occupations | 7,815 | 8,049 | 234 | 3.0 | 27 | 241 | 268 |
| Installation, Maintenance, and Repair | 2,798 | 2,930 | 132 | 4.7 | 15 | 55 | 70 |
| Management | 7,959 | 7,693 | -266 | -3.3 | 13 | 123 | 136 |
| Business and Financial Operations | 3,110 | 3,385 | 275 | 8.8 | 28 | 64 | 92 |
| Farming, Fishing, and Forestry | 687 | 633 | -54 | -7.9 | 0 | 18 | 18 |
| Architecture and Engineering | 1,116 | 1,073 | -43 | -3.9 | 3 | 25 | 28 |

**Workforce Investment Board (WIB) Region #4 consists of Carroll, JoDaviess, Ogle, Stephenson, and Whiteside counties.*
*Source: Illinois Department of Employment Security, 2012.*

Because of the competition with surrounding metro areas for workers with specific skills or experience, compensation levels are a concern for local businesses[4]. For example, the projected demand for production workers in the metro areas around the Region is estimated to be 2,398 openings per year between 2008 and 2018[5]. The estimated average annual wage for production workers is $31,329[6]. Wages are not only lower than the other manufacturing-related sectors in the Region, they are also lower than the surrounding metro areas. This could put local employers at a competitive disadvantage relative to other industries offering comparable jobs at higher wages. Given the intense competition for skilled workers, companies will need to monitor compensation trends in order to recruit and retain qualified employees.

## BUSINESS OPERATING COSTS

The operating cost analysis focuses on those key geographically variable cost elements which are considered the most pivotal within the corporate site selection process and overall target industry competitiveness. The format of the cost exhibits allows a site selection professional or corporate facility planner to further tailor the cost data, plant specifications, and shipping patterns.

Annual operating costs are projected solely for comparative purposes with only major geographically variable operating costs included for seven county sites in the U.S. These include the five-county region along with two additional counties which have significant concentrations of businesses in the Agribusiness, Food Processing, and Technology cluster. One of the two out-of-state counties is in the Midwest region, and the second is located in an alternative U.S. region. Costs which did not vary significantly with geography, including relocation and start-up expenses, were not considered (Figure 11).

**Figure 11:** Agribusiness, Food Processing, and Technology: Geographically-Variable Operating Cost Comparison

| County Name | Total Annual Operating Costs |
|---|---|
| Lancaster County, PA | $20,579,638 |
| Butler County, OH | 19,464,390 |
| **Whiteside County, IL** | 19,001,860 |
| **Ogle County, IL** | 18,962,010 |
| **Stephenson County, IL** | 18,769,038 |
| **Carroll County, IL** | 18,677,786 |
| **Lee County, IL** | 18,630,286 |

*Source: The Boyd Company, Inc., 2012.*

[4] Northern Illinois University, Center for Governmental Studies, "*Promoting Regional Prosperity in Northwest Illinois: Wage and Benefit Report*", August, 2012, p.23.
[5] Source: Illinois Department of Employment Security, 2012.
[6] Sources: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and the Purdue Center for Regional Development (cluster definitions), 2012.

### Costs of Doing Business

Since most businesses operate in a real-time global marketplace, their focus is on maintaining a comparative advantage through sourcing and supplying products profitably. Cost components such as labor, taxes, real estate, and utilities are the key measures which most companies use to decide where to locate or expand their operations.

*Operating cost analysis* focuses on those key geographically variable cost elements which are considered to be the most pivotal within the corporate site selection process and overall target industry competitiveness.

The five-county region was the most competitive with its peers in terms of labor costs and site acquisition and property tax costs. However, the labor cost differential with related industries and the nearby metro areas could be a drawback, given the competition for skilled workers. The Region was also more cost- effective in terms of shipping costs versus the comparative counties. Estimated outbound shipping costs from the five-county region were 3.0% to 23.0% below the comparison areas, highlighting the importance of northwest Illinois' transportation assets and its access to national and global markets.

## KEY TAKEAWAYS

- The Agribusiness, Food Production, and Technology cluster in the five-county region has a concentration of firms which is 3.2 times the national average and an employment concentration 2.5 times the national average. The Reference Region also ranks above in both categories.
- The Region has maintained these advantages despite the impact of the recent recession and the long-term term decline in the number of manufacturing businesses and employment.
- The Agribusiness component of the cluster is relatively specialized in the types of agricultural commodities produced with corn and soybeans being the dominant crops. Livestock operations are primarily involved in the production of beef and dairy cattle, as well as hogs.
- The Food Processing component, specializing in five product groups (food additives, cheese and dairy products, processed meats, snack foods, and livestock feed), has the potential for further development based on their supply chain relationships to other industries in the Region or the surrounding metro areas.
- Opportunities likely exist for grain and livestock producers to work with food processors to develop new value added products or to process more locally grown produce. However, more work will be necessary to identify and develop those opportunities.
- Alternative value-added opportunities, such as organic food production or the conversion of grain, oilseeds, or by-products into fuel from the bio-based materials of products is an emerging opportunity. Further research is required to determine the viability of such opportunities.
- The expected wave of retiring Baby Boomers will create most of the demand for new workers, despite static, or even declining, overall employment in the industry. Since other industries will experience the same challenges, competition for skilled workers will be brisk given the relatively limited number of potential younger workers.

*Produced by the Center for Governmental Studies with financial support from the U.S. Economic Development Administration.*

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