positively Minnesota
Department of Employment and Economic Development

Review ONLINE

Minnesota Employment Review

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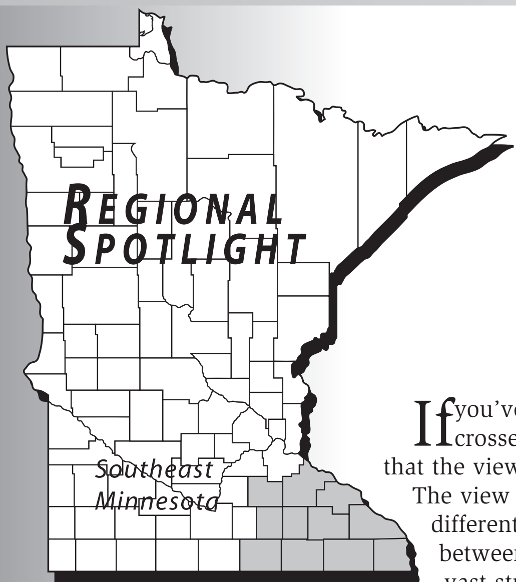
October 2008 Data...November 2008 Issue



Southeast Minnesota's Agricultural Sector Finds Its Place

in the Local, Regional and Global Economy

If you've ever taken a plane ride that crossed the upper Midwest, you know that the view suggests a lot of flat green land. The view of Southeast Minnesota is no different. That leads some to assume that between rivers and cities one will only find vast stretches of farmland. To some extent that view holds true. More than half of the state's land is in farms, and in the Southeast region the farmland concentration jumps to 82 percent.

There were nearly 13,000 farms in the Southeast region in 2002, which together accounted for 16 percent of farms statewide. However, only 5 percent of regional jobs in 2006 were in farming (about 16,700 jobs including both hired farm labor and "self-employed" or farm proprietor employment — both full- and part-time farmers).[1] So what does agriculture in the Southeast region look like, and what is its role in the economy?

Farm employment itself is relatively small, but its presence is felt regionwide

The Southeast region is in many respects an employment powerhouse. With more than 85,000 jobs, Rochester is one of the largest employment centers in the state, but the region is also home to several other sizable cities and in total there are nearly 235,000 jobs in the 11-county area, or 35 payroll jobs per square mile — a much higher concentration than other regions in southern Minnesota. Add in self-employment and total jobs in the region rose to more than 318,000 in 2006. The largest number of payroll jobs are in manufacturing (40,936 jobs) and in health care and social assistance (55,203 jobs), which together account for 41 percent of payroll employment and generally grab the spotlight in the region.

In contrast, there are 13,000 farms in the region, but farm proprietors themselves are not always full-time farmers. Local farmers are more likely to be part timers than in many other areas of southern Minnesota. In the Southeast region only 65 percent of principal operators on farms list farming as their primary occupation. Thirty-nine percent of principal operators worked at least 200 days off the farm according to the 2002 Census of Agriculture.

Regardless of their own working status, nearly one in three of the farmers in the region hired help. Data from the 2002 U.S. Census of Agriculture showed 15,041 workers on 3,959 of the region's farms. Only one in four of those workers (3,873) put in 150 days or more. Of those that worked less than 150 days, 60 percent worked on farms with less than 10 workers.

That limited status of farm labor may be one of the reasons that counting farm employment is so difficult. The Minnesota Department of Employment and Economic Development (DEED) collects payroll records on firms that are subject to Unemployment Insurance, a group that covers 97 percent of Minnesota's employment but omits farmers without staff as well as agriculture-based businesses whose total gross pay in any calendar quarter does not meet a $20,000 threshold. In 2007, a total of 2,098

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payroll employees worked in 245 firms in the region's crop and animal production industry according to Unemployment Insurance record data collected by DEED. Seventy-five percent of those payroll jobs were in animal production (typically a year-round operation), where labor accounts for a larger share of production costs for farmers. Three out of four jobs in animal production were in firms with less than 20 employees. Crop production was also made up of predominately small firms, but it included a handful of larger firms (still with less than 100 employees) that together accounted for 39 percent of jobs in Southeast Minnesota.

Perhaps the most reasonable count of farm jobs in the region is the one from the U.S. Bureau of Economic Analysis, which shows that the 11-county region was home to about 16,700 jobs (including both hired farm labor and self-employed or farm proprietor employment) in 2006. That estimate may not take into account the part-time nature of some farm proprietors' work, but at that level the industry accounts for 5.3 percent of total employment (payroll and self-employment) in the region.[2] Agriculture's employment impact does not end here.

In the Southeast region food manufacturing is the most obvious connection to our agricultural roots. With nearly 10,000 jobs, it is the largest manufacturing industry in the region, and it accounts for nearly one in four of statewide industry jobs. These jobs outnumber agriculture payroll employment (jobs in firms with paid employees) by more than four to one. The largest share of food manufacturing jobs are in animal slaughtering and processing, followed by fruit and vegetable, grain and oilseed, and dairy product manufacturing. Processing plants are scattered across the Southeast region as well as adjoining areas, showing the widespread connection to production.

Jobs do not stop with farm production and food manufacturing, however. The agribusiness industry in the region includes a variety of related businesses, from farm implement dealers to fertilizer manufacturers. Using a definition developed in part by the Purdue Center for Regional Development, there were close to 14,000 payroll agribusiness jobs in the Southeast region in 2007.

Total agribusiness payroll employment has contracted in recent years (see Figure 1). Despite overall losses in agribusiness, however, several agriculture and food processing industries together have added hundreds of jobs since 2001, including dairy cattle and milk production, frozen specialty food manufacturing, and fruit and vegetable canning.

Eat your veggies: Feeding the global food chain

Like most of the southern tier of the state (and most of the state of Iowa), production in crops like soybeans and corn dominates many counties in the Southeast region. One in six farms is classified as "oilseed and grain farming," and together corn, for grain, and soybeans accounted for 78 percent of harvested commodities in the region during 2007 (see Figure 2). Geographically those key crops are spread across most of the region — especially toward the west — with Mower County ranking fifth and Freeborn County ranking sixth in corn production in the state, and Mower County ranking seventh in soybean production. Other counties rank high on other crops and livestock too:

Oats Production

- Fillmore (fourth)
- Goodhue (fifth)
- Wabasha (sixth)
- Winona (seventh)

Beef Cows

- Fillmore (first)

Milk Cows

- Winona (third)
- Goodhue (fifth)
- Wabasha (sixth)

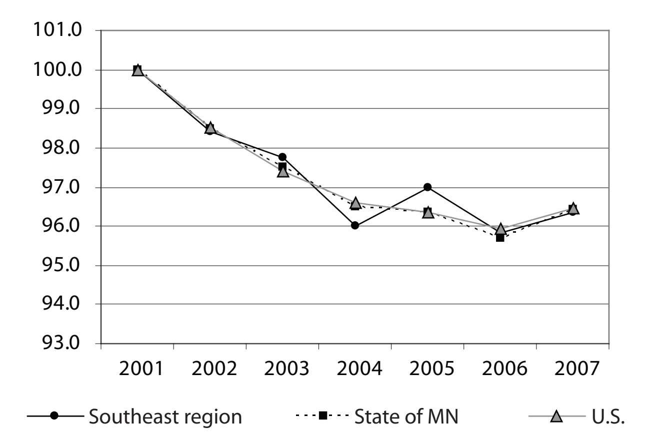
Hay Production

- Winona (third)
- Wabasha (fifth)
- Houston (sixth)

Of course that doesn't mean that local kids eat more veggies than their counterparts in other regions of the state or nation. Output from farming is no longer exclusively used to meet the food needs of people in the area. Over the decades — and especially in recent years — agriculture's reach has expanded around the globe. Minnesota exports of farm commodities and related processed food products reached $3.6 billion in 2007, placing Minnesota seventh in state agricultural and related processed food exports.[3] Processed food exports

Figure 1

Agribusiness Payroll Employment in the MN Southeast Region, State of Minnesota and U.S. (Index, 2001)



Source: Department of Employment and Economic Development, Quarterly Census of Employment and Wages accounted for $1.2 billion, or about one-third of farm and food exports, in 2007. As an aggregated group, agriculture and food exports represented about 13 percent of an estimated $27 billion in total state exports of agricultural, manufactured and services exports.[4]

The state's exports of agricultural commodities and related processed foods increased 20 percent since 2006. Feed grains and soybeans topped the list of exports by value. Among all states, Minnesota ranked third in exports of soybeans and related products ($1.1 billion) and fourth in exports of feed grains and related products ($948 million). The Southeast region is a solid contributor in the production of those crops with 20 percent of corn production and 15 percent of soybean production in 2007.[5]

Agriculture: It's not just for breakfast (or lunch or dinner for that matter) anymore

The agribusiness cluster has received a lot of attention in recent years, in part because of the explosive growth in agricultural exports. But agriculture is also playing a key role in the development of another emerging industry: renewable energy. Research by the Minnesota Department of Agriculture estimates that approximately 15 percent of Minnesota's annual corn crop is processed into ethanol, and 13 percent of its annual soybean crop is used to produce soy diesel. Proximity to corn and soybeans has driven the rise of renewable fuels across southern Minnesota. (See Figure 3 for locations of current and proposed ethanol facilities. The Southeast region is also home to a biodiesel production facility in Freeborn County.)

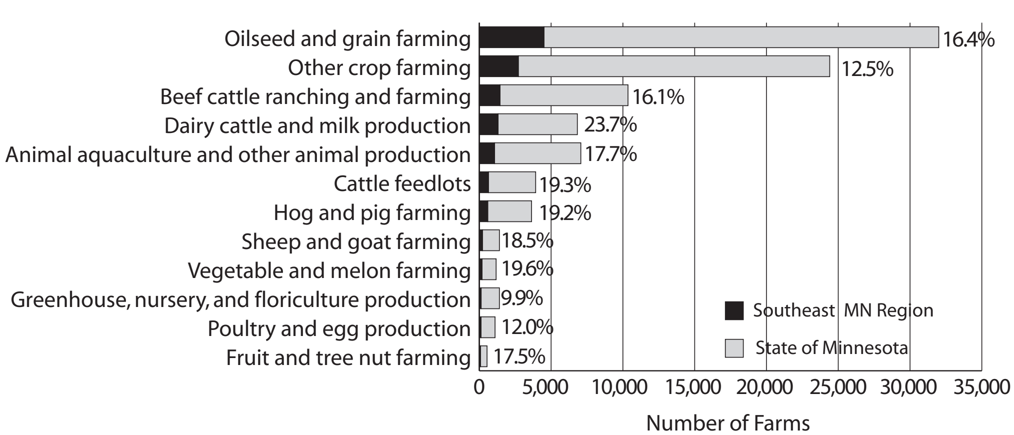
The region is also rich with biomass feedstocks. A report by the Center for Energy and Environment (CEE) seeks to provide communities with information about biomass and includes information about the statewide availability of biomass resources.[6] Agriculture is the largest biomass category in Minnesota, particularly crop energy from corn grain. Crop residues, agricultural processing residues, wood, manure, animal processing and municipal waste streams are principal feedstocks for biomass. This article has already described the region's ranking on commodities like corn, soybeans, alfalfa (hay) and oats. In addition to Northeast Minnesota, the far southeast part of the state is also one of the only areas that has wood resources for biomass such as mill residue. Moving east across the region, cropland is replaced in many areas by woodland — 28.6 percent of farmland in Houston County, 20.8 percent in Winona County, and 16.7 percent in Wabasha County. Finally, animal production leads to beef, dairy, hog and sheep manure feedstocks among the best in the state, as well as feedstocks from animal processing. Of course, land and other natural resources are not limitless, and growth in many different aspects of agriculture and energy raise discussions about managing those resources.

There are also applications to bioscience — a buzzword to many but also a real opportunity for the Southeast region to use its expertise in agriculture, science and technology to develop new products and processes. Minnesota companies are top manufacturers of agricultural chemicals, biopesticides, plant biopolymers/fibers and many other innovative products. Many of those companies as well as other research organizations have operations in southern Minnesota. Industries related to animal health, food and renewable energy are increasingly overlapping, and Southeast Minnesota's businesses are in a competitive position to build on their strengths in traditional agribusiness industries. Employment data cannot disentangle the current status of this growing arena, but current efforts by groups such as the Biobusiness Alliance of Minnesota to map state resources related to bioscience serve as an excellent starting point.[7]

Finally, there is one agricultural impact that is sometimes overlooked — although it may be as obvious as the role of agriculture to meet local food needs. In the Southeast region

Figure 2

Number of Farms and Percent of Statewide Total 2002, by Industrial Classification



Source: U.S. Department of Agriculture

commitments to organic production and development of local food markets play a role in both quality of life for residents and efforts to attract visitors and new residents to the area. Minnesota ranks fourth in the country in certified organic cropland acres, and the 11 counties in the region together account for 23 percent of payments from the state's organic certification cost-sharing program. Estimates from the Minnesota Department of Agriculture (MDA) show some of the largest numbers of organic farms in this region (see Figure 4). These foods are important not only to processors but to buyers like restaurants and retailers. Access to local foods has also spurred growth in local markets. MDA lists 97 regional products and services in its *Minnesota Grown Directory*, available to consumers and visitors. Indeed the region promotes agri-tourism among its features. Nestled along scenic river drives and bike trails are apple orchards, with 20 listed in the state directory, and pumpkin patches. The officially designated Apple Blossom scenic byway is an excellent example. Unique microclimates and suitable soil conditions along the eastern edge of the region have also supported development of land in vineyards with five listed in the MDA directory. Data available for nine of the 11 counties show the area accounting for 39.5 percent of Minnesota acres in all types of orchards.

Regional agriculture really does have a local-to-global reach. Recent developments such as the rapid growth in ethanol production in recent years have led us to take a fresh look at the impact of agriculture in the region, but both traditional and emerging industry story lines are sure to capture our attention more and more in the coming years.

by Jennifer Ridgeway

Figure 3

Ethanol Facilities in Minnesota Present and Future - July 31,2008

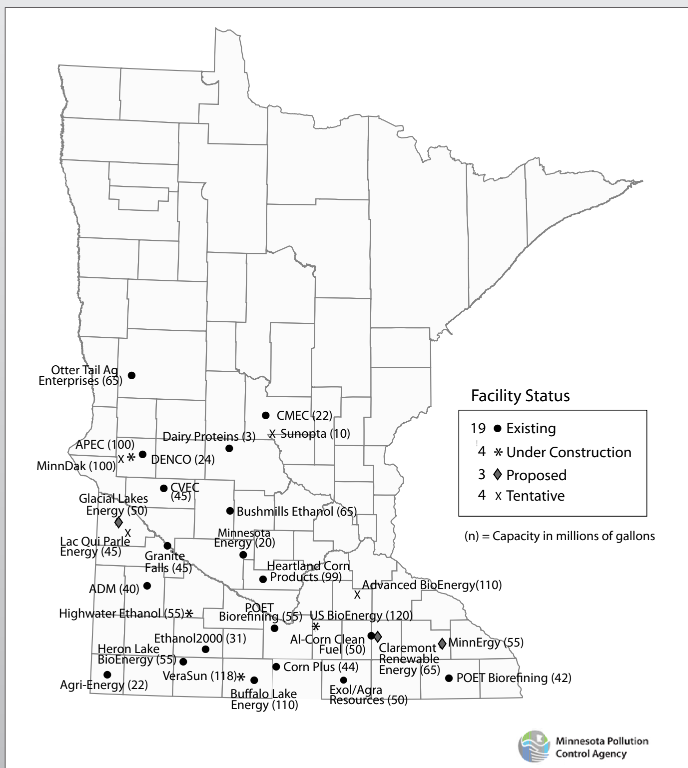
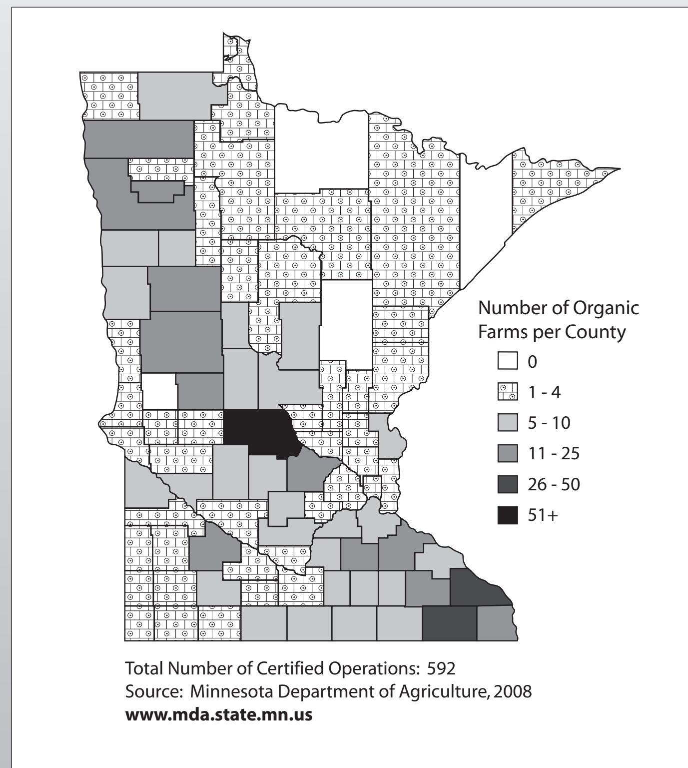


Figure 4

Location of Certified Organic Farms in Minnesota by County



[1]U.S. Bureau of Economic Analysis, Regional Economic Information System. Total employment includes both farm and nonfarm proprietors.

[2]While only 5 percent of jobs regionwide are in farming, shares are much higher in a handful of counties like Fillmore (16.6 percent), Houston (13.4 percent) and Wabasha (12.4 percent).

[3]Economic Research Service, U.S. Department of Agriculture.

[4]DEED's estimate of total exports is derived from DEED estimates of services exports, pro-rated from U.S. services export data released by the Bureau of Economic Analysis; manufacturing export data from the Foreign Trade Division, Bureau of the Census, U.S. Department of Commerce, published by WISER (World Institute of Social and Economic Research); and agricultural export data from the Economic Research Service, U.S. Department of Agriculture.

[5]2006-07 Minnesota Agricultural Statistics, released in 2008.

[6]Report by the Center for Energy and Environment. "Identifying Effective Biomass Strategies: Quantifying Minnesota's Resources and Evaluating Future Opportunities." Online at **www.mncee.org** .

[7]Access the BioBusiness Alliance of Minnesota's mapping tool, BIOMAP, at **http://network.biobusinessalliance.org/BIOMAP.asp** .

[8]U.S. Census of Agriculture 2002.