

**Industrialization of Agriculture:
Economic Implications for Producer Investments in Value-Added Business**

Final Report

to

**American Farm Bureau
Foundation for Agriculture**

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August 2002

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Introduction and Purpose of the Research

The food industry is experiencing significant structural changes, as the industrialization of agriculture continues and there is increased consolidation and concentration of agribusiness firms. In a drive to increase efficiencies, businesses in the agrifood sector are developing closer connections with firms at adjacent stages along the supply chain to relay information and take redundant costs out of the system. In addition, a drive to achieve economies of scale has resulted in fewer and larger agribusinesses.

These changes have resulted in farmers facing a more competitive business environment and examining ways to improve the returns from their farm operation. One response by farmers is to form producer alliances, often structured as New Generation Cooperatives. In some cases the driving force behind the formation of the producer alliance is a desire, by farmers, to move along the value chain and capture profits from other stages. In other situations, producers find themselves without a marketing or processing plant when agribusiness firms consolidate and close local facilities. Iowa turkey farmers are one example. When Oscar Mayer was closing a processing plant and feed mill the producers formed Iowa Turkey Growers Cooperative and purchased the facility (Perkins). These producer alliances have the common objectives of producers working together towards common business goals and a desire to capture additional value from the commodities they produce. The forms that an alliance can take include: New Generation Cooperatives (NGC), Limited Liability Company (LLC), Partnership, Corporation, Buying or Marketing groups, Joint Ventures, Strategic Alliances, as well as unique ownership arrangements with regional cooperatives.

This research addresses one of the critical questions the industrialization of agriculture poses for producers: What role should producers play in the formation of these value chains, which involves decisions of where and when to invest in value-added agricultural businesses? The purpose of this research is to identify the returns and risks for producers who take the initiative in the formation of food supply chains through investment in value-added first handling, processing or other downstream activities. The results of this research will be useful to producers as they consider future investment options as well as to policy makers as they examine ways to maintain viable rural communities.

The following section of this report describes the direction of the research. The research results and implications for producers are presented in the third section of this report. This third section is structured around three important questions that are vital to the success of a producer alliance. The final section of this report contains a discussion of the dissemination of the research results. In addition, three appendices make up this report. The first appendix lists the relevant output related to this research. Appendix II is a set of Powerpoint™ slides for a presentation on “Value Added and New Generation Cooperatives.” In response to a demand for information from producers considering value added investment the article “New Generation Cooperatives: What, Why, Where and How: An Internet Guide” was developed. The article is found in Appendix III.

Direction of the Research

The research began by examining the risk and return implications for agricultural producers as they consider investment in value-added business activities. Three sub-

sectors of agriculture were considered in depth: corn, pork and beef. In each case a stochastic simulation model was developed. A series of M.S. theses were produced as a result of this research. In each case alternative strategic business decisions that producers could make were identified. These alternative business decisions involved investments in value-added activities associated with the commodity they were producing as well as diversification into stocks and bonds. Stochastic dominance analysis was used to evaluate the risk and return implications of the different business decisions.

There are a number of issues associated with the business organization structure that will affect the success of producer investment in value added businesses. As noted earlier, many different business organization structures have been considered and adopted as producers invest in value added agribusiness. It is insightful to consider two examples of beef producers working together to develop a producer-owned value added beef processing agribusiness: Northern Plains Premium Beef and U.S. Premium Beef. Although both of these organizations had strong leaders and a highly motivated group of initial producers, Northern Plains Premium Beef was unable to move into the implementation stage of developing a functioning cooperative while U.S. Premium Beef did successfully develop a viable and functioning business. Northern Plains Premium Beef tried to raise equity capital to develop an independent beef processing business and came up short. In contrast, U.S. Premium Beef, by forming a partnership with Farmland Industries, did not have to generate as much equity capital and were also able to link up with and gain the operating efficiencies of one of the country's largest beef packing firms. The changes associated with the industrialization of agriculture are resulting in scale economies for many aspects of value added processing, that make it essential for

producer groups to link up with another agribusiness firm to achieve efficiencies. In many cases, linking with a regional cooperative is an important alternative for producer groups to consider.

The important research question is: Are there conclusions relating to business organization structure that will assist producers, who are developing a project, to determine whether they should link up with a particular partner? An M.S. thesis examined this issue. First a model of business reorganization was developed. Second, a case study of the merger of two of the country's largest regional cooperatives (Cenex and Harvest States) was developed. This case study is important because the merger resulted in a cooperative with a farm to market presence, or supply chain, in one business.

Research Results and Implications for Producers

The success of producer alliances depends upon the answers to three important questions:

1. Is it a Good Business Investment?
2. Will the Organizational Structure Work?
3. Are there Other Goals for the Alliance and do they Compete or Compliment the Goal of Business Profitability?

In the following sub-sections of this report each of these questions will be considered in further detail.

Is it a Good Business Investment?

There are two important questions to consider when evaluating whether an opportunity represents a good business investment or not. First it is important to examine the returns and risks associated with the business ventures. Second, one must examine the potential for the business venture from the perspective of long term strategic positioning.

Returns and Risks

Through a series of M.S. theses at Purdue University the returns and risks associated with producer investment in value added business activities have been evaluated. Three sub-sectors of agriculture were considered in depth: pork, corn and beef. In each case a stochastic simulation model was developed, alternative strategic business decisions for producers were identified and evaluated. Stochastic dominance analysis was used to determine the alternatives that were preferred and therefore in the efficient set.

Jones evaluated opportunities for hog producers investing in hog packing operations. A stochastic simulation model was developed first and then used to analyze alternative business strategies including investing all equity in the hog farm and investing different percentages of equity in the hog farm, hog packing and stocks (through the S&P 500) and bonds (through T-bills). Three different sizes of farrow-to-finish hog operations were considered: 300, 600 and 1200 sows.

Opportunities that were examined for corn producers, by Anderson, included investment in both wet and dry corn milling. A strategic business analysis was performed followed by the development of a stochastic simulation model to analyze the

impact of investment in a dry corn milling (ethanol) operation. An important aspect of this research was the consideration of different government programs for corn producers as well as for ethanol operations.

Opportunities for cow-calf producers were also evaluated by Van Fleet and Rosa. The scenarios evaluated reflect decisions that cow-calf producers are currently facing. These include: retaining ownership and custom feeding in a feedlot, incorporation of improved genetics in the beef herd, different pricing grids in a coordinated marketing system, spring versus fall calving, and diversification into the stock market. The different pricing grids reflect situations that producers are currently considering with cooperative marketing programs that are being established by beef producers, while the spring versus fall calving is an important consideration for these groups as they need a steady supply of beef year round to meet consumer demand.

Four important conclusions can be drawn from the results of the research involving the stochastic simulation analysis and the question of returns and risk: (i) producers will benefit from diversifying, (ii) producers will benefit from a balanced portfolio, (iii) producers will benefit from leveraging into more profitable areas, and (iv) government subsidies and programs influence investor behavior.

Producers will benefit from diversifying. Diversification into business activities other than the farm or ranch may result in both an increase in expected return and a decrease in the variability of returns (or a decrease in risk) when compared to a 100% investment in the farm or ranch. Just as nonfarm businesses place a high priority on having a diversified portfolio, farmers and ranchers should strive for a balanced portfolio of investments.

Producers will benefit from a balanced portfolio. In particular, diversification into a value added business related to a farmer's commodity can be a good investment if there is a negative correlation between farm income and processor income. When a product is characterized by volatile commodity prices and relatively stable wholesale/retail prices there tends to be a high degree of negative correlation between farm income and processor income. This phenomena exists in the pork industry and the research, done as part of this project, revealed that there is the potential for hog producers to diversify beyond the farm into processing and increase expected return and decrease risk. Of course, achieving this potential depends upon finding an appropriate business organizational structure for successful implementation. In particular, in the case of the processing of livestock, scale economies may make it infeasible for a producer alliance to directly own the entire processing plant because they may not be able to support a large enough operation to achieve economic efficiency.

Producers will benefit from leveraging into more profitable areas. Some subsectors of agriculture do not yield as high a rate of return as outside investments. In these instances it is often argued that individuals place value on the lifestyle of farming or ranching and thus are willing to accept the lower rate of return on their equity. Historical data on the profitability of cow-calf operations provide a picture of a sector of agriculture that often earns a lower rate of return than other investments. In these situations, with low rates of return, the diversification scenarios are attractive because the other investments yield higher returns.

Government subsidies and programs influence investor behavior. This conclusion is highlighted in the results of Andreson's study of corn producers investing in ethanol

production. In particular, the business scenarios involving investment in an ethanol project only remained in the efficient set when subsidies for ethanol production were in place. It is therefore vital for producers to evaluate all relevant government programs as part of the evaluation of a new business venture.

Long Term Strategic Positioning

A strategic business analysis that carefully and systematically identifies all assumptions and evaluates the potential actions and reactions of competitors is an important step in the evaluation of investment alternatives. A typical framework for this analysis is to examine the five forces as set out by Michael Porter. In the analysis of the corn sub-sector a Porter analysis was done of wet corn milling and dry corn milling. One interesting result follows from the analysis of “rivalry among competitors” force. In wet corn milling, industry concentration is very high with the top three firms having almost 80% market share in the corn sweetener market and the top three firms having over 86% market share in the lysine industry. From the perspective of competitive rivalry the wet corn milling industry is not a good prospect for any firm to enter, and certainly not one for farmer owned cooperatives to try and enter. The advantage of hindsight from a real world example confirms this. Guebert reports an interesting 1994 meeting where Dwayne Andres, then CEO of ADM, urged Joe Famalette, then CEO of American Crystal Sugar, not to build the ProGold high fructose sugar plant. American Crystal Sugar did proceed with the ProGold plant but it experienced financial difficulties and is now being operated by Cargill.

Will the Organizational Structure Work?

Four important conclusions follow from the model of business reorganization and subsequent analysis by Andrew Porter. First, the resulting structure of a business reorganization (e.g. merger, acquisition, joint venture, strategic alliance or divestiture) will be a function of the forces that drove the leaders of the businesses to reorganize.

The driving forces behind business reorganization may be external or internal. External driving forces include changing demand, technology advances, government policy or increasing competition. A change in consumer demand that puts greater emphasis on traceability may lead firms along the supply chain to coordinate their efforts via joint venture agreements. In contrast a technological advance that lowers the average cost of production only if the business is large will result in firms merging to achieve the scale economies.

Internal driving forces include company goals and objectives, resources, trust, commitment, communication, the nature of the benefits of reorganization, the penalty for renegeing on an agreement, financial stability of the firms involved, the number of firms involved and the degree of similarity of the firms involved. It is expected that the business reorganization would be an acquisition when the goals and objectives of the one company were to become the largest firm in the industry. In contrast, we would expect to observe two firms that are already working closely together (and trust each other and communicate well with each other) to develop a joint venture when they set up the business structure to take advantage of a newly identified set of cost savings activities.

Second, the success of the business reorganization will depend upon the combination of the driving forces that lead to the reorganization and the business structure that was

selected for the reorganization. As noted in the previous paragraphs there is a tendency for certain business structures to result when certain driving forces are the impetus for change. The success of the business reorganization is dependent upon whether the business structure and the driving forces are consistent with each other. For example, a joint venture business arrangement is not expected to be successful when the firms involved do not trust each other. The success of a business reorganization is multidimensional and must be evaluated from a multidimensional perspective. These components can include customer satisfaction, operational effectiveness, financial analysis, and innovation and learning perspectives.

Third, important reasons for business reorganization within the cooperative system include: strategic positioning, increased competition, need for growth, and development of an integrated supply chain. An examination of the case of the merger of Cenex and Harvest States cooperatives revealed that the driving forces behind the merger were factors often associated with the industrialization of agriculture including having a cooperative that is strategically positioned to serve the producer members and be effective in the face of increased competition. In addition, the cooperative leaders identified that the cooperative needed to grow larger to achieve scale economies and remain competitive. Finally, they noted that it is necessary for cooperatives to develop an integrated supply chain in order to be effective in the new industrialized agriculture.

Finally, the business reorganization involving the merger of Cenex and Harvest States Cooperatives was successful because there was commitment, trust, communication, homogeneity of the two cooperatives and a unified vision of why the merger should happen. CHS Cooperatives, the business that resulted from the merger of Cenex and

Harvest States, is an important and viable business in the agribusiness marketplace. By many measures the merger of Cenex and Harvest States Cooperatives was a success. Important factors contributing to the successful merger are that key decision makers in both cooperatives were committed to the merger, there was a high degree of trust and communication among the key decision makers from the two cooperatives, the two cooperatives shared important values, and there was a common vision of the opportunities that would result with a unified cooperative.

These conclusions suggest some important factors for producer alliances to examine when considering an agreement or partnership with another firm involved in value added processing. Questions that will be particularly important to ask include: (i) Are there driving forces in place that may result in the firm reorganizing in the near future? (ii) If the firm is involved in a reorganization, what type of reorganization would it likely be and what is that likelihood that the reorganization would be successful? Producer alliances will want to align themselves with firms that are successful in the long run, both before and after any reorganizations.

Are there Other Goals for the Alliance and do they Compete or Compliment the Goal of Business Profitability?

It is important to identify and evaluate all of the goals that members, or potential members, of a value added business venture have for the business. Examples of goals that members may have include: generating new markets for the commodities they producer, increasing income, generating new jobs in the area, and enhancing rural development in the area. It is certainly the case that some value added producer alliances will generate additional economic activity in the rural area, generate new jobs, enhance

the local tax base, and strengthen local demand for retail goods and services. However, the success of the value added business venture will be judged on the profitability of the business by lenders and investors. It is therefore important for producers to first explicitly identify all of the goals for the value added business. Then they can determine whether these goals are complimentary or competing. Finally, producers can proceed with the project focusing on the goals that are most important for the project.

Dissemination of Results

Extensive dissemination of the research results has already taken place, as listed in Appendix I. The results were presented to groups of producers in Indiana at two county Farm Bureau meetings, the Farm Show in Fort Wayne, and a Cooperative Extension County meeting. The results were presented to producers in North Dakota during a workshop at the annual Marketplace of Ideas in January 2001. The results were presented to County Educators as part of the Purdue Extension Annual Forum in 2000 and to the ANR training in 2001. In addition, the results were presented to a group of Community Development Specialists in June of 2001. During the fall of 2000 the results formed part of the annual Outlook presentations that Purdue faculty delivered.

Important printed documents included the results of this research as well. These include: a follow up from the American Agricultural Economics Association pre-conference on Policy Issues in the Changing Structure of the Food System, the document that accompanied the annual Outlook campaign from Purdue University, an article in the Purdue Agricultural Economics Report, and the internet guide that is published as a Cooperative Extension report.

References:

- Andreson, K. (2000) "The Risk and Return Implications of Value-Added Investments by Corn Producers". *Master's Thesis*. Department of Agricultural Economics, Purdue University.
- Guebert, Alan. "Fructose Venture Sours On Farmers Cooperative Was Reportedly Warned Away From Business By ADM Executive." *Peoria Journal Star*. Dow Jones Interactive Publishing. p. C2, November 25, 1997.
- Jones, B.R. (1999) "The Risk and Return Implications of Value-Added Investments by Hog Producers". *Master's Thesis*. Department of Agricultural Economics, Purdue University.
- Perkins, Jerry. (1997) "Banding Together: Iowa Turkey Co-op Moves Up the Food Chain." *Rural Cooperatives*. (March/April 1997): 22-26.
- Porter, Andrew. "Driving Forces and Success Factors for Agribusiness Reorganization: A Case Study of Cenex Harvest States Merger." M.S. Thesis, Purdue University. Summer 2001.
- Porter, Michael. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The Free Press, A Division of MacMillan Publishing Co., Inc., New York, 1980.
- Rosa, E.L. (2002) "The Risk and Return Implications of Strategic Business Alternatives for Eastern Corn Belt Cow-Calf Producers". *Master's Thesis*. Department of Agricultural Economics, Purdue University.
- Van Fleet, S. (2000) "The Risk and Return Implications of Value-Added Decisions by Beef Producers in Coordinated Supply Chains". *Master's Thesis*. Department of Agricultural Economics, Purdue University.

Appendix I

Outputs Relevant to this Project

Masters Theses Completed:

Jones, Brian R. "The Risk Return Implications of Value-Added Investment by Hog Producers" M.S. Thesis, Purdue University. Spring 1999. (Thesis received Kenneth Naden award, given by the National Council of Farmer Cooperatives in 1999 for the best M.S. thesis.)

Andreson, Kevin. "The Risk and Return Implications of Value Added Investment by Corn Producers" M.S. Thesis, Purdue University. Spring 2000. (Thesis received Kenneth Naden award, given by the National Council of Farmer Cooperatives in 2001 for the best M.S. thesis.)

Van Fleet, Shylea. "The Risk and Return Implications of Value Added Decisions by Beef Producers in Coordinated Supply Chains" M.S. Thesis, Purdue University. Fall 2000.

Porter, Andrew. "Driving Forces and Success Factors for Agribusiness Reorganization: A Case Study of Cenex Harvest States Merger." M.S. Thesis, Purdue University. Summer 2001.

Rosa, Erica. "The Risk and Return Implications of Strategic Business Alternatives for Eastern Cornbelt Bow-Calf producers." M.S. Thesis, Purdue University. Summer 2002.

Presentations that resulted from the Research:

Fulton, Joan R. "Producer Investments in the Value-Added Business." Poster Presentation at American Farm Bureau Annual Meeting, January 9, 2000, Houston, Texas.

Fulton, Joan R. "Concentration, Consolidation and Structural Change in Agribusiness Sector." Presentation to The National Agricultural Research, Extension, Education, and Economics Advisory Board Meeting. March 14, 2000, Washington DC.

Fulton, Joan R. "Are Producer Alliances/Networks and Alternative for Producers?" Presentation at Policy Issues in the Changing Structure of the Food System (American Agricultural Economics Association pre-conference). July 29, 2000, Tampa Florida.

Fulton, Joan R. "Producer Business Organizations Alliances/Networks/New Generation Cooperatives." Presentation as part of Purdue Extension Professional Development Conference (Annual Forum). November 15, 2000. West Lafayette, IN

Fulton, Joan R. "Structural Change in Agribusiness: Challenges and Opportunities for Producers." Presentation at Ripley County Farm Bureau Conference on Structural Change in Agriculture. November 17, 2000.

Fulton, Joan R. "Cooperatives: Opportunities for Producers." Workshop at Marketplace of Ideas, January 21, 2001. Bismark, North Dakota.

Fulton, Joan R. "Producer Business Organizations Alliances/Networks/New Generation Cooperatives." Presentation at Fort Wayne Farm Show, January 17, 2001

Fulton, Joan R. "Structural Change in Agribusiness: Challenges and Opportunities for Producers." Presentation at Lawrence County Farm Bureau Meeting. April 9, 2001. Bedford, IN.

Fulton, Joan R. "Structural Change in Agribusiness: Challenges and Opportunities for Producers." Presentation to Community Development Specialists. June 15, 2001. West Lafayette, IN.

Purdue Faculty. "Agricultural Outlook 2002" (During September 2002 Purdue Faculty will deliver Outlook programs across the state of Indiana reaching about 2000 people with Value Added Opportunities for Agriculture as part of the program.) September 2001.

Fulton, Joan R. "Value Added and New Generation Cooperatives." Presentation to Purdue University Agricultural and Natural Resource Extension Educators. November 14, 2001.

Fulton, Joan R. "Value Added and New Generation Cooperatives." Presentation in Winter Program Series, Fulton County, IN. January 9, 2002.

Publications:

Fulton, Joan, Brian Jones and Lee Schrader. (1998) "New Generation Cooperatives." *Purdue Agricultural Economics Report*. September. p. 7-10.

Jones, Brian R., Joan R. Fulton and Frank J. Dooley (1999) "Hog Producer Investment in Value-Added Agribusiness: Risk and Return Implications." Paper presented at the 1999 Annual Meeting of the American Agricultural Economics Association and abstract published in *American Journal of Agricultural Economics*. 81, 5. p. 1289.

Fulton, Joan. (2000) "Are Alliances/Networks and Alternative for Producers?" in *Policy Issues in the Changing Structure of the Food System*. A. Porter, P. Feldman, and D. Ernstes (Eds.).

Fulton, Joan R. and Frank Dooley. (2001) "Value Adding Formats for Indiana Farmers." in *Agricultural Outlook*, Purdue University.

Schank, Michelle and Joan Fulton. (2002) "New Generation Cooperatives: What, Why, Where, and How: An Internet Guide" EC Paper. Purdue University.

Appendix II

Slide 1



Value Added and
New Generation Cooperatives

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Slide 2



WHY THE INTEREST?

- Time of Dramatic Change
- Desire to "capture" additional value

Slide 3



Structural Change in Agribusiness

- Time of dramatic change
- Increased Consolidation/Concentration amongst agribusinesses at all stages
- Take advantage of scale economies and efficiencies associated with coordination
- What are the Opportunities for producer investments in value added agriculture?
- Recent and ongoing research at Purdue

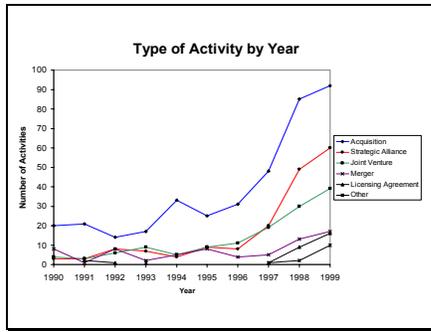
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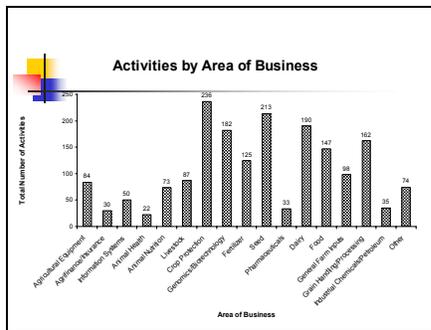
Research at Purdue University

- Develop database of Structural Change among agribusinesses
 - Investor Oriented Firms
 - Cooperatives
 - Regional and National Level
 - Mergers, Acquisitions, Joint Ventures, Strategic Alliances
- January 1990 - December 1999
- 837 Entries

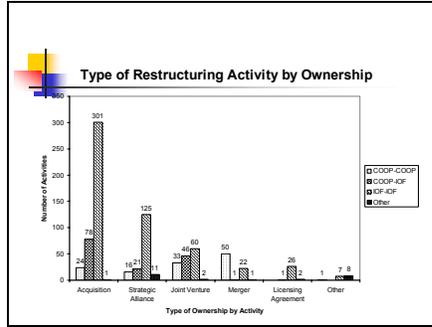
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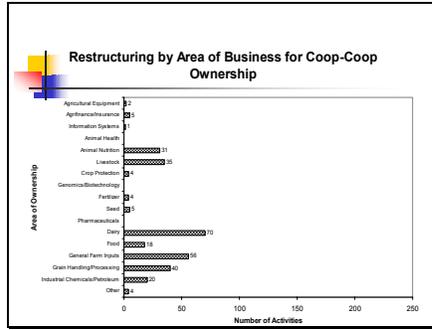
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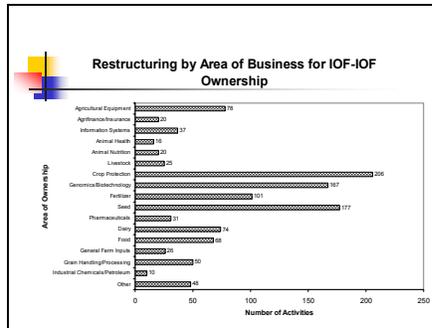
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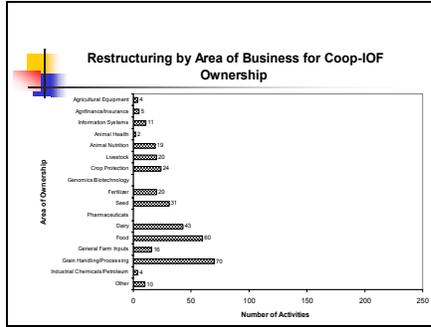
Slide 8



Slide 9



Slide 10



Slide 11

Company	Number of Activities
Monsanto	53
Farmland Ind.	48
Cargill	41
Novartis AG	28
Dow AgroSci.	27
AgriBioTech	22
Land O'Lakes	22
Con Agra Inc.	20
DuPont	20
ADM	17
Zeneca	17
Mycrogen Corp	16
Suiza Foods	16
Terra Ind.	16
Dean Foods	14
Pioneer Hi-Bred	14

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What?

- Business Forms are Available
- Most Appropriate Business Form

Slide 13



Business Forms

- LLCs
- Partnerships
- Corporations
- Buying or Marketing Groups
- New Generation Cooperatives
- Common Themes
 - Joint Business Goals
 - Desire to "capture" additional value

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Will the new Businesses be Effective?

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Will Producer Businesses Work?

- Is it a good Business Investment?
 - Return and Risk
 - Long Term Strategic Positioning
- Will the Organizational Structure work?
- Are there other Goals?
 - Complementary with Business Investment Goals
 - Conflicting with Business Investment Goals
 - *e.g. Local Economic Development*

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 **Return and Risk**

- Purdue Research
 - Examined Pork, Corn, and Beef subsectors
 - Developed stochastic simulation model to evaluate ROI for producer diversifying beyond the farmgate
 - Value added processing of their commodity
 - Diversification into Stocks and Bonds

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 **Return and Risk**

- Conclusions from Purdue research
- Producers will benefit from Diversifying
- Producers will benefit from a Balanced Portfolio (financial portfolio)
- Producers will benefit from Leveraging into more profitable areas of business
- Government Subsidies/Incentives do influence behavior

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 **Long Term Strategic Business Decision**

- Porter's Framework (Five Forces)
 - 1) Barriers to Entry
 - 2) Rivalry Among Competitors
 - 3) Substitute Products
 - 4) Bargaining Power of Buyers
 - 5) Bargaining Power of Suppliers

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Rivalry and Wet Corn Milling

- Industry Concentration
 - Corn Sweeteners
 - ADM – 33%, A.E. Staley – 25%, Cargill – 20%
 - Lysine
 - ADM – 48-54%, Ajinomoto – 22-23%, Kyowa – 16-21%
- Incumbent Reactions to Entry
- Is this an industry you would recommend any firm to enter?

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Will the Organizational Structure Work?

- Multi-faceted Issue
- Organizational Form needs to be compatible with Objectives
 - Appropriate incentives are important
- Don't let the Legal Structure drive the selection of organizational form of the business

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Organizational Structure

- How do we get producers to work towards a common goal?
 - Common Property Problem
 - Want to avoid the "Tragedy of the Commons"
- Game Theory
 - Prisoner's Dilemma and Assurance Problem

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**Organizational Structure:
Necessary Conditions for Success**

- Trust
- Commitment for the Long Run
- Communication
- Financially Stable
- Positive Benefits from working together
- Smaller Number of Homogenous Players
- Penalty for those who Defect
- Mechanism to share Profits/Losses and Risks

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Are There Other Goals?

- Important to identify all of the goals of the business operation
 - Markets for product
 - Enhanced income
 - Increased employment
 - Rural development
- Are these goals conflicting or complimentary?

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A Specific Business Form

- New Generation Cooperatives

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 **New Generation Cooperatives**

- Origin
- Structure
- Strengths
- Weaknesses
- Steps
- To Watch for

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 **Origin of New Generation Cooperatives**

- Early 1970's sugar beet producers in Red River Valley of ND and MN
- Response to a need to increase vertical integration and invest in value-added processing
- New Generation Cooperative has often been the structure used
- Recently "cooperative fever" or "hype"

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 **Structure of New Generation Cooperatives (NGCs)**

- Link producer equity contributions and product delivery rights
- Tradeable equity shares and delivery rights
- One-member, One-vote
- Earning distributed on bases of patronage
- Value-added processing of member's commodities
- Significant equity investment by members

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 **Strengths of NGCs**

- Provide producers opportunity to become part of integrated food system
 - Share in profits
 - Address imbalance of market power issue
- Overcome free-rider problem and horizon problem that faces traditional cooperatives

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 **Strengths of NGCs**

- Free Rider Problem
 - Why should I invest in the cooperative so long as everyone else invests?
- Horizon Problem
 - Refers to the investment perspective of the cooperative members. Members may have little incentive to support long term investments that will pay off after they retire.

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 **Weaknesses of NGCs**

- Significant up-front investment required which means some producers can't afford to get in
- Capital requirements for the cooperative business are so large there is not sufficient membership to support the investment

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 **Weaknesses of NGCs**

- Farmers who want to buy in after the initial equity drive will have to pay more if the share value has increased
- Financial risk implications
- Aligning goals of the cooperative with goals of the owners can be difficult

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 **Steps to Organizing a NGC**

- Hold an Organizational meeting of Potential Members and form a Steering Committee, collect initial fees
- Conduct a Feasibility Study
- Hold a Meeting to report Results of Feasibility Study
- Prepare a Business Plan
- Incorporate the Co-op by filing Articles of Incorporation and Draft Bylaws

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 **Steps to Organizing a NGC**

- Secure Financing for the Cooperative
- Recruit Members for the Cooperative
- Hire a Cooperative Manager and Staff
- Hold the Cooperative's First Membership and Board Meetings
- Start Operations

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 **To Watch For**

- Lack of a Clearly Identified Mission
- Inadequate Planning
- Failure to Use Advisors and Consultants
- Lack of Member Leadership
- Lack of Member Commitment
- Inadequate Management
- Failure to Identify and Minimize Risk

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 **To Watch For**

- Overly Optimistic Assumptions
- Not Enough Money and Excessive Debt/Equity Ratio
- Inadequate Communication
- Problems with the Physical Plant
- Noncompetitive Business Location

Slide 36

 **Response to Structural Change**

- Increased concentration and consolidation in Agribusiness is with us
 - Need to be proactive
- Alliances/Networks will work when:
 - A Good Business Investment and
 - Organizational Structure works and
 - Other Goals are Satisfied

Appendix III

New Generation Cooperatives: What, Why, Where, and How

An Internet Guide

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As consolidation and the industrialization of agriculture intensify, the food chain is experiencing significant structural changes. Increased concentration and increased vertical coordination are occurring as businesses in the agrifood sector are trying to increase efficiencies, relay information along the supply chain more quickly, and take advantage of profits at other stages of the food chain. Many agricultural producers are responding to the changing environment by cooperating with other producers to develop value-added businesses. One common organizational form that producers are using for the value-added business is the New Generation Cooperative.

This Internet Guide is intended to be a resource for locating electronically available information on New Generation Cooperatives. In the following sections we provide a brief explanation of the What, Why, Where, and How of New Generation Cooperatives, along with related references to publications and other information that is available on the internet.

What is a New Generation Cooperative?

New Generation Cooperatives (NGCs) are a relatively new cooperative structure. NGCs have particular characteristics that differentiate them from traditional agricultural cooperatives. These characteristics include: value-added processing of members' commodities, a significant equity contribution by farmer members, obligation of product

delivery based on equity contribution, and the ability to trade equity shares and delivery rights. Two characteristics of NGCs that are similar to traditional cooperatives are: earnings based on member patronage and one-member, one-vote.

Fulton et. al. examine the growth and development of New Generation Cooperatives along with describing the structure of NGCs and the strengths and weaknesses of this form of business. This overview can be found at:

Fulton, Joan, Brian Jones and Lee Schrader. (1998) "New Generation Cooperatives." *Purdue Agricultural Economics Report*. September. p. 7-10.
<http://www.agecon.purdue.edu/ext/paer/1998/paer0898.pdf>

Other useful articles that provide an overview on New Generation Cooperatives include:

Hackman, Deanne. (2001) "What is a New Generation Cooperative(NGC)?" *Ag Decision Maker*. Iowa State University Extension. December 2001.
<http://www.extension.iastate.edu/agdm/articles/others/HackDec01.htm>

Coltrain, David, David Barton, and Michael Boland. (2000) "Differences between New Generation Cooperatives and Traditional Cooperatives." Arthur Capper Cooperative Center, Kansas State University. May 2000.
<http://www.agecon.ksu.edu/accc/kcdc/PDF%20Files/DiffTrad3.pdf>

University of Manitoba and Agri-Food Research Development Initiative. (1999) "New Generation Cooperatives on the Northern Plains."
http://www.umanitoba.ca/faculties/afs/agric_economics/ardi/index.html

Fulton, Murray. (2000) "New Generation Cooperatives." Centre for the Study of Co-operatives. University of Saskatchewan. November 2000.
<http://coop-studies.usask.ca/pdf-files/What%20Are%20NGCs%3F.pdf>

Centre for the Study of Co-operatives. University of Saskatchewan. (2001) "Overview of NGC Model."
<http://coop-studies.usask.ca/NGC2/ngcoverview.htm>

Why do Producers form New Generation Cooperatives?

There are many reasons why producers form a New Generation Cooperative. Producers may individually be looking for the opportunity to increase their margins and thus their income, diversify their investment portfolio, reduce their risks, or increase their

market. In addition, producers may decide to form a NGC if their local processing plant closed and they needed somewhere to market their product. Another reason for forming a NGC is to increase or maintain the number of jobs in the local community.

Articles can be found on the following websites that describe some of the problems associated with traditional cooperatives along with an explanation of the emergence of NGCs.

Cook, Michael and Constantine Iliopoulos. (1999) "Beginning to Inform the Theory of Cooperative Firm: Emergence of New Generation Cooperatives" *The Finnish Journal of Business Economics*. April. P.525-535.

(University of Missouri)

<http://www.ssu.missouri.edu/faculty/mcook/cv/finnish.pdf>

Coltrain, David, David Barton, and Michael Boland. (2000) "Value Added: Opportunities and Strategies" Arthur Capper Cooperative Center, Kansas State University. June 2000.

<http://www.agecon.ksu.edu/accc/kcdc/PDF%20Files/VALADD10%20col.pdf>

Articles can be found on the following websites that provide further explanation concerning why individual producers would invest in a NGC:

Sinner, George. (1999) "Why Farmers won't survive unless they become Food Merchants" *Bloomquist Lecture Series*. Quentin Burdick Center for Cooperatives, North Dakota State University. April 1999.

<http://www.ag.ndsu.nodak.edu/qbcc/BloomquistLectures/1999sinner.htm>

Torgerson, Randall. (2001) "A Critical Look at New Generation Cooperatives" *Rural Cooperatives*. USDA Rural Business- Cooperative Service. January/February. P.15-19.

<http://www.rurdev.usda.gov/rbs/pub/jan01/jan01.pdf>

Cobia, David. (1997) "New Generation Cooperatives: External Environment and Investor Characteristics" Food and Agricultural Marketing Consortium, Las Vegas, NV. January 1997.

(Quentin Burdick Center for Cooperatives, North Dakota State University)

<http://www.wisc.edu/uwcc/info/cobia.html>

Hofstrand, Don. (1999) "Value-Added Cooperatives – Wave of the Future" *Ag Decision Maker*. Iowa State University Extension. January 1999.

<http://www.exnet.iastate.edu/agdm/articles/hof/HofJan99.htm>

Articles on the following websites provide information concerning the economic benefits that communities enjoy when a NGC is established in the region:

Rural Business Cooperative Service. "The Impact of New Generation Cooperatives on their Community" USDA Rural Business- Cooperative Service. Report by a consortium of Midwest university researchers.
<http://www.rurdev.usda.gov/rbs/pub/RR177.pdf>

Sell, Randall, Dean Bangsund, and F. Larry Leistritz. (2000) "Contribution of the Bison Industry to the North Dakota Economy" *Agricultural Economics Report*. Department of Agricultural Economics, North Dakota State University. June 2000.
http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=2288&ftype=.pdf

Doherty, Michael. (1997) "New Age Cooperatives and their Role in Rural Development: USDA Rural Development Program" *Rural Research Report*. Illinois Institute for Rural Affairs, Western Illinois University.
http://www.iira.org/pubsnew/publications/IVARDC_RRR_74.pdf

Loewe, Paula and Evert Van der Sluis. (2000) "Socioeconomic Conditions for and Impacts of Establishing and Operating a New Generation Cooperative: The Case of the South Dakota Soybean Processors." Paper presented at the Western Agricultural Economics Association Annual Meeting, June 2000. Vancouver, Canada.
(South Dakota State University)
http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=2225

Estes, Patricia. (1996) "Committing to a Community: Minn-Dak Farmers Cooperative" *American Cooperation*. National Council of Farmer Cooperatives.
<http://www.americancooperation.org/Browse.htm>
(Select 1996, Select the Article, it is located under Chapter 1)

Where are New Generation Cooperatives being formed?

The sugar beet producers of the Red River Valley, located on the North Dakota/Minnesota border pioneered the first NGC in the early 1970's. However, the number of NGCs established has taken off only within the last decade. A large

proportion of these cooperatives are in Minnesota and North Dakota. However the concept of NGC can be applied in any area.

Directories of NGC can be found on the following sites:

Merrett, Christopher, Mary Holmes, and Jennifer Waner. (1999) "Directory of New Generation Cooperatives." Illinois Institute for Rural Affairs, Western Illinois University. September 1999.

http://www.iira.org/pubsnew/publications/IVARDC_Reports_8.pdf

Coltrain, David. (2000) "Kansas Directory of New Generation Cooperatives and Other Producer Alliances." Arthur Capper Cooperative Center, Kansas State University. May 2000.

<http://www.agecon.ksu.edu/accc/kcdc/PDF%20Files/Kansas2.pdf>

The following case studies of NGCs provide an overview of these new businesses:

Holmes, Mary, Norman Walzer, and Christopher Merret. (2001) "New Generation Cooperatives: Case Studies Expanded 2001" Illinois Institute for Rural Affairs, Western Illinois University. August 2001.

http://www.iira.org/pubsnew/publications/IVARDC_CS_198.pdf

Zeuli, Kim, Gary Goreham, Robert King, and Evert van der Sluis (1998) "Dakota Growers Pasta Company and the City of Carrington, North Dakota: a Case Study" USDA Fund for Rural America. March 1998.

<http://www.wisc.edu/uwcc/info/fra/carrington.pdf>

University of Manitoba and Agri-Food Research Development Initiative. (1999) "New Generation Cooperatives on the Northern Plains"

http://www.umanitoba.ca/faculties/afs/agric_economics/ardi/index.html

Stefanson, Brenda and Murray Fulton. (1997) "New Generation Cooperatives: Responding to Changes in Agriculture" Centre for the Study of Co-operatives, University of Saskatchewan. September 1997.

http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=1663&ftype=.pdf

How is a New Generation Cooperative formed?

A number of useful references are available for producers that are interested in determining what it takes to form a New Generation Cooperative.

USDA Rural Development – Cooperative Services has published numerous Cooperative Information Reports (in booklet format) dealing with establishing and operating a cooperative. These reports are just as relevant for New Generation Cooperatives as they are for traditional cooperatives. The following website lists all of the Cooperative Information Reports published by USDA:

<http://www.rurdev.usda.gov/rbs/pub/cooprpts.htm>

Selected Cooperative Information Reports, that are of particular interest to those organizing New Generation Cooperatives are listed below:

Mather, J. Warren, and Homer Preston. (1990) “Cooperative Benefits and Limitations.” USDA Rural Business – Cooperative Service, Cooperative Information Report 1 Section 3.

<http://www.rurdev.usda.gov/rbs/pub/cir1sec3.pdf>

Vogelsang, Donald, John Bailey, Lloyd Biser, E. Eldon Eversull, and J. Warren Mather. (1993) “Cooperative Organization and Structure.” USDA Rural Business – Cooperative Service, Cooperative Information Report 1 Section 6.

<http://www.rurdev.usda.gov/rbs/pub/cir1sec6.pdf>

Rathbone, Robert. (1995) “Cooperative Financing and Taxation.” USDA Rural Business – Cooperative Service, Cooperative Information Report 1 Section 9.

<http://www.rurdev.usda.gov/rbs/pub/cir1sec9.pdf>

Meyer, Tammy. (1999) “Cooperative Business Principals.” USDA Rural Business – Cooperative Service, Cooperative Information Report 45 Section 2.

<http://www.rurdev.usda.gov/rbs/pub/cir452.pdf>

Meyer, Tammy. (1994) “The Structure of Cooperatives.” USDA Rural Business – Cooperative Service, Cooperative Information Report 45 Section 3.

<http://www.rurdev.usda.gov/rbs/pub/cir453.pdf>

Rapp, Galen. (1995) “How to Start a Cooperative.” USDA Rural Business – Cooperative Service, Cooperative Information Report 45 Section 14.

<http://www.rurdev.usda.gov/rbs/pub/cir4514.pdf>

Namken, Jerry and Galen Rapp. (1997) “Strategic Planning Handbook for Cooperatives.” USDA Rural Business – Cooperative Service, Cooperative Information Report 46.

<http://www.rurdev.usda.gov/rbs/pub/cir48.pdf>

Patrie, William. (1998) "Creating 'Co-op Fever': A Rural Developers Guide to Forming Cooperatives." USDA Rural Business – Cooperative Service. RBS Service Report 54. July 1998.

<http://www.rurdev.usda.gov/rbs/pub/sr54/sr54.htm>

Articles and reports at the following websites provide information on the formation and operation of New Generation Cooperatives:

Côté, Daniel, Murray Fulton and Julie Gibbings. (2000) "Canadian Agricultural Cooperatives: Critical Success in the 21st Century – Summary Report." Canadian Cooperative Association. October 2000.

<http://www.coopcca.com/agricoops/Summary%20Report1.pdf>

Olson, Frayne. (1996) "Should I Join a New Processing Cooperative?" Quentin Burdick Center for Cooperatives, North Dakota State University. July 1996.

<http://www.ext.nodak.edu/extpubs/agecon/farmmgmt/eb67w.htm>

Thyfault, Cindy. (1996) "Developing New Generation Co-ops: Getting Started on the Path to Success" *Rural Cooperatives*. USDA Rural Business – Cooperative Service. July/August 1996.

<http://www.wisc.edu/uwcc/info/develngen.html>

Missouri Department of Agriculture. Agriculture Innovation Center. "A Checklist for Producers Starting a New Value-Added Business"

<http://www.aginnovationcenter.org/IdeatoImplementation.pdf>

University of Manitoba and Manitoba Rural Adoption Council. "Forming a New Generation Cooperative in Manitoba"

http://www.umanitoba.ca/afs/agric_economics/MRAC/

Morris, Ralph. (1996) "Legal and Financial Aspects of New Generation Cooperatives: Legal Implications" *New Generation Cooperatives Conference*. April 1996

<http://www.wisc.edu/uwcc/info/morris.html>

Hanson, Mark. (2000) "Starting a Value-Added Agribusiness: The Legal Perspective" Illinois Institute of Rural Affairs, Western Illinois University. January 2000.

http://www.iira.org/pubsnew/publications/IVARDC_Other_5.pdf

Brown, Roger and Christopher Merrett. (2000) "The Limited Liability Company vs. the New Generation Co-op: Alternative Business Forms for Rural Economic

Development” *Rural Research Report*. Illinois Institute of Rural Affairs, Western Illinois University.

http://www.iira.org/pubsnew/publications/IVARDC_RRR_44.pdf

Saskatchewan Economic and Co-operative Development. (1999) “Building the New Saskatchewan: New Generation Co-operatives for Agricultural Processing and Value Added Projects” November 1999.

<http://coop-studies.usask.ca/NGC2/DEVELGDE.pdf>

Stefanson, Brenda, Murray Fulton, and Andrea Harris. (1995) “New Generation Cooperatives: Rebuilding Rural Economics” Centre for the Study of Co-operatives, University of Saskatchewan. September 1995.

<http://coop-studies.usask.ca/pdf-files/Rebuilding.pdf>

Johnson, Dennis. (1996) “The Rise of the New – Wave Cooperatives” *American Cooperation*. National Council of Farmer Cooperatives.

<http://www.americancooperation.org/Browse.htm>

(Select 1996, Select the Article, it is located under Chapter 5)

Torgerson, Randall. (2001) “A Critical Look at New Generation Cooperatives” *Rural Cooperatives*. USDA Rural Business- Cooperative Service.

January/February. P.15-19.

<http://www.rurdev.usda.gov/rbs/pub/jan01/jan01.pdf>

Lawless, Greg and Will Hughes. “Potential Role of Cooperatives in Wisconsin’s Aquaculture Industry” University of Wisconsin Center for Cooperatives.

http://www.wisc.edu/uwcc/info/i_pages/aquacul.html