

Food, Fuel and Foreign Trade

Like many industries, agribusiness is influenced by global competition, but new products and methods are opening doors for today's optimistic entrepreneurs.

By Christine Hierlmaier Nelson

It's no secret that agribusiness is changing. Romantic images of post-war farm families earning a living from the sweat of their brow and a cab-less tractor borrowed against the season's harvest are harder to conjure up as more farm land is sold for commercial development and today's farmer is as likely to sit in front of a computer as in the heated cab of a combine.

Like any industry, agribusiness is influenced by global competition, but its participants face many challenges in creating successful trade alliances outside their geographic regions. Optimistic entrepreneurs that they are, local agribusiness owners determined to stay in the game are seeking new products and methods to serve the food, fuel and fiscal demands of the world.

Adding Value

Take soybeans...please. As one of the top three commodities in cash receipts in Minnesota, soybeans compete with corn in acres planted. Today, the state produces five percent of the world's soybeans, used to make everything from tofu and soymilk to skin care products, candles, nutritional supplements and pet food. This round legume is big business — but competition among growers is increasing.

Getting a piece of the action may be difficult for local farmers unless they can figure out a way to add value to their particular crop of soybeans and set it apart from markets like Brazil, where the growth potential now seems unlimited.

One way that University of Minnesota scientists believe it can happen is by designing a super soybean, backed by conclusive research that it reduces certain diseases. If local farmers could prove that their soybeans are richer in certain compounds that reduce cholesterol, for example, they should be able to get a direct premium on the world market, according to Dr. Gary Gardner, professor in the Department of Horticultural Science and director of the cross-disciplinary Center for Plants and Human Health.

“One of our biggest challenges is how farmers can get a direct return, and it's really important if we are to have viable farming in this country,” says Gardner. He points to a soybean study underway at the U of M that has successfully selected soybeans with higher levels of potential cholesterol-reducing compounds, but now requires funding to conduct a human feeding study.

Another study on watercress is altering growing conditions to increase the levels of glucosinolates, which have been shown to prevent certain cancers in animals. “I believe consumers would be willing to pay a premium for disease-reducing foods if they knew that these claims were backed by scientific fact,” Gardner explains. Similar research has occurred in the design of feed mixes for livestock. In conjunction with better breeding methods, the use of nutritionally dense feeds with vitamins and trace minerals can raise a baby chick to maturity in half the time today than it took in the 1950s, notes David Heim, CEO of Heim Milling in St. Cloud.

Heim Milling has operated in the same location since 1900 and is in its fourth generation with the addition of David Heim's three sons. The company has grown by continuing to innovate and look for market niches it can fill in a region that extends to the Canadian border and east to Wisconsin.

“One of our growth areas is in specialty feeds,” says Heim, referring to the emergence of 20-40 acre hobby farms where a few horses may co-exist with chickens or a small herd of sheep. Heim Milling has a full line of vegetable-based feeds that include products for area game farms. One of Heim’s Minnesota clients raises waterfowl that end up on the menus of fine Twin Cities restaurants.

David Heim believes he needs to offer a broad line of products to remain competitive. He sells through dealers and by marketing direct to the consumer. He’s watched his clients begin to eliminate the middlemen of production, noting that the majority of the country’s community grain elevators have gone out of business since 1950. He’s also had to adapt to regulatory changes, such as stricter regulations on animal byproducts. (He got around that one by eliminating all animal byproducts in his feeds.)

Growing Fuel

Speaking of animal byproducts, federal funding has come Minnesota’s way to research alternative fuel sources that range from ethanol and wind power to electricity-producing cows.

Right now, a 1,000-head dairy farm in Princeton is selling some of the electricity it produces from its cows to a regional electric company. Operating one of the few sustainable anaerobic methane digesters in the country, the Haubenschild farm generates enough electricity for its farm and several nearby homes from cow manure. The farm also uses the digester’s odorless and nitrogen-rich byproduct to amend its fields.

In his first few months on the job as a regional extension educator in Brainerd, Diomy Zamora is coordinating programs to educate farmers about biomass opportunities like this and to address the challenges. Often, the set-up costs are the first hindrance. Since 1999, the Haubenschilds have invested at least \$70,000 of their own money for their digester operation, in addition to a zero-interest federal loan and state and federal subsidies.

Still, Zamora is excited about the potential of turning farm residues and waste into fuel. “We have much underutilized waste, wood chips, corn cobs, and seeds as well as waste from livestock,” he says. In addition to producing electricity and ethanol, Zamora says there is also research underway to establish climate-hardy chestnut and hazelnut tree farms for the production of biodiesel.

Expanding Trade

Whether they produce food as medicine or alternative fuels, agribusiness owners know that competition and opportunity extend beyond the continent. Although larger companies like Gold’n Plump Poultry have invested substantially to market and sell their poultry products abroad, the potential for smaller producers appears hampered by regulations, logistics, and costs.

Consider the potential for exporting dairy products or agribusiness equipment to Guatemala. Through a former Minnesota resident, Jeff Paul, St. Cloud has developed some connections to this country, a world producer of such products as sugar, cardamom, snow peas, and poinsettias.

“Guatemala’s dairy industry is undeveloped and imports the majority of its dairy products, especially milk and butter,” says Paul, who now makes his home in Guatemala. “There are opportunities for Minnesota producers to provide products, technology, or invest in developing operations in the region,” he says.

Restrictions such as protective tariffs are loosening in some industries, such as poultry, to increase foreign access and competition, something Paul is excited about every year that he has to pay for an expensive Thanksgiving turkey.

Still, reducing import taxes aren't the only measures countries should take to increase trade, according to Carolina Castellanos, director of AmCham Guatemala. Transportation, insurance, document facilitation and regulation need to be less costly and more efficient, she says. "One of the reasons for signing free trade agreements is to establish a partnership between countries that complement each other, so the new partners can grow in employment levels, standards of living, and access to a wider variety of goods and services at a better price," Castellanos explains.

A romantic concept, perhaps, but then again many farmers have sustained themselves with the help of a neighbor. So while the definitions and methods of agribusiness continue to adapt and change, it seems that some values are timeless.

Freelance writer Christine Hierlmaier Nelson spent many childhood summers at her grandparents' dairy farm in Central Minnesota. She lives in Foreston.

What is a Farm?

The definition of a farm has blurred in recent years for both economic and lifestyle reasons. While good money can be made on the farm on a part-time basis, defining a sustainable farm all depends on the farmer. Greg Simones, a farmer turned agribusiness lender, tries to explain the differences in a way a banker would understand.

Lifestyle Farms — These farmers are not overly concerned with high net income, typically have low debt, and enjoy the lifestyle of country living. They may or may not have a job off the farm site.

Traditional Family Farms — Generational farmers who are typically middle-aged and don't expect their children to take over the operation when they retire. The percentage of these farms is shrinking.

Mega-Farms — These farms require the owner and hired help to operate, with perhaps a livestock operation of 500 or more head. The farmer usually relies exclusively on the farm for income.

Part-Time Farms — One or both spouses have jobs off the farm, and don't rely on it for their income, but enjoy farming evenings and weekends.

Jim Carlson, regional director of the Brainerd Extension Regional Center, said not all farmers fit these descriptions. "You may have a lifestyle farm with greenhouses that are large enough to use equipment and hire employees, and you may have a full-time farm where you work intensely just six months of the year," he explains.

—C.N.

Farm Show Proceeds Benefit Students

Each year the St. Cloud Area Chamber of Commerce awards eight \$400 agricultural scholarships. The revenue for the scholarships comes from the Chamber's annual Farm Show exhibition. In order to be eligible for the scholarships students must be college-bound high school seniors who have displayed an ongoing dedication to agricultural and animal sciences.

The following students received scholarships in 2011:

Grant Hopke, St. Cloud, plans to attend the University of Minnesota – Twin Cities enrolling in animal science-pre-vet. It has always been a dream of Grant's to become a veterinarian. After finishing the animal science program he plans to go on to veterinary school to get his Doctor of Veterinary Medicine (D.V.M.) degree and be a large animal veterinarian.

Brandon Massmann, Osakis, will attend the University of Minnesota – Crookston, majoring in pre-vet and animal science. Upon finishing college Brandon plans to go to veterinary school and become a large animal veterinarian somewhere in Central Minnesota.

Mackenzie McCann, Milaca, plans to attend Gustavus Adolphus College and major in biology (pre-veterinary medicine). She plans to continue her education in veterinary medicine at the University of Minnesota and become a large animal veterinarian.

Meredith Meyer, Cold Spring, will be attending the University of Minnesota – Twin Cities College of Food, Agricultural and Natural Resources Sciences, majoring in food science and nutrition. After graduating from college Meredith plans to use the knowledge from studying food science to give back to the community. Her goal is to work for a food manufacturing company.

Trisha Molitor, Sauk Centre, plans to attend the University of North Dakota or Hamline University, majoring in agriculture management and agri-business/natural resources management. Trisha's goal upon completion of college is to work at an agri-business firm, consulting, or grain marketing business.

Michael Schmitt, Royalton, will attend the University of Minnesota – Twin Cities, and major in dairy science production. After completing the dairy science program Michael plans to look for career opportunities in the dairy genetics field. He has an interest in dairy genetics, either as a sire analyst or to return home to the family farm and continue to breed good cattle.

Natasha Spiczka, Sauk Rapids, plans to attend the University of Minnesota – Twin Cities enrolling in pre-vet. After completion of this program Natasha plans on beginning her career at a large animal veterinary clinic in Minnesota. After a few years there, she wants to start her own veterinary clinic that helps large animals.

Caleb Studenski, Sauk Rapids, will be attending South Dakota State University, majoring in animal/range sciences. Caleb would like to work for a company involved in animal nutrition, specializing in the beef industry.