



Minnesota Department of Agriculture

October 27, 2000

The Honorable Robert Ness
509 State Office Building
100 Constitution Avenue
St. Paul, MN 55155

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Dear Representative Ness:

I am writing to provide the fifth quarterly report on the progress of the marketing funds appropriated to the Minnesota Department of Agriculture (MDA) for the 2000-2001 biennium. The 1999 Legislature appropriated \$480,000 for the first year and \$420,000 for the second year to the Commissioner of Agriculture for programs to aggressively promote, develop, expand, and enhance the marketing of agricultural products from Minnesota producers and processors.

MDA continues to direct the appropriation to initiatives with the following objectives:

- Assisting producers in developing alliances with processors;
- Promoting value-added and agricultural processing initiatives;
- Improving producers ability to manage risk associated with production agriculture;
- Facilitating needs of the new state meat inspection program;
- Aggressively promoting Minnesota agricultural products so farmers and processors can benefit from domestic and international markets.

The following summarizes MDA's activities regarding these objectives.

FarmConnect

MDA and FarmConnect closed on a \$250,000 grant contract on January 11, 2000. The grant is payable in three installments. The first installment of \$125,000 was disbursed by MDA in February 2000 to achieve a membership drive. The second installment of \$100,000 was made in August after receipt of a preliminary business plan and budget approved by the Board of Directors. Conditions for advance of the \$25,000 was not achieved.

Perry Aasness and I met with the Executive Committee of the FarmConnect Board on Monday, August 21, 2000 to discuss strategies to sharpen the focus of the business plan. They include: Write objectives with performance indicators to measure progress of an initiative; Budget for research and development to determine market feasibility in any or all of the six segments identified in the supply and production chain; Determine strategies to compete against established corporate "value chains; or Deployment of an Internet model to facilitate business linkages.

FarmConnect's mission is to improve the profitability of farmer owners by aggressively identifying, creating, and meeting market needs through strategic relationships with processors and end users. The coop intends to offer farmers improved profitability through production of higher value 'made to order' products. The coop would offer buyers an effective way to access a reliable supply and quality of desired product. A copy of the FarmConnect Business Plan is attached to this report. Total funds granted to FarmConnect are \$225,000.

FarmConnect's Web site is: www.farmconnect.com

Risk Management

Northwest Region filled their Regional Risk Management Specialist position in September. Ridgewater Community College in Willmar replaced their Risk Management Specialist due to a resignation. Dave Bullock conducted a 40 hour Regional Risk Management Specialist Basic Training Course the last week of September for the two new instructors. Graduates of the 40-hour workshop are under contract to work with the MDA to develop a voluntary certification program for agricultural risk management professionals and advance risk management education for producers in their respective regions. The program will be tailored to manage risks associated with marketing, production, financing, personal liability and legal risks.

Producers are faced with an expanding array of risk management tools such as revenue insurance, hybrid contracts, and trade options in addition to the traditional crop insurance, forward contracts, futures and options. The program offers producers the ability to evaluate and utilize these tools and is a partnership effort between MDA and the MnSCU Farm Business Management. Total funds directed the Risk Management Activities is \$240,000.

Minnesota Wheat Council

MDA approved a grant contract in the amount of \$12,000 to assist the Minnesota Wheat Council in Developing the Toolshed Project. Grant funds will be used for the development of the futures market, local market and basis charting section of the web site. Funds will also be used to develop and print educational material to be used in educational seminars. The Toolshed demonstration site may be viewed at: www.agnewsonline.com

A copy of the grant proposal is attached to this report.

State Meat Marketing

Minnesota's State Meat Inspection Program was established by the MDA in November of 1998. The State Meat Inspection Program continues to facilitate growth in small to medium-sized processors in rural communities. The Agricultural Utilization Research Institute (AURI) concluded a survey of the state's processors to determine industry needs. The executive summary of AURI's Meat Processor Study raised issues facing meat processors and the meat processing industry.

MDA and AURI staff discussed findings of the survey in a September meeting. Key issues raised include: The shortage of labor supply in rural areas; Writing and monitoring HACCP plans; Business planning initiatives; Marketing and promotional skills; and Financing needs for business upgrades. A work group made up of staff from MDA and AURI will develop a work plan within the next 30 days to address key issues

Agricultural Marketing Services Division

Commissioner Hugoson announced the creation of a new division, Agricultural Marketing Services (AMS), to serve the evolving needs of Minnesota farmers in a global agricultural marketplace. Developing domestic and global markets for Minnesota agricultural will be the primary goal of the new division. Principal Responsibilities of the Agricultural Marketing Services Division will be to:

- Identify agricultural marketing opportunities through consultation with the Commissioner's Office, the Minnesota Trade Office, United States Department of Agriculture (USDA), market research organizations, producers, processors, exporters and others.
- Facilitate efforts between farmers and farm commodity groups with grain companies and trade teams to increase value-added processing, and assist Minnesota producers in developing new markets for agricultural products.
- Facilitate ownership or certification of agricultural production methods and agricultural products grown or processed in the state to assure the integrity of claims made by producers, processors and others involved in the marketing process.

On August 10, 2000, Assistant Commissioner Perry Aasness and I met with Alan Peterson and Tony LaRousa from the Minnesota Trade Office to discuss key responsibilities of the AMS and ways that AMS could partner with the Minnesota Trade Office.

Minnesota Certified Pork (MNCEP) and Minnesota Certified (MNCERT)

MNCEP (Minnesota Certified Pork), a farmer owned pork cooperative, has established, in cooperation with the University of Minnesota, a production manual providing producers with guidelines to meet demands of certain market segments. A second project involves production and certification of identity preserved grains through the Minnesota Crop Improvement Association.

It is envisioned that MNCERT will provide a process to examine production and compliance criteria, and if the product or process is certified, monitoring and auditing will be provided to assure label integrity. MDA will seek outside expertise to develop a compliance mechanism for MNCert proposals that will have credibility with customers of Minnesota agricultural products. A qualified candidate will conduct a critical analysis of other certification systems to determine their application to agricultural products. The project will identify and examine relevant certification process currently being utilized, further defining the certification requirements of some likely end users, liability issues, and fees associated with various aspects of a certification program. Within each of these initiatives, the MDA will continue to seek private funds to match or partially match the state appropriation.

Please feel free to contact me with any questions.

Sincerely,

Jim Boerboom
Assistant Commissioner

August 2, 2000

Minnesota Wheat Council
2600 Wheat Drive
Red Lake Falls, MN 56750

Jim Boerboom
Minnesota Department of Agriculture
90 West Plato Boulevard
St Paul MN, 55107-2094

Dear Jim,

Thanks for the opportunity to speak with you about the Department of Ag grant program. The following pages will describe our project, the problems we hope to address and timeline.

The Minnesota Wheat council is currently working on a project that will address three problems that face agriculture producers and organizations across the region. The problems we strive to address are:

1. A need for an agricultural web site in the Northern Plains where busy producers can access key regional weather, market, news, and industry information from a single "one-stop shop."
2. Efficient communication between individual producers and marketing groups.
3. Technology information - Many rural computer and Internet users, especially older producers, have questions on using the web or are unsure about where to best access online information.

Toolshed, a regional information site will address those areas of concern by generating the following content:

1. **News:** We will feature daily "Hot topics" in this section. The "Hot topics" could range from crop scouting updates on disease or insect problems, to storm and precipitation updates, to links to agricultural reports from organizations such as the USDA or the Extension service. We will also have news stories that will cover regional and national events.
2. **Futures Markets:** This section will consist of the following topics:
 - **Markets at a glance:** On the front page of Toolshed will have a section titled "Markets at a glance", ten of the most pertinent contracts will be featured here.
 - **My Quote board:** Producers will be able to enter up to 15 of their own contracts. These contracts will be tracked and charted on a daily basis.
 - **Contract quotes:** The grain contracts will be listed in quote board, chart and end of day form, linking into the options.
3. **Local Cash Prices:** Elevators from Minnesota, North Dakota and South Dakota will have cash prices updated daily. These prices will be stored for each individual elevator. Producers will have the opportunity to choose an elevator and time frame, then they will be able to chart that information. Producers will also have the ability to calculate the basis. This section will also include LDP prices for the tri state region.
4. **Weather:** Producers will be able to type in their zip code to generate the localized forecast. This section will also contain the regional radar loop.

5. **Red River Farm Network:** Regional news broadcasts will be taped daily. These files will be available in both audio and written form.
6. **Communication:** This section will be used to share the information, ideas and questions generated in local marketing groups from the tri state region. This will be accomplished by several methods:
 - **Updates:** Updates from local meetings, contact information and discussion topics.
 - **Specialty crop contracts:** There currently is no comprehensive place on the web that lists businesses in the region that offer specialty crop contracts, and specialty crop contract guidelines, as well as production contract "Do's and Don'ts."
 - **Marketing and technology "Q&A.":** Producers will be able to post marketing or technology questions, which will be answered by area experts.
 - **Message boards:** Producers will post questions and suggestions to be answered or responded to by other producers.

Educational Seminars

Toolshed is also unique because of the educational possibilities. Producers will be able to have hands-on experience through a portable computer network at no or minimal cost. 25 workshops will be offered across the region during the winter of 2000-01. Our mobile **Toolshed on Wheels** will also display and explain computer hardware and software of use to producers.

Toolshed is designed to benefit the local producer and agricultural organizations. During the educational sessions suggestions concerning Toolshed will be encouraged. These suggestions will be implemented so Toolshed is the most user friendly and content rich site possible.

Community cooperation

Agricultural Utilization Resource Institute, an organization devoted to fostering long term economic benefit through increased business and employment opportunities, is helping with the development of Toolshed. After the initial development, AURI will be involved in development of advanced weather information and online calculator and charting capabilities.

Information Sharing

Another unique aspect of Toolshed is the organizational structure. Toolshed will function along the lines of a regional radio network, where local and regional content is developed in a central location and then it is distributed to many independent outlets. These outlets are local radio stations in the case of a radio network, however in the case of the Toolshed network it will be local or regional web sites. We hope that 70 local and regional web sites will carry the Toolshed content on their own individual web sites. The organizations that choose to join the Toolshed network will be able to place the Toolshed content within their web sites in a variety of formats. Viewers will be able to see all the Toolshed information from the web site of their choice.

In addition to regional organizations, there will be Tab Holders, each tab holder will receive a link that will be designed to look like a file folder tab. This link will lead into either the tab holders home page or a page describing their activities.

The different levels of organization will lead to a wide range of viewers that are accessing the information, and a wealth of information sources from across the region.

Outcomes of this project

We anticipate increased literacy of computer and Internet technologies. A measuring tool for **Toolshed** will be the number of "hits" each supporting site receives. Another measure will be the record kept of all producers attending the **Toolshed on Wheels** classes and a communication system set up with them to monitor their satisfaction and usage of the information.

We also anticipate an increase in communication between producers, marketing groups and organizations. This includes bringing forth new information on specialty crops and the explorations of new agricultural ventures.

Timeline

The information site is currently in the development stages. A prototype information site will be ready for display on September 11. Distribution of the information site will be distributed to organizations beginning in late September. The educational seminars will be conducted between December 2000 and April 2001. Implementation of producer suggestions will take place throughout. Attached to this letter is an in-depth timeline.

Budget

We are requesting \$12,000 per year for two years. This money will be used for the development of the futures market, local market and basis charting section. This money will also be used to develop and print the educational materials to be used in the educational seminars.

As a thank you for supporting Toolshed, the Minnesota Department of Ag will be able to have a "tab" that will link to statewide or regional information. We would also like to acknowledge the Department of Ag as a supporter on the educational materials.

Additional Funds

AURI has committed to \$6,000 along with the development of the information site. The Minnesota Wheat council will contribute money for the development of: online weather, market, legislative, and news updates; renting of portable computer equipment; development of "Toolshed on Wheels" technology topics; personnel to conduct the seminars; travel expense to distribute the information site and to conduct seminars; promotion for the seminars.

Thanks you for your support of the Toolshed project. If you have any question feel free to call me at (218) 253-4311 or e-mail me at tdagman@gvtel.com.

Sincerely,

Tara D. Dagman
Minnesota Wheat Council – Program Director

September 1, 2000

Minnesota Wheat Council
2600 Wheat Drive
Red Lake Falls, MN 56750

Jim Boerboom
Minnesota Department of Agriculture
90 West Plato Boulevard
St Paul MN, 55107-2094

Dear Jim,

In response to our phone conversation on 08/31/00 the following information outlines the cash and in kind contributions of the Minnesota Wheat Council and the Minnesota Association of Wheat Growers:

<u>Item</u>	<u>Amount Contributed</u>
Monthly Payments for Futures Market Quotes	\$650.00/month
Salary for Program Director of Toolshed	\$29,500.00/year
Equipment and Supplies	\$2,500.00
Database Programmer Wage	\$825.00
Web Development Fee	\$1650.00
<u>Wage for collection of Local Markets</u>	<u>\$3,120.00</u>
Total	\$45,395.00

The demonstration site for Toolshed can be viewed at www.agnewsonline.com. The home page is an information page describing the concept of Toolshed. If you scroll to the bottom of the page, you will see a graphic titled "Visit Demo Site". That link will take you to the demonstration site. Feel free to explore the information and links.

If you have any questions I may be reached by phone at (218) 253-4311 or by email at tdagman@gvtel.com.

Sincerely,

Tara D. Dagman



FarmConnect

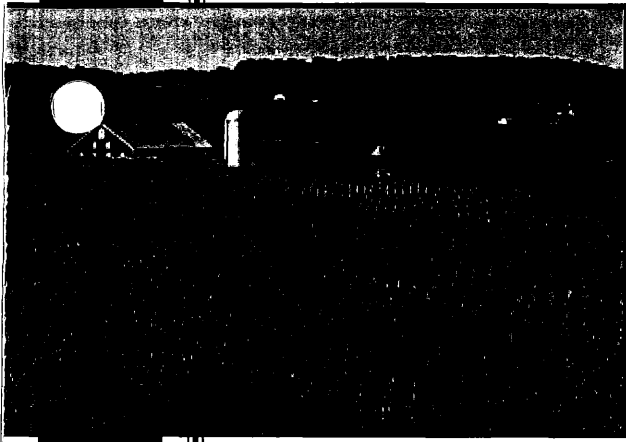
**A Minnesota Farmer Owned
Next Generation Cooperative**

Business Plan

**FarmConnect
P.O. Box 396
Crookston, MN 56716
1-888-654-5077 (phone)
1-218-281-8457 (fax)**

**info@farmconnect.com
www.farmconnect.com**

November 17, 2000



FarmConnect Business Plan

Executive Summary

**FarmConnect
P.O. Box 396
Crookston, MN 56716
www.farmconnect.com**

November 17, 2000

Executive Summary

The Company

FarmConnect is comprised of 650 of the most progressive crop and livestock farmers in Minnesota. Between February and March of 2000 these 650 farmers each paid \$500 to establish and become member owners of FarmConnect.

The vision and mission of FarmConnect are as follows:

VISION: Create a broad-based farmer owned network that connects production to market needs.

MISSION: Improve the profitability of farmer owners by aggressively identifying, creating, and meeting market needs through strategic relationships with processors and end users.

FarmConnect identifies production and marketing opportunities that can improve profitability for its members. FarmConnect benefits end users by providing them with access to farmers capable of supplying the quantity and quality of product desired. New opportunities to produce specific end-use products are identified by forming close associations with end users and by developing an intimate understanding of their needs. The system would ensure that communication of consumer needs is moved quickly and efficiently through the marketing chain to processors and farmers. New product research would be directed by market demands and opportunities. FarmConnect provides

the avenue for farmers to work together to obtain the information and expertise in the marketplace and allow farmers, commodity groups, grower associations, research institutions, government, and non-governments entities to work together to provide the farmers with the ability to improve profitability by meeting market needs.

Current Situation

Minnesota Farmers:

Agriculture plays a critical role in Minnesota's economic climate. Cash receipts for Minnesota agricultural products totaled over \$8 billion in 1997, the most current year for which detailed statistics are available.

Minnesota ranks very high in production of many agricultural products - specifically corn, soybeans, dairy products, hogs, turkeys, and sugarbeets. However, what is most important is not how much Minnesota farmers produce, but how profitable they are. It appears clear that if Minnesota farmers are going to be



Our vision is to create a broad-based farmer owned network that connects production to market needs...

more profitable they need new production options to choose from. They either need to produce different products, or add value to the products they currently produce by differentiating them. Producers have

been encouraged to diversify, identify, and produce products that have higher potential returns than the undifferentiated commodities most produce today. However, significant barriers make it very difficult for individual farmers to identify and produce for new and higher value markets.

Individual farmers do not have the information to know what the industry needs and how they could produce a higher-value product to the market.

Individual farmers do not have the production capacity or the resources to supply many of the markets in the industry.

Individual farmers do not have the power and expertise to negotiate with the processor or consumer.

Farmers will need to work together to supply the market in order to take advantage of the opportunities provided by this transition. The strength will come from working together to obtain the information necessary to identify and supply the market. These products will need to be differentiated from the commodities currently available and have quality, supply, and service needed by the end user. This differentiation will allow farmers to obtain higher value for their products because they will be worth more to the consumer and end user.

The Industry

Agricultural products have traditionally been sold in broad quality categories such as #2 yellow corn, USDA grade A meat, etc. The farmer produced it, the elevator blended it, and the processor used it. There was little differentiation or reward for high quality products built into the system. Buyers that did want a specific-quality or type of product

often didn't know where to get it. For example, a major poultry producer and retailer were very interested in producing organic poultry, but didn't know how or where to get certified organic feed products.

A major grain buyer stated that *'he didn't want to work with a thousand farmers'* to get the specific product he wanted, but *'he sure would like to work with someone who did work with a thousand farmers'*. Buyers are beginning to realize that *'quality starts on the farm, not at the door of the processing plant'*.

In many instances the current system of agricultural production and procurement does not appear to be working for farmers (low profitability) or for buyers (difficult to access specific products). Changes are beginning to take place in the food and agriculture industry that will require these problems to be solved. This situation presents great opportunities for those that are able to develop systems to provide specific types and qualities of products to the buyers that want them.

Major Trends in the Agriculture and Food Industry

The Trends

Rapid and fundamental changes are beginning to take place in the agriculture and food industry. These changes are being driven by three main factors:

Changes In Consumer Preferences

- Variety
- Convenience
- Quality
- Consistency
- Price

- Food Safety Concerns
- Healthy Foods: 'Functional Foods'
- Organic Foods
- Environmentally Friendly Food Production Systems

1. **The Drive To Continuously Improve Process Efficiencies**
2. **Product Differentiation In A Competitive Marketplace**

Changes in consumer preferences, the drive to continuously improve process efficiencies, and product differentiation in a competitive marketplace are not new concepts. Why, then do we see rapid and fundamental changes occurring? Primarily because of new enabling technologies, systems, and conditions.

Enabling Technologies, Systems, and Conditions

Rapid changes in food and agriculture are partially driven by changes in consumer preferences and partially driven by new enabling technologies, systems, and conditions, which influence consumer preferences. These enabling technologies, systems, and conditions are:



Many companies are demanding more specific-quality raw products to allow them to optimize their processes.

Enabling Technologies

- Specific Input and Output Trait Development
- Biotechnology
- Research and Analytical Technology
- Information Technology

Enabling Systems

- Identity Preservation
- Certification

- Tracability

Enabling Conditions

- Prosperity

Rapid changes are beginning to occur in the food industry and some clear trends are emerging. Consumers are demanding that food products be safer, healthier, and produced in an environmentally responsible manner. They are demanding variety, convenience, and quality.

Biotechnology provides tremendous potential to identify and incorporate specific traits in crops and livestock. Medical and nutrition research are identifying specific compounds and products in food that have positive and negative health effects.

Advancements in research and

analytical technologies, as well as information technologies are allowing more accurate and rapid selection of specific traits in crops and livestock. Our infrastructure is developing identity preserved systems capable of segregating, certifying, transferring, and storing products with specific traits.

Food safety scares involving mad cow disease and bacterial infections have heightened public awareness about food safety. Many parts of the world are experiencing times of prosperity, allowing consumers to pay more for products they prefer.

Many companies are demanding more specific-quality raw products to allow

them to optimize their processes. specific varieties and breeds allow them to increase product quality, create new products, and allow their processing systems to operate more efficiently. The needs for identity-preserved products allow farmers to supply these markets and fill specific needs. These trends open significant opportunities to Minnesota farmers. Proactive farmers working together to identify and fill these opportunities will be able to become more integrated in the value chain by developing strategic alliances and relationships with processors and end users to supply specific products. Because individual farmers will be unable to take advantage of many of the opportunities that are emerging, farmers will need to work together. Success will come from working together to obtain the information necessary to identify and supply the market.

Helping Farmers Capitalize on the Rapid Changes Occurring in the Food and Agriculture Industry: FarmConnect

A Disconnected System

The profitability of Minnesota farms is low largely because Minnesota farmers are primarily producers of undifferentiated, low value commodities. Many of these farmers would like to diversify by identifying and producing products that have higher potential returns. However, significant barriers make it very difficult

Companies are learning how use of for individual farmers to identify and produce for new and higher value markets:

Individual farmers do not have the information to know what the industry needs and how they could produce a higher-value product for the market.

Individual farmers do not have the production capacity or the resources to supply many of the markets in the industry.

Individual farmers do not have the power and expertise to negotiate with the processor or consumer.

At the same time, buyers of agricultural products are unable to identify and coordinate production of the type, quality, and quantity of products they desire. It is a disconnected system – buyers and farmers do not have an effective working relationship that could make both more profitable.

FarmConnect

There is clearly a need for an organization to help farmers connect to buyers and end users.

FarmConnect is a producer-owned entity that will identify, develop, and create production and marketing opportunities that can improve profitability for its members.

FarmConnect benefits end users by providing them access to significant numbers of producers capable of supplying the quantity and quality of product desired. New opportunities to produce specific end-use products are identified and created by forming close relationships with end users and by developing an intimate understanding of their needs. The system would ensure that communication of consumer needs is moved quickly and

efficiently through the marketing chain to processors and producers.

FarmConnect will pursue a wide range of opportunities.

Products we currently produce – like wheat, corn, soybeans, or livestock – that a coordinated system could add value to so that a premium could be obtained. And from the processor's point of view, these are products that they currently want.

Examples include:

- **Specific wheat varieties** with certain milling and baking characteristics. We may already produce the variety of wheat but it is not identity preserved, and there is not a coordinated production and delivery system in place.
- **Specific livestock breeds** for specific markets, such as ethnic markets.
- **Products we currently grow** that could be certified for specific markets requiring tracability or other specific production criteria.
- **Higher value products** that we already produce and that we have capacity to produce more of. Organic soybeans are one example. We currently produce organic soybeans in Minnesota for a significant price premium, but we have the capacity to produce much more.

Products that Minnesota farmers currently do not produce, but end users want.

This category would provide new market opportunities for farmers, and would allow them to diversify their production system profitably. The vast majority of Minnesota crop and livestock production falls in the category of undifferentiated, low value commodities.

There are many significant opportunities for Minnesota farmers to produce higher value, more profitable products. The markets already exist, and are often being supplied by brokers with products being produced in other states. An organization such as FarmConnect that can provide a connection between the buyers that want these products and the farmers that can or do produce them can bring those opportunities to Minnesota farmers.

Products Minnesota farmers can produce, but end users don't know they want.

Examples in this category include major or alternative crops with specific-quality traits, such as high protein, identity preserved varieties of wheat with specific-quality characteristics, or a variety of barley with specific brewing characteristics. Livestock with specific-quality traits are included in this quadrant also. Biotechnology will be used to identify and incorporate specific traits in crops and livestock. Medical and nutrition research are identifying specific compounds and products in food that have positive and negative health effects. Advancements in research and analytical technologies, as well as information technologies are allowing more accurate and rapid selection of specific traits in crops and livestock. Many specific traits will be identified and produced that we are not even thinking about today.

Products that Minnesota farmers do not currently produce, and that end users don't know that they want.

These opportunities may include industrial hemp or crop varieties with specific-quality characteristics not yet introduced. This may be the most difficult area to pursue, but may also hold the greatest opportunities for new

growth. Opportunities in this area critical that we work closely with research organizations like the University of Minnesota, AURI, USDA, and the Minnesota Department of Agriculture. We will need their involvement to help determine the profitability, evaluate market potential, understand agronomic production factors, educate farmers on production, etc. for producing the various products the end users are demanding.

Framework for Support:

Numerous groups already support producers and end users in the agricultural production system including:

- Commodity groups and grower associations
- Agricultural Utilization Research Institute
- Minnesota Department of Agriculture
- University of Minnesota's research and outreach arms
- Minnesota Trade Office, and Department of Trade and Economic Development
- Northern Great Plains Initiative for Rural Development

FarmConnect creates a framework for these support groups to work together to more effectively help producers meet the needs of end users.

Minnesota farmers have a tremendous network of supporting organizations. However, these organizations are often unable to coordinate activities and may lack a close connection to the marketplace. FarmConnect will provide that close connection to the marketplace. The support organizations will then help FarmConnect produce the products that buyers and end users want and will pay premiums for.

demonstrate why we believe it is

Services Provided by FarmConnect To Members and Buyers

To Members:

- Identification of higher value production opportunities in crops and livestock
- Provide access to markets unavailable to individual producers
- Negotiation and construction of contracts with buyers
- Conduct due diligence of buyers
- Work out logistics of transportation and payment
- Educate/inform members on how to produce appropriately to meet contract requirements
 - ✓ Production
 - ✓ Identity preservation/certification
 - ✓ Quality specifications
 - ✓ Storage and handling
- Coordinate with processors, research organizations, commodity groups, and others to develop and create new, higher value uses for products members can produce
- Identify and communicate to members investment opportunities with high potential for success

To Buyers

- A one stop connection to production – allows buyers to work with one organization instead of many individual farmers
- Provide access to products with specific traits and characteristics
 - ✓ Quality
 - ✓ Identity preserved traits
 - ✓ Certification/Trace ability
 - ✓ Organic
- Assistance in determining ways to provide products that will:
 - ✓ Increase product quality
 - ✓ Increase efficiency of processing

- ✓ Allow new product creation and product differentiation
- ✓ Provide logistical services:
consistent, reliable supply
- Provide a link to research and development organizations such as the University of Minnesota and AURI who can assist in determining ways to improve product quality, improve process efficiency, or develop new or differentiated products.



FarmConnect Business Plan

Detailed Discussion

**FarmConnect
P.O. Box 396
Crookston, MN 56716
www.farmconnect.com**

November 17, 2000

Detailed Discussion

The Company

FarmConnect is comprised of 650 of the most progressive crop and livestock farmers in Minnesota. Between February and March of 2000 these 650 farmers each paid \$500 to establish and become member owners of FarmConnect.

FarmConnect is a cooperative organized under Minnesota Statutes, Chapter 308A under the name of 'Minnesota Marketplace'. The Articles and Bylaws of the organization were approved by the Board of Directors on Feb. 7, 2000.

The vision and mission of FarmConnect are as follows:

VISION: Create a broad-based farmer owned network that connects production to market needs.

MISSION: Improve the profitability of farmer owners by aggressively identifying, creating, and meeting market needs through strategic relationships with processors and end users.

FarmConnect identifies production and marketing opportunities that can improve profitability for its members. FarmConnect benefits end users by providing them with access to farmers capable of supplying the quantity and quality of product desired.

New opportunities to produce specific end-use products are identified by forming close associations with end users and by developing an intimate understanding of their needs. The system would ensure that communication of consumer needs is moved quickly and efficiently through the marketing chain to processors and farmers. New product research would be directed by market demands and opportunities. FarmConnect provides the avenue for farmers to work together to obtain the information and expertise in the marketplace and allow farmers, commodity groups, grower associations, research institutions, government, and non-governments entities to work together to provide the farmers with the ability to improve profitability by meeting market needs.



Our mission is to improve the profitability of farmer owners by aggressively identifying, creating, and meeting market needs through strategic relationships with processors and end users.

Current Situation

Minnesota Farmers

Agriculture plays a critical role in Minnesota's economic climate. Cash receipts for Minnesota agricultural products totaled over \$8 billion in 1997, the most current year for which detailed statistics are available.

The following table illustrates the value of Minnesota's agricultural production for 1997.

Product Rank	Cash Receipts (\$Millions)	% of Total (Production)	U.S.
Corn	1,325	16.2	4
Soybeans	1,511	18.5	3
Dairy products	1,200	14.7	5
Hogs	1,169	14.3	3
Cattle and calves	973	11.9	15
Vegetables, fruits & other	410	5.0	N/A
Turkeys	400	4.9	2
Wheat	317	3.9	11
Sugar beets	389	4.8	1
Other poultry and eggs	228	2.8	N/A
Other grain and oil crops	149	1.8	N/A
Other livestock	84	1.0	N/A
TOTAL	8,155	100.0	

Source: USDA NASS

Minnesota ranks very high in production of many agricultural products - specifically corn, soybeans, dairy products, hogs, turkeys, and sugarbeets. However, what is most important is not how much Minnesota farmers produce, but how profitable they are.

The following table shows average farm income from 1993-1998*.

Year	Number of Farms	Gross Farm Income	Farm Production Expense	Net Farm Income	Net Farm Income – Without Gov. Payments
	(1,000)	------(Dollars)-----			
1993	86.0	82,453	80,575	1,878	-7,695
1994	84.5	105,147	88,018	17,129	9,765
1995	83.0	100,351	89,275	11,076	5,442
1996	82.0	123,178	95,588	27,590	23,330
1997	81.0	115,413	103,637	11,776	6,628
1998	80.0	119,420	103,665	15,754	6,224
Average				14,200	9,847

*Farms having annual sales of agricultural products of \$1000 or more.

Source: 1999 Minnesota Agricultural Statistics

The foregoing table indicates that even though Minnesota ranks high in production of many important agricultural products, average profitability of Minnesota farms is very low. Net farm income from 1993 through 1998 averaged under \$15,000 per year, with nearly a third of this income derived from government payments. Prices for many agricultural products remain low and inventories remain high. Worldwide production capacity is increasing for many products Minnesota farmers produce. Brazil, for example, is currently the number two producer of soybeans in the world behind the U.S., and is planning to become the number 1 producer. Many areas of Brazil receive near 60 inches of rainfall per year and they have the ability to double crop. Current supplies coupled with global production suggest that prices are not likely to take a significant upward turn anytime soon.

Consider the dilemma for a Northwest Minnesota crop producer.

The following table shows the crop budgets for 17 of the most commonly grown crops in the region. Average yields and expenses, and expected prices are used.

Crop	Yield/A	Price/ Unit	Gross Return/A	Costs/ A	Net Return/A
Spring Wheat	29	3.13	91	114	-23
Durum Wheat	26	3.33	87	114	-27
Barley – Malt	51	2.13	109	113	-5
Corn	67	1.70	114	167	-53
Sunflowers – Oil	1260	0.092	116	127	-11
Sunflowers – Conf	1260	0.13	164	139	25
Soybeans	23	4.72	109	126	-17
Dry Beans	1260	0.15	189	172	17
Oats	57	1.03	59	102	-43
Flax	20	5.26	105	104	1
Canola	1350	0.097	131	135	-4
Yellow Mustard	1000	0.106	106	93	13
Field Peas	36	3.24	117	126	-9
Crambe	1300	0.078	101	103	-2
Millet	1600	0.045	72	88	-16
Buckwheat	950	0.104	99	92	7
Alfalfa – Estab.	2.0	50	100	96	4

Source: Northwest Minnesota Farm Business Management Reports and NDSU Northeast North Dakota Crop Budgets

Only 6 of the 17 crops show a positive net return, averaging only about \$11 per acre. Profitability is a function of three things: Yield X Price – Expenses. A thorough analysis of the data suggests that there is some potential to increase profitability by increasing yields, and only a small potential to increase profitability by increasing prices or reducing expenses. The bottom line is – it will be difficult for farmers to be profitable growing these crops. Crop and livestock farmers throughout the state face the very same dilemma. The

result, as we have seen, is low net farm income in Minnesota.

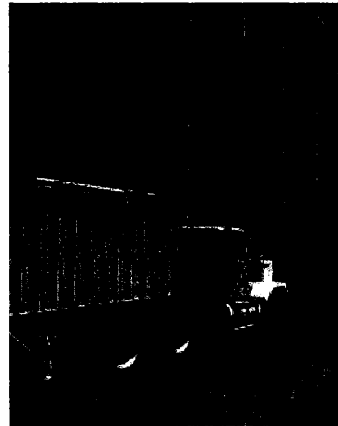
It appears clear that if Minnesota farmers are going to be more profitable they need new production options to choose from. They either need to produce different products, or add value to the products they currently produce by differentiating them. Producers have been encouraged to diversify, identify, and producing products that have higher potential returns than the undifferentiated commodities most produce today. However, significant barriers make it very difficult for individual farmers to identify and produce for new and higher value markets.

Individual farmers do not have the information to know what the industry needs and how they could produce a higher-value product to the market.

Individual farmers do not have the production capacity or the resources to supply many of the markets in the industry.

Individual farmers do not have the power and expertise to negotiate with the processor or consumer.

Farmers will need to work together to supply the market in order to take advantage of the opportunities provided by this transition. The



The strength will come from working together to obtain the information necessary to identify and supply the market.

strength will come from working together to obtain the information necessary to identify and supply the market. These products will need to be differentiated from the commodities currently available and have quality, supply, and service needed by the end user. This differentiation will allow farmers to obtain higher value for their products encouraging them to diversify and identify, because they will be worth more to the consumer and the end user.

The Industry: Agricultural Product Buyers, Processors, and End Users

Agricultural products have traditionally been sold in broad quality categories such as #2 yellow corn, USDA grade A meat, etc. The farmer produced it, the elevator blended it, and the processor used it. There was little differentiation or reward for high quality products built into the system. The old system and the transition that is currently taking place are described well in the following statements:

'We're shifting from what are called independent roles in the supply chain to what we call interdependent roles in the supply chain. In the past we all

operated independent of each other, so a farmer could operate and grow whatever he felt he wanted to grow, and sell it to whoever wanted it. Everybody did what they wanted, and they all had opinions on how the world should function from their vantage point, and the world should function from their vantage point, and things tended to function pretty well. But as we drive productivity into the system and start doing linkages, if quality truly starts on the farm, we're going to have to bridge those individual pieces or link them together, or we're not going to achieve future productivity and quality gains that are needed in the food companies. So we need to figure out how to establish those kinds of links'. Ron Olson, VP for Grain Operations, General Mills.

(Source: 1999 Trade & Transportation Conference, Sioux Falls, South Dakota, October 20, 1999).



For example, a major poultry producer and retailer were very interested in producing organic poultry, but didn't know how or where to get certified organic feed products.

Buyers that do want a specific-quality or type of product often don't know where to get it. For example, a major

poultry producer and retailer were very interested in producing organic poultry, but didn't know how or where to get certified organic feed products. A major grain buyer stated that *'he didn't want to work with a thousand farmers'* to get the specific product he wanted, but *'he sure would like to work with someone who did work with a thousand farmers'*. Buyers are beginning to realize that *'quality starts on the farm, not at the door of the processing plant'*. Olson of General Mills states: *innovation 'is starting to drive the grain business, and it's starting to include farmers because we are learning that grain makes a big difference'.*

21st Century Alliance is a grower alliance seeking to provide the products processors want. Lynn Rundle, CEO of 21st Century Alliance, states: *'How can food companies begin to access traits in crops? There's only two ways to do it: contract production and partnering with producers.'* *'What we're trying to do is develop partnerships with people in the food business to gain some of the value, a long-term partnership and not just contract production'. 'We think developing alliances is a real opportunity. Interdependence is the key, not independence, for farmers in the next century. And agribusiness will have to include producers in the new era because we can do things that nobody else can because we control the land. And that's really important -- we control the land'.*

(Source: 1999 Trade & Transportation Conference, Sioux Falls, South Dakota, October 20, 1999).

Current Situation: Summary

In many instances the current system of agricultural production and procurement does not appear to be

working for farmers (low profitability) or for buyers (difficult to access specific products). Changes are beginning to take place in the food and agriculture industry that will require these problems to be solved. This situation presents great opportunities for those that are able to develop systems to provide specific types and qualities of products to the buyers that want them.

Major Trends in the Agriculture and Food Industry

The Trends

Rapid and fundamental changes are beginning to take place in the agriculture and food industry. These changes are being driven by three main factors:

1. **Changes In Consumer Preferences**
 - Variety
 - Convenience
 - Quality
 - Consistency
 - Price
 - Food Safety Concerns
 - Healthy/Functional Foods
 - Organic Foods
 - Environmentally Friendly Food Production Systems
2. **The Drive To Continuously Improve Process Efficiencies**
3. **Product Differentiation In A Competitive Marketplace**

Changes in consumer preferences, the drive to continuously improve process efficiencies, and product differentiation in a competitive marketplace are not new concepts. Why, then do we see rapid and fundamental changes occurring? Primarily because of new

enabling technologies, systems, and conditions.

Enabling Technologies, Systems, and Conditions

Rapid changes in food and agriculture are partially driven by changes in consumer preferences and partially driven by new enabling technologies, systems, and conditions, which influence consumer preferences.

These enabling technologies, systems, and conditions are:

1. **Enabling Technologies**
 - Specific Input and Output Trait Development
 - Biotechnology
 - Research and Analytical Technology
 - Information Technology
2. **Enabling Systems**
 - Identity Preservation
 - Certification
 - Tracability
3. **Enabling Conditions**
 - Prosperity

Biotechnology/Specific Input and Output Trait Development

The tremendous potential of biotechnology is much talked and written about. It has been stated that biotechnology may be the most important technology of the 21st century. Lowell Catlett, Futurist and Agricultural Economist from New Mexico State University states:

'We already have plants that beat back insects. That's child's play. What about crops that attack weeds? Plants that absorb pollution or yield clean fuels? Vegetable oils that fend off cancer or fight heart disease? What about those born today living to see the 23rd century? We will see all of that and more. Biology will explode. We're at

the point now where physics was 75 years ago. Biotechnology offers us ways to be healthy, ways that we're not even thinking about.'

A few years ago, a researcher at one of the countries largest grain companies said, *'If we don't figure out this biotechnology thing, we're going to be like the vacuum tube companies. Of the six leading vacuum tube companies that existed in 1955, there's only one left today that successfully transferred into the transistor business, and they're a minor niche player in the transistor business'*. Major agricultural companies view participation in biotechnology as an absolute must for success in the future.

In the future farmers won't be just growing corn, they will be growing ethanol, or synthetic fiber, or corn chips, or corn for some other predetermined use. The corn they grow will have specific traits for specific uses, and farmers will know when they plant it what it will be used for. The same will be true for soybeans, wheat, sunflowers, etc. Likewise, livestock products will have specific traits for specific uses and markets. These specific traits will be developed and sold because of customer demand, and incorporation of many of these traits will be possible because of biotechnology. Currently there is significant opposition to biotechnology. Most industry analysis feel that the present opposition will erode when the benefits

of biotechnology to all segments of society are understood, and when environmental and food safety claims have been substantiated. The perception of biotechnology should improve when the focus is placed on output traits that benefit consumers such as traits that reduce cancer or heart disease risk, instead of input traits such as herbicide and insect resistance.

Advanced Research and Analytical Technology

However, it is important to understand that the identification and incorporation of specific traits can and does occur without biotechnology.

In fact, conventional plant and animal breeding is all about selecting for certain traits. Advanced research and

analytical technology allows researchers to identify traits quickly and incorporate them into crops and livestock using conventional techniques.

Often, the traits already exist; it is just a matter of identifying them.

For example, human health research has identified isoflavones as cancer fighting chemicals, which

are naturally present in soybeans. Research is currently underway to identify soybean cultivars that have the highest levels of isoflavones.



In the future farmers won't be just growing corn, they will be growing ethanol, or synthetic fiber, or corn chips, or corn for some other predetermined use.

Information Technology

The Internet, electronic communications, and e-commerce are all considered information technology (IT). Information is so much more widely and readily available than in the past. Efficiencies of communications and transactions are greatly improved by IT. IT has an overall accelerating effect on change.

Identity Preservation, Certification, and Tracability

Once desirable, specific traits have been identified and incorporated into a crop or livestock product, it is essential that the product be kept separate from products that do not possess the trait. Specific trait development creates the need for identity preservation systems. Creating an identity preservation system is not a simple task. Jim Prokopanko, VP & Retail Crop Inputs Manager, North America for Cargill Grain states; *'At the same time as we start to understand the identity preservation of a crop from the field into [a specific product], it is no less complex and no less difficult in my opinion than inserting a new gene into a piece of corn. This is a huge system, with tremendous complexities, involving a great many people'*.

In addition to identity preservation, customers may also require certification and/or tracability. The entire organic food industry depends on a certification system that works and has credibility with customers yet is based on relatively small volumes of product and is not based on a unified system. Development of a system that can provide delivery of specific-quality product on large volumes of product is the key. Phillippe Florentin Sales Director for Agro-Picarde a French Grain Cooperative says *Adopting a quality and tracability process when*

working with large volumes of grain demands know-how, adapted logistics and investments. Ultimately this must be profitable to the producer. The cooperative has adapted a segmentation policy, which has opened doors to high level markets in milling, the starch for industry, and for exports. Quality and volume are far from being two opposed concepts.

The French cooperative understands that it must become product suppliers instead of a company that delivers commodity grain. To initiate this philosophy they have begun by blending wheat to produce homogeneous product that they can supply 365 days per year. The next step is determining which varieties of wheat are planted on milling and baking characteristic, and their *ultimate goal is to move step-by-step to tracability*. Tracability is required to insure food safety – products or ingredients that are suspect must be quickly and completely removed from the system. Systems need to be, and are being developed to perform these tasks.

The Farmers Role in Tracability

The changes described will dramatically change the farmer's role in the supply chain. Lynn Rundle, CEO 21st Century Alliance stated *there are two ways to allow companies to access specific traits in crops, contract production or partnering with producers*. Companies such as General Mills have stated that they don't have the resources to manage many individual farmers but would much rather work with someone who represents a group of farmers.

Working with a group of farmers to develop relationships to supply product provides additional incentive

over contract production. Farmers cannot only provide product but they can also provide creativity and innovation resources to help understand how to produce and deliver product. Ron Olson of General Mills stated, *the reason General Mills is successful is that they expect very high innovation and creativity.* By contracting with farmers instead of partnering with them you have the advantage of having creativity start at the farm instead of the processing plant door.

However, contract production dictates what is to be produced and how and does not allow a system to develop with each of the players. A good example of this can be described by what happened when the sugarbeet growers in Minnesota and North Dakota went from being contract growers to becoming partners in the process.

American Crystal Sugar(ACS) was originally an independent sugar company that contracted with farmers in Minnesota and North Dakota to produce sugarbeets under contract. ACS was having financial problems because the sugarbeets being delivered to the plant did not have high enough recoverable sugar to allow efficient processing. ACS representatives worked with the contract producers optimize crop inputs to obtain beets that had higher recoverable sugar. However, the farmers were more interested in producing tons of beets because they were compensated on yield. As a result the company was not able to obtain the quality of raw product to compete, and at the point of bankruptcy ACS sold the company to the farmers. Once

the farmers purchased the company they began to understand what the old company had been unsuccessfully trying to tell them. However, because they could see why they must change, they developed a system to optimize sugarbeet tonnage and recoverable sugar and obtained the beets they needed by compensating them on recoverable sugar. The partnership allowed the innovation and creativity to start at the field and not at the door of the processing plant and allow both phases to be more profitable.

By working together with the industry, producers have the opportunity to help develop the system to understand the needs and supply the product. One of the key issues is the ability to provide specific-quality product to the customer. Ron Olson with General Mills indicated that one specific variety may only be used for just one product and that it will take lots of varieties of wheat to supply the many specific products for the market. We need to develop the capability to deliver the identity-preserved grains. An added benefit to the producers is that if you stay connected with the market, it will give you signals of what to grow and what to use. We are finding out that innovative farmers are doing that.

The ability for farmers to move from independence to interdependence is the first step in this process. The ability to work together to understand the market, develop relationships with their customers, and provide leadership, innovation, and creativity to the supply chain will allow them to win.

Currently identity-preserved products are focused on maintaining identity after it leaves the farm. However, to provide the products the consumers are demanding a system needs to be developed that allows tracability of the product from when the farmer sows the seed throughout the entire supply chain in order to supply products that the consumers deem safe.

Because consumers are no longer directly linked to the farm, their understanding of how food is produced has decreased dramatically. Food scares that results in even a handful of people becoming sick or even dying are highly publicized and provide the consumer with the perception that food in general is not safe.

One of the latest food scares involved a dioxin contamination of food in Europe where a few people became sick because a producer fed spent transformer oil to livestock instead of incurring the expense of properly disposing of the material, and also from shipping fresh product on dioxin-contaminated wood pallets. Because of these illness and detection of the problem, European food companies had to prove that none of their ingredients came from the areas where the contamination occurred or they would have to pull those products from the shelf.

Other debates over regulation of different types of products such as the GMO/non-GMO debate or the hormone treatment used in beef production, needs to essentially come down to what the consumer wants. European Trade Commissioner Pascal Lamy points out *The precautionary principle must serve as a safety valve to regulate scientific uncertainties. In other respects progress in product labeling and tracability, both*

indispensable, would assist the consumer in their choices. In the hormone-treated beef case it is clear that the Americans will continue to have significant reservations about the precautionary principle defended by the Europeans. On the other hand its may be easier for them to accept labeling of products such as "Beef of American Origin" in order to preserve the consumers' freedom to choose the foods they want.

These issues have been debated as to whether concerns are based on true health fears or on actions to protect their markets from foreign suppliers. Regardless of the issue, increased concern over the ability to provide products that the consumer deems safe, it is critical to maintain the identity of these products. It is very feasible that if companies are not able to obtain the product from the farmers, they will set up a system to accomplish it themselves. The issue is whether the producers will be proactive enough to see the need and are able to help develop the system to position themselves in the supply chain. The alternative to that is that the companies will set up the system and simply demand the product from the producers without the producers sharing in the added-value gained from the effort.

Precision Agriculture and Tracability

New technology and testing equipment is allowing the processor to better define product specifications and new systems are allowing producers the tools to more efficiently collect, manage, and supply data to provide the type of product that consumers are demanding. Precision farming provides a tremendous opportunity to collect reliable, accurate and

defensible data. The ability to collect real-time spatial information on the production of the crop allows producers to understand what issues affect crop quality allowing the production system to be adjusted and refine product quality.

Precision farming data collection coupled with rapid communication and data transfer technology through the Internet provides the tools to provide a traceable product throughout the entire supply chain.

FarmConnect will utilize this technology to develop a system to address the needs of the industry and supply identity preserved product that has the ability to provide traceable defensible data. FarmConnect will develop appropriate alliances to:

1. Develop an effective and efficient communication system to and among many individual producer members.
2. Develop a sophisticated, defensible data collection system that allows the producer to efficiently collect the production data.
3. Develop an integrated data transfer system to process and analyze production information.
4. Develop proprietary systems to allow tracability of the data through the entire supply chain.
5. Utilize the tracability system to transform precision agriculture to a system that allows complete tracability from the field to the shelf and provide the feed back mechanism to optimize the farm product quality to the demands of the customer.

Changes In Consumer Preferences

Consumer preferences are undergoing rapid changes. *'A strong economy and changing consumer lifestyles means more people are eating meals*

prepared by somebody else, whether it be in restaurants, as take-out, or in the company cafeteria. This business segment currently accounts for one-half of each food dollar', says Jerry Smiley of Technomics Research. Smiley goes on to say, *'Our population is aging, we have a growing ethnic diversity, we have more dual income families, we have more single heads of households, and we have more constraints on our time. This means that rather than preparing our own meals at home, consumers are looking to food service outlets to provide solutions for cooking and convenience. But consumers also are demanding freshness, variety, value and food safety. In the future consumers will be even more demanding, and they will also be knowledgeable about what they want. They will know quality and will prefer freshness. They want options and they expect value to meet their expectations.'*

Food retailers are changing to meet the needs of time-strapped, selective shoppers. John Selzer of the University of Minnesota Retail Food Industry Center describes these changes: *'More and more food items are being packaged and sold together. More retail outlets are providing ready-to-eat meals. Retailers are adopting solution selling - the simplification of a shopping experience to meet the consumer's need by bundling and merchandising products, services and information to create value for the consumer. Some examples: pre-cut, ready-to-cook vegetables; pre-cut bagged salads; and pre-cut marinated ready-to-cook meat.'* Consumers are demanding these products at an increasing rate, and they are paying a premium for them.

At the same time that more consumers are demanding and paying for quality, variety, consistency, convenience, and food safety biotechnology and advanced research and analytical systems are producing specific traits faster and more efficiently than ever. The converging of these trends means creation of a multitude of specific products developed to meet consumer demands.

Organic and Environmentally Conscious Foods

Natural and organically produced foods are also impacting the Ag and food industry. Natural foods are one of the fastest growing sectors in the food industry. The emergence of products with the natural or organic label is big news in the food industry. Organic sales in the United States are estimated to be over \$6 billion in 1999. This represents average growth rates over the last 8 years in excess of 20% per year, making organic foods the fastest growing segment in the U.S. food industry. It is a viable market that is now at 1% of the total U.S. food sales, and growing very rapidly. Organic production is projected to occur on at least 5% of Minnesota's agricultural land base by the year 2010. This is a conservative estimate given the growth of the industry, but very realizable.

The organic industry has long been in place in Minnesota. At the farm level, there are hundreds of organic farmers producing everything from fruits and vegetables to dairy, grain, soybeans, corn, sugar beets, meat, and more. Many of them are participants in the 1200-member Sustainable Farming Association (SFA) of Minnesota, which has chapters in place around the state. There are seven designated organic certification organizations in the state,

which have been registered to operate by the Minnesota Department of Agriculture and certify both farmers and processing plants. There are numerous organic brokers who move the organic product from the farmland



Many companies are demanding more specific-quality raw products to allow them to optimize their processes.

to the buyer's destination. There are processing plants including elevators, grain processors, and manufacturers of organic retail products. Organic consumer products now move not only through the established organic and natural food wholesalers to the natural food co-op population, but also through conventional distributors to mainstream supermarkets such as Byerly's, Cub, and Rainbow.

As the consumer becomes more concerned about the social and environmental implications of food production there is an emerging market for 'green labeled' products. There are various options for communicating environmental and social values in the marketplace. These values may encompass support for local production, the survival of family farms, preservation of water quality, conservation of wildlife, or welfare of farm workers. Produce is

differentiated in supermarkets through 'ecolabels', or marketed outside the conventional system through cooperatives, direct marketing, and other direct producer-consumer links. Emerging strategies are being developed to help farmers and community groups organize to meet these new and expanding marketing opportunities.

Ethnic Foods

A rapidly developing trend in the United States is the diversification of its population. Since the early 1980s the Hmong, East African, and Latino populations have increased dramatically in Minnesota. This trend is creating new marketing opportunities for farmers. These ethnic communities desire specific food products that are not being supplied by conventional sources. There are indications that these ethnic groups desire access to quality, affordable, and unique food products from known and trusted sources. The Hmong consumers, for example, prefer to buy lighter weight pigs that provide tastier meat than traditional slaughter pigs. These trends provide new opportunities for farmers to work directly with local meat processors to satisfy these unique markets.

Food Industry Responses to Trends

The food industry recognizes the changes in consumer preferences and the enabling technologies and systems that are in place to meet and accelerate these changing preferences. They are responding in two basic ways:

1. Continuously Improving Process Efficiencies
2. Product Differentiation

These concepts are not new. However, they are vastly more

important now than in the past because the marketplace is changing faster than ever before. Companies realize that they must be efficient and meet customer demands to be competitive, but more importantly they see the vast number of opportunities these trends create.

Another major influencing trend is consolidation resulting in increased economic concentration. The consolidation under way in U. S. agriculture is of two distinct types. Cost savings and supply-chain. Consolidation due to cost savings has been under way for years. Being the low-cost player in a commodity ensures that you can survive. Especially in a period of low prices, there is always increased impetus to consolidate to shift to a lower cost structure. Recent examples of consolidation for cost savings include the Cargill – Continental merger.

A more profound movement in consolidation that potentially has more impact is supply-chain consolidation. According to a report from the Federal Reserve Bank of Kansas City, the supply-chain variety of consolidation is driven by the principle of building innovative alliances to deliver new and better food products to consumers. Supply chains are formed in order to ensure high-quality consumer products, capture economies of scale and minimize risk.

In a supply chain structure, all stages of production, processing and distribution are bound tightly together to ensure reliable, efficient delivery of high-quality products. Furthermore the firms that create the supply chains prefer coordinating fewer rather than more players – it's easier to coordinate and keeps transaction costs lower

than dealing with a large number of individual producers. As supply chains become more dominant, producers will need to build new relationships – moving from independence to interdependence.

In addition, the FRB of Kansas City further notes that supply chains mark a clear shift from commodity markets to product markets, however, most farmers still see themselves in the commodity business. *“The key to staying in the game for many producers may be cooperatives that can either become part of a supply chain, or be the integrator in a new chain.”*

Many companies are demanding more specific-quality raw products to allow them to optimize their processes. Companies are identifying how individual varieties and breeds allow them to increase product quality and allow their processing system to operate more efficiently. The needs for identity-preserved products allow farmers to supply these markets and fill specific needs.

The following comments were made by Ron Olson, Vice-President for Grain Operations for General Mills at the Trade & Transportation Conference, Sioux Falls, South Dakota, October 20, 1999. Mr. Olson very clearly and specifically details how General Mills is responding to trends in the marketplace by increasing process efficiency and product differentiation.

We're going from generic commodities to identity preserved ingredients. This can be GMO, non-GMO, whatever. But in the past, if you wanted to make a product like Wheaties, you basically went out and

bought a certain class of wheat. Wheaties are made from soft white wheat. You bought a class of wheat -- No. 1 wheat and 60 pounds and whatever the generic factors that you buy on -- and you took it to the plant and made a product. What we know today is that we can make a better Wheaties out of any individual variety of wheat than we can out of a No. 1 wheat. We tested seven or eight of the common varieties in the cereal business. And you start discovering things like the curling of a flake is genetic. We didn't know that before. So if you look at a box of Wheaties and some of those flakes are curled and some of them are flat, those are different varieties of grain, and we didn't know that before. This is the stuff that we're rapidly learning.

So what difference does that make to a food company? Well, if you take a box of Wheaties, dump it on the table, and put the curled flakes on one side and the flat flakes on the other side, and you run a taste test, curled flakes will win 90 percent of the time because it's mouth feel. It's the consumer trait. Also, when you get down to the end of a box of cereal there is that little tablespoon of crumbs that comes falling out the top. There's 15 percent less crumbing with curled flakes than there is with flat flakes. That's driven by the variety of wheat. We don't know what gene it is yet, but we'll find it. The point we're learning is that we can do a much better job of buying grain or any ingredient that is tailor-made for our products which are tailor-made

for consumers and that's what drives our business.

We're also shifting from agronomic traits to output traits. Now we've always had things like BT corn, Round-Up Ready beans and stuff like that, and most of the genetic work by most of the companies have been focused on higher yields, higher proteins, let's get rid of bugs and diseases, etc. Most of those are single gene traits, which are very easy to manipulate. It's pretty common to be able to do that. When you flip to the output side, a lot of those are multigene traits, which means you get into the pathways in the genetic world rather than just a single gene. A little more complicated, but you start to get into things like taste and texture and how does it flow through the plant. Driven by productivity in the manufacturing process, a lot of things have become very fine-tuned.

Cheerios is a good example. It's our No. 1 cereal. It's the No. 1 cereal of the nation. The formula for Cheerios sits on the top of a pin. If you go one way or the other, any little bit, you screw it up big time. And it gets into how Cheerios are made. Cheerios are shot from an electronic gun. They're heated in about an eight-foot tube, and there's a hole at the end. They come out one Cheerio at a time at 135 miles an hour, and they double in size in four inches. So it's a box of Cheerios per second. If you screw up the grain or screw up the formula, the gun plugs up. And it's 375 degrees inside the gun because you're toasting this

product. It takes eight hours to clean that gun. So if you put the wrong grain in the gun, you shut that particular gun down for eight hours. In the past we used to do all that work in the plant. You dealt with manufacturing aids – you add various levels of starches and stuff to make it flow better -- it is a constant adjustment process. You can take a lot of that variability out by getting much, much more involved all the way to the genetics of the grain. That's the path we're walking down.

The big issue is health. I don't think there's a food company in the world that is not learning that we can derive health benefits through whole grains, additions of calcium, folic acid, and things like that. There is no question we will have grains that lower cholesterol. That's why Cheerios has a red heart on the package; that's beta glucan. It's a soluble fiber in oats, and there's just enough of it there that it does reduce cholesterol if you eat Cheerios every day. So the trick is, how do you get beta glucan higher in the raw grain? You cannot add beta glucan just to make it higher. It's very easy to find, but you can't do it as an additive. It has to come naturally from the grain to make the health plan from the FDA. So there are a lot of issues that flow around that.

So you sit there and say, 'Why don't we genetically develop oats that have twice as much beta glucan, which is possible to do'? It takes a little while, but that's the kind of stuff that food

companies are starting to spend a ton of time on.

The last one is what I call open access shifting to proprietary grains. Open access to grains means if there's a new variety of grain that's out there that makes a better product, there isn't a food company in the world that couldn't go and buy it. In the future, because of competition and because of the proprietary work that people are doing genetically and changing things so much faster, we're going to own some grains. We will have a wheat for Wheaties, and we will contract grow that because it will have some characteristics that no other wheat has. And we want to keep it proprietary because we don't want private label or our competitors making their product out of the same grain that we're making our product. That's the competitive advantage. Of course, there are multiple issues around proprietary grain: who owns the property, who owns the seed, who owns the genetics?

Why are these things happening now? Why didn't they happen five years ago or ten years ago? The big one is exploding technology. You probably have all read about the Genome Project. A year ago they said we'll have the human genome map.

Wheat has more genes than a human being, so it's a much more complicated plant to operate. But when you get into wheat -- and again, we're a wheat-oat-based company -- we

can have one variety of oats and basically make Cheerios from that. We can have three or four varieties of corn and soybeans and probably make most of the additives that apply in most of our products. But we're going to need many, many varieties of wheat and many, many different segregations because of the complexity of the gene element in wheat and what it can do. There are 13 or 14 glutens in wheat, and 7 or 8 of those are usually active. We have wheat from France that we're bringing out. It only has one active. You can take that wheat, grind it up, make flour, and stretch it out like a pencil. It's real tensile, and you can flatten it out like a piece of paper. And you say, What good is that? Crackers. Do you like crackers that are brittle, and you can make them flatter and they break? That's what drives products is those kinds of things. That is all genetic. And that's the kind of stuff that we're learning today.

And in the health field in particular, once you identify the genes, you start to say, "What is different? Why does this grain make a human healthier?" And you can start delivering health benefits through food. There is a tremendous cost advantage in that environment.

We need to develop the capability to deliver identity preserved grains. What we're finding is that if you've got to go all the way to the farmer, in today's world, there are a lot of pieces in between. You can work with them all, but if

everybody wants to take a margin out of it, the value doesn't necessarily get to the farmer. Freedom to Farm got rid of the subsidy system and changed how we functioned. But to me the real motive behind Freedom to Farm is to tell agriculture, 'You produce what the economy wants you to produce, and you should be growing stuff for fuel or to make boards. You don't have to make food or feed. It's opening the door for you to do a lot of other things. And, if you stay connected with the market, it will give you signals of what to grow and what to use.' And how do you change a farm? Well, what we're finding is that the innovative farmers are doing that. They're coming and saying, 'Listen, I'm going to do this. I'm going to grow this variety of grain, and I'll manage the insects, I'll manage the fertilization, and I will make a high quality product for you, so you can make a better product'. That's what we like to hear because that's what drives us, because our tolerances keep getting tighter and tighter all the time on all the products we make.

Even though we're a grain-based company, three-and-a-half years ago when I came, we knew nothing about grain. We knew a lot about products and a lot about consumers, but we knew nothing about grain. We have hired a whole staff of people who are microbiologists and people with all different kinds of degrees that are learning about grains. That's where we learned why flakes curl. We're learning so much

today about what makes products better that it drives our whole thinking. And because we're a food marketing company, we do about 250,000 consumer surveys a year, probably more than anybody I think. Our consumer inside group doesn't just count stuff. We're not there just to say, 'How many boxes did you sell?'

We're there to figure out what does the consumer need, what's the consumer going to need five years from now, what do they want in health, how do they want it presented, what size of box do they want it in, do they want convenience. There's a multitude of factors. But we feel that gives us a competitive advantage and it has.

We started by identifying public varieties because cereal is where we started with this. And we found out there's just one variety of wheat that's better for our process. We can probably make 10 to 15 percent more flakes, and the process flows much better. And the quality is so tight that it's allowed our cereal plants to remove their cleaning system because it's now an ingredient instead of a commodity. So there are a lot of other side benefits as well.

When the CEO of General Mills talks, he stands up and says, 'The hallmark of our company is that we need to stand on brand-building strategies, and that means things like an unwavering commitment to quality.' We will never compromise quality. Our products have to be better all the

time because our products trade at a premium. We expect them to because we believe they're better. And we have to have continual innovation and productivity all the time. Productivity accounts for about half of our earnings every year. We make things cheaper every year than we did the previous year. Our costs have gone down every single year since 1991. And if you ask for a ten-year plan, the challenge to us at General Mills is to make products cheaper ten years from now than you're making them today. And I think we'll probably figure out how to do that. We don't know today, but that's the challenge that you live with.

We also expect very high innovation and creativity. We expect to win, but we expect to be better all the time. Every product that you see that has a "G" on it or a Betty Crocker on it, we do a lot of taste tests and a lot of consumer comparisons. If we do not win at least 60 to 70 percent of the time in those taste tests, we change the product because that's what drives our business. So there's this continual innovation, continual creativity, continual look at what you do all the time. And that's what is starting to drive the grain business, and it's starting to include farmers because we are learning that grain makes a big difference.

Cargill also recognizes the trends. Jim Prokopanko, Vice-President and Retail Crops Inputs Manager for North America for Cargill made these statements at the Trade &

Transportation Conference, Sioux Falls, South Dakota, October 20, 1999:

Today the bulk of our trading is still made up of corn, corn gluten meal, soybeans, and soybean meal. But in the future, we are firm believers that more of our trading will be based on properties of these products not the products -- how much protein they have, how much lysine they have, methionine, tryptophan content. That's what's going to describe the crop we sell, not whether it's #2 yellow corn or whether it's not #2 yellow corn. (Cargill)

The point of this is to increase the value of crops. Cargill's involved with Monsanto in developing crops that are going to work best to make ethanol, crops that are going to make corn sweeteners, crops that are going to make the best soybean meal, soybean meal that's going to be used to feed different kinds of hogs, soybean meal that's going to be used to feed animals at different stages in their life. From there, it goes into seed production and the whole integrated value chain. I don't believe that there's a single company that can globally be involved in all stages. But there will be alliances, partnerships and joint ventures that will make it all happen.

The upshot is that you're going to see a lot more coordination from farm support to ensure end users get the traits they want. That's alarming to some who want complete independence from what the end user wants. But I

don't think the grow-it-and-they-will-come-and-buy-it mentality can continue.

But as biotechnology allows us to customize more crops for more customers, we'll need to vastly expand the ability to handle that. So we're working on establishing pipelines from farm to port that serve our customers. We have presently in the U.S. about six joint ventures with cooperatives to ensure that we are involved all the way from the farmer to the food processor.

Mr. Olson and Mr. Prokopanko both indicate that major changes are taking place, creating great challenges and opportunities for their companies. They both also indicate that farmers are a key component in the system, and their companies will be seeking to establish alliances with farmers.

FarmConnect Helps Farmers Capitalize on Rapid Changes Occurring in the Food and Agriculture Industry

A Disconnected System

The profitability of Minnesota farms is low largely because Minnesota farmers are primarily producers of undifferentiated, low value commodities. Many of these farmers would like to diversify by identifying and producing products that have higher potential returns. However, significant barriers make it very difficult for individual farmers to identify and

produce for new and higher value markets:

Individual farmers do not have the information to know what the industry needs and how they could produce a higher-value product for the market.

Individual farmers do not have the production capacity or the resources to supply many of the markets in the industry.

Individual farmers do not have the power and expertise to negotiate with the processor or consumer.



Rapid changes are beginning to occur in the food industry and some clear trends are emerging.

At the same time, buyers of agricultural products are unable to identify and coordinate production of the type, quality, and quantity of products they desire. It is a disconnected system – buyers and farmers do not have an effective working relationship that could make both more profitable.

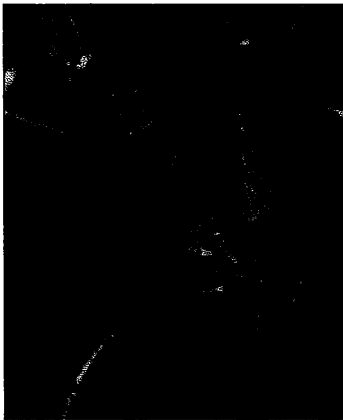
Abundant Opportunities in a Changing Marketplace

Rapid changes are beginning to occur in the food industry and some clear trends are emerging. Consumers are demanding that food products be safer, healthier, and produced in an environmentally responsible manner.

They are demanding variety, convenience, and quality.

Biotechnology provides tremendous potential to identify and incorporate specific traits in crops and livestock. Medical and nutrition research are identifying specific compounds and products in food that have positive and negative health effects.

Advancements in research and analytical technologies, as well as information technologies are allowing more accurate and rapid selection of specific traits in crops and livestock. Our infrastructure is developing identity preserved systems capable of segregating, certifying, transferring, and storing products with specific traits. Food safety scares involving mad cow disease and bacterial infections have heightened public awareness about food safety. Many parts of the world are experiencing times of prosperity, allowing consumers to pay more for products they prefer.



Consumers are demanding that food products be safer, healthier, and produced in an environmentally responsible manner.

Many companies are demanding more specific-quality raw products to allow them to optimize their processes. Companies are learning how use of specific varieties and breeds allows them to increase product quality, create new products, and allow their processing systems to operate more efficiently. The needs for identity-preserved products allow farmers to

supply these markets and fill specific needs.

These trends open significant opportunities to Minnesota farmers. Proactive farmers working together to identify and fill these opportunities will be able to become more integrated in the value chain by developing strategic alliances and relationships with processors and end users to supply specific products. Because individual farmers will be unable to take advantage of many of the opportunities that are emerging, farmers will need to work together. Success will come from working together to obtain the information necessary to identify and supply the market.

FarmConnect

There is clearly a need for an organization to help farmers connect to buyers and end users.

FarmConnect is a producer-owned entity that will identify, develop, and create production and marketing opportunities that can improve profitability for its members. FarmConnect benefits end users by providing them access to significant numbers of producers capable of supplying the quantity and quality of product desired.

New opportunities to produce specific end-use products are identified and created by forming close relationships with end users and by developing an intimate understanding of their needs. The system would ensure that communication of consumer needs is moved quickly and efficiently through the marketing chain to processors and producers.

The matrix below represents the types of opportunities FarmConnect will pursue.

Quadrant I ✓ Products We Currently Produce ✓ Buyers Who Know They Want Them	Quadrant II ✓ Products We Currently Don't Produce ✓ Buyers Who Know They Want Them
Quadrant III ✓ Products We Currently Produce ✓ Buyers Who Don't Know They Want Them	Quadrant IV ✓ Products We Currently Don't Produce ✓ Buyers Who Don't Know They Want Them

Quadrant I is the most familiar to us. These are the products we currently produce – like wheat, corn, soybeans, or livestock – that a coordinated system could add value to so that a premium could be obtained. And from the processor's point of view, these are products that they currently want. Examples include:

- ✓ Specific varieties of wheat with certain milling and baking characteristics. We may already produce the variety of wheat but it is not identity preserved, and there is not a coordinated production and delivery system in place.
- ✓ Specific breeds of livestock for specific markets, such as ethnic markets.
- ✓ Products we currently grow that could be certified for specific markets requiring tracability or other specific production criteria.
- ✓ Higher value products that we already produce and that we have capacity to produce more of. Organic soybeans are one example. We currently produce organic soybeans in Minnesota for a significant price premium, but we have the capacity to produce much more.

There are many other examples that would fit into this category such as seed production, non-GMO crops, and clear hylum soybeans. Efforts in this category will produce the quickest benefit to farmers and to end users.

Quadrant II in the matrix includes products that Minnesota farmers currently do not produce, but end users want. This category would provide new market opportunities for farmers, and would allow them to diversify their production system profitably. The vast majority of Minnesota crop and livestock production falls in the category of undifferentiated, low value commodities. Many high value fruit and vegetable crops could be grown in Minnesota, but are not. Also, Minnesota farmers have the capacity to significantly increase their production of seed crops. Another example can be found within the Minnesota Department of Transportation. When they create specifications for road projects, they determine what species of ground cover is to be used. The contractors often go to out-of-state sources to purchase seed of these species because they don't know where to find them locally.

Quadrants I and II offer many significant opportunities for Minnesota farmers to produce higher value, more profitable products. The markets already exist, and are often being supplied by brokers with products being produced in other states. An organization such as FarmConnect that can provide a connection between the buyers that want these products and the farmers that can or do produce them can bring those opportunities to Minnesota farmers.

Quadrant III includes products we can produce, but end users don't know they want. Examples in this category include major or alternative crops with specific-quality traits, such as high protein, identity preserved varieties of wheat with specific-quality characteristics, or a variety of barley with specific brewing characteristics. Livestock with specific-quality traits are included in this quadrant also. Biotechnology will be used to identify and incorporate specific traits in crops and livestock. Medical and nutrition research are identifying specific compounds and products in food that have positive and negative health effects. Advancements in research and analytical technologies, as well as information technologies are allowing more accurate and rapid selection of specific traits in crops and livestock. Many specific traits will be identified and produced that we are not even thinking about today.

A case in point: A group of farmers approached a food processors who uses dry beans to discuss whether there would be any benefit to working direct with growers for their bean purchases. As a result of the discussions, the bean growers worked with the University Experiment Station to test a wide range of dry bean

varieties to see how they would perform in the end user's products. The tests revealed a variety that not only tasted better, but that significantly reduced the cooking time for the processor. FarmConnect will develop strong working relationships with processors and end users to help them identify ways to improve the quality of their products or the efficiency of their operations through specific-quality traits.

Quadrant IV represents products that we as growers do not currently produce, and that end users don't know that they want. Opportunities in this quadrant may include industrial hemp or crop varieties with specific-quality characteristics not yet introduced. This may be the most difficult area to pursue, but may also hold the greatest opportunities for new growth. Opportunities in this quadrant demonstrate why we believe it is critical that we work closely with research organizations like the University of Minnesota, AURI, USDA, and the Minnesota Department of Agriculture. We will need their involvement to help determine the profitability, evaluate market potential, understand agronomic production factors, educate farmers on production, etc. for producing the various products the end users are demanding.

Framework for Support

Numerous groups already support producers and end users in the agricultural production system including:

- ✓ Commodity groups and grower associations
- ✓ Agricultural Utilization Research Institute
- ✓ Minnesota Department of Agriculture

- ✓ University of Minnesota's research and outreach arms
- ✓ Minnesota Trade Office, and Department of Trade and Economic Development
- ✓ Northern Great Plains Initiative for Rural Development

FarmConnect creates a framework for these support groups to work together to more effectively help producers meet the needs of end users.

Minnesota farmers have a tremendous network of supporting organizations. However, these organizations are often unable to coordinate activities and may lack a close connection to the marketplace. FarmConnect will provide that close connection to the marketplace. The support organizations will then help FarmConnect produce the products that buyers and end users want and will pay premiums for.

Services Provided by FarmConnect To Members and Buyers

To Members:

- ✓ Identification of higher value production opportunities in crops and livestock
- ✓ Provide access to markets unavailable to individual producers
- ✓ Negotiation and construction of contracts with buyers
- ✓ Conduct due diligence of buyers
- ✓ Work out logistics of transportation and payment
- ✓ Educate/inform members on how to produce appropriately to meet contract requirements
 - Production
 - Identity preservation/certification
 - Quality specifications
 - Storage and handling
- ✓ Coordinate with processors, research organizations, commodity groups, and others to develop and

create new, higher value uses for products members can produce

- ✓ Identify and communicate to members investment opportunities with high potential for success

To Buyers

- ✓ A one stop connection to production – allows buyers to work with one organization instead of many individual farmers
- ✓ Provide access to products with specific traits and characteristics
 - Quality
 - Identity preserved traits
 - Certification/Tracability
 - Organic
- ✓ Assistance in determining ways to provide products that will:
 - Increase product quality
 - Increase efficiency of processing
 - Allow new product creation and product differentiation
- ✓ Provide logistical services: consistent, reliable supply.

Provide a link to research and development organizations such as the University of Minnesota and AURI who can assist in determining ways to improve product quality, improve process efficiency, or develop new or differentiated products.

Economic Viability

FarmConnect is developing a new business model in agriculture. Its main objectives are to remain focused on providing market opportunities for its producers. Its main goals are not to re-invent the wheel, but to work with existing infrastructure to supply product demanded in the marketplace. With that FarmConnect will have to be innovative and creative to focus its efforts on understand the market. Just as Ron Olson, General Mills stated, *An added benefit to the producers is that as you stay*

connected with the market, it will give you signals of what to grow and what to use. That is what FarmConnect provides is the ability to be connected with the market so the members get the signals and the premiums for producing for what the market needs.

Discussions with several companies indicate that the most important issue to supplying product is **QUALITY, THEN SUPPLY, AND FINALLY PRICE.**

Ron Olson, General Mills indicated at the Trend in Food and Agriculture Conference, that they could pay double for the oats they use to make their products, but they are not going to pay any more than they have to for that product. Premiums come as you define your ability to provide value. The objective of FarmConnect is to work with a processors and end users to bundle the services in such a way that the customers are no longer able or willing to look for additional suppliers. The ability to provide input to the process, develop genetics or systems of production that continually improve quality, and a reliable and consistent communication between the producer and the customer is key.

One example of a potential FarmConnect project may be supplying wheat for milling. Recent discussions with a grain company indicated that they would like to work with FarmConnect to obtain specific varieties of wheat to process through one of their mills and evaluate the benefits of maintaining varietal identity to optimize flour for specific markets. They indicated that right now they buy on protein and test weight, but are not able to obtain individual varieties of wheat. Because of that they do not understand which varieties are the best ones to use. They have propose that FarmConnect work with them to

evaluate different varieties in the lab and supply approximately 150,000 bushels of several of the best varieties to be run through the mill. They would then evaluate the affect on processing efficiency and be able to work with their customers to evaluate different flour characteristics in their products.

FarmConnect is able to assist the process by working with AURI, the University of Minnesota, Northern Crops Institute and others to evaluate the varieties based on quality parameters defined by the company. These evaluations and baking tests may help to determine other factors that are much more beneficial to the process. The company is interested in helping to develop brands that define the flour from Minnesota wheat as premium specific-quality products.

This type of project would require that FarmConnect collect a fee per bushel to cover the expenses associated with the project. Revenue from this type of project is very dependent on volume. Hypothetically, if FarmConnect could obtain premiums of \$0.25 per bushel for the wheat and it kept \$0.05 per bushel to develop the project and associated costs, it would make \$30,000. However, as the project continues to develop over time to deliver the 10,000,000 bushels processed in that mill, the \$0.05 per bushel would return \$500,000. As the value continues to develop and the product becomes more specialized, the value of the premium or return to the farmer should continue to increase.

From this example project, a farmer supplying 10,000 bushels would gain \$2000. The total benefit to the FarmConnect members and Minnesota farmers would be \$200,000

per million bushels of product sold. The amount of each specific premium is less important than the ability to be in the market place to take advantage of the opportunities available in it. 21st Century Alliance, a cooperative similar to FarmConnect has been delivering specific-quality wheat for three years. They have sought to develop relationships as suppliers and have been able to return approximately \$0.28 per bushel on approximately 3,000,000 bushels.

FarmConnect could also work with existing processing cooperatives or companies in Minnesota to develop systems to provide procurement services. As FarmConnect supplies product to them, it would be able to work to understand what variety would allow the process to be more efficient, to increase the yield, and increase the quality. As each of these added benefits is identified, the value of FarmConnect services continues to increase to the processor.

Discussions with on processor indicated that they were trying to add an organic product to their line, but need help finding the volume of product and help with initial processing of the product. The ability to couple the procurement with organic processing allows services to be bundled from the start.

Just as any new business, the ability to expand and develop is limited by the available capital. As FarmConnect identifies specific opportunities the availability to respond is limited to its available capital. Farmers in Minnesota are producing products essentially at a loss or break-even. These farmers are dependent on the state and federal governments to provide funds to boost the value of the product. Unfortunately, these

payments compound the problems by encouraging over production to overcome the low prices. As these payments are necessary to maintain the agricultural infrastructure, a system to help farmers develop market-based production approach that differentiates their production from the rest of the world is needed to break from this cycle.

The opportunity to effectively utilize FarmConnect is an investment in the future of Minnesota agriculture and the development of a new mind-set in production of food products.