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Local Cooperatives' Role in the Identity- Preserved Grain Industry



Abstract

This study examines how locally owned cooperatives have responded to the transition from commodity to identity-preserved grain marketing. Survey results showed locals' overall commitment to identity-preserved grains was determined more by a cultural receptivity to innovation than by differences in priorities among grain, feed, and general managers.

Key words: cooperatives, grain, identity-preserved grain, specialty grain, innovation.

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Highlights

This study reports the responses of 230 Midwestern cooperative managers (including general, feed, and grain department managers) to a 1999 survey on their local's response to identity-preserved grains (IPG). All cooperatives surveyed had at least \$14.5 million in annual sales with at least 40 percent in grain sales.

IPG offers a case study on how and why local cooperatives choose to innovate. Most locally-owned grain cooperatives purchase grain from members and put it into condition for the next level of the marketing chain, not necessarily the end user. Like the grain industry in general, locals are oriented toward mass marketing, buying in bulk from many producers, co-mingling and blending lots for an average (No. 2) quality, and reselling such grain to a variety of users. It has been up to users adapt the grains to their specific processing requirements. The variation in grain characteristics recently introduced by genetic engineering and advanced plant breeding techniques has begun to shift the burden of adjustment back to the grain elevator and feed mill, who must either adapt or continue marketing undifferentiated grains.

Identity-preservation requires cooperatives to maintain the purity of the specialized grain by segregating it from other grain, rather than the traditional blending practice. Such "identity-preservation" costs money and requires extra bins to store the specialized grain, mill cleaning between runs and testing to assure purity of incoming and outgoing grain. Grains developed for specialized food or feed applications require other reevaluations of locals' established practices, including market development, contracting with growers, specialized facilities, and grower education. Locals' attitudes toward these changes were explored in the survey.

The study also evaluated the impact of cooperative culture--priorities and established ways of doing business--on IPG adoption. Respondents classified their cooperative as either: an Innovator (being "first" is a priority); Follower (willing to innovate but more cost sensitive); or Status Quo (conservative, cautious, slow to react, and independent). Each category represented one-third of respondents.

Innovator-respondents handled a much greater IPG volume than Followers and Status Quo. Interdependence demonstrated through partnering with regional cooperatives and investor-owned firms (IOFs) appeared to underwrite Innovators' willingness to bet on new products. The more traditional and independent cooperatives appeared to retain the independence and isolation that is the historical norm of grain cooperatives, including a competitive, even adversarial relationship with regionals. Unlike Innovators, Status Quo and Followers saw less evidence of producers adopting IPG in their marketing territory. They preferred to focus on getting the best price for producers through a unidimensional focus on traditional marketing practices. In contrast, Innovators operated in a multidimensional world where many avenues and perhaps some money-losing detours could ultimately achieve a similar end.

A new cooperative culture appears to be emerging alongside the established framework that includes managers who continually scan the environment for new opportunities, spread risk by partnering, and are psychologically at ease with the time required for new investments to mature.

Local Cooperatives' Role in the Identity-Preserved Grain Industry

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Introduction

This report is a continuation of a series by USDA's Rural Business-Cooperative Services (RBS) examining how locally-owned cooperatives are responding to industries undergoing significant structural change. Previous reports have examined locals' place in a dairy industry restructured by on-farm feeding and a pork industry undergoing vertical integration.¹ The advent of grains developed for specific food or feed applications requires a similar reevaluation of locals' established practices.

Like the grain industry in general, locals are oriented toward mass marketing, buying in bulk from many producers, co-mingling and blending lots to achieve an average No. 2 quality, and reselling the grain to a variety of users. Users have traditionally adapted the grains to their specific processing requirements. The variation in grain characteristics recently introduced by genetic engineering and advanced plant breeding techniques has begun to shift the burden of adjustment back to the grain elevator and feed mill, which must adapt or continue marketing undifferentiated grains.

To adapt, elevators and feed mills must maintain the purity of the specialized grain by isolating or segregating it to avoid contamination from other grain, a requirement completely contrary to the historical practice of co-mingling and blending. Such "identity preservation" costs money in the form of extra bins to

store the specialized grain, mill cleaning between grain runs, and testing to assure purity of both entering and exiting grain.

Most locally-owned grain cooperatives have traditionally purchased grain from producer-members, assembled, dried, conditioned and blended it, and sold to the next level in the marketing chain. This may be a grain exporter or processor, not necessarily the end user. In contrast, the identity-preserved grain market is expected to be driven by the needs of end users willing to pay extra for a product with greater starch, protein, oils, or other characteristics they need.

The new system requires more contact between end user and elevator or mill because specialized varieties² are not as readily available as conventional grains. Moreover, market development to locate potential users may be required to achieve scale economies and maximize use of specialized facilities. Growers may require education on the market potential of different grains or specialized planting requirements. Contracts between growers and users are needed to assure supply.

Close ties with producers and experience with grain merchandising and processing put cooperatives in an ideal position for this adjustment. Yet it's unclear to what degree cooperatives are interested in or prepared for these opportunities. Characteristic of an emerging industry, limited information is available about preferences, resources, and needs of system participants.³

² These varieties are typically referred to as "specialty grains," "identity-preserved grains," "GMO" (genetically modified organisms), and "value-enhanced" grains. The terms specialty grains and identity-grains preserved grains are used interchangeably in this report.

³ An excellent reference that discusses the characteristics of types of IPG is "1998-1999 Value-Enhanced Corn Quality Report" by the U.S. Grains Council, Washington, D.C. (www.grains.org).

¹ Hogeland, Julie A., Local Cooperatives' Role in the Emerging Dairy Industry. USDA/Rural Business-Cooperative Service Research Report 162, June, 1998. Also, Hogeland, Role of Local Cooperatives in Emerging Swine Industry, RBS Research Report 144, November, 1995.

This study seeks to contribute to an informed response by the cooperative sector through a survey determining local cooperatives' resources, preferences, and experience with identity-preserved grain (IPG). Responses are interpreted to determine whether cooperatives consider specialty grains a subset of a "core" grain industry or a core industry by itself, by nature of the specialized investment required.

IPG provides a case study on how and why local cooperatives differ in their response to innovation. A second objective is to interpret survey results through the filter of documented references to cooperative culture to determine how that shapes decision-making in local cooperatives. How regional cooperatives and grain producers interact with culture are also considered.

The third objective is to examine how internal organizational roles affects locals' overall commitment to IPG. Responses by general managers are compared with those of grain and feed department managers to determine whether individual department constraints and priorities exert a particular impact on the decision to adopt IPG.

These findings can be generalized to innovations and settings beyond specialty grain where cooperatives have the potential to become a technologically leading or lagging sector.

Hypotheses

Survey design was guided by several propositions which emerged from preliminary discussion with industry observers and literature review:

1. Cooperative culture and organizational roles will influence commitment to IPG.⁴
2. Grain cooperatives could find a new role bargaining on behalf of growers with technology developers and end users.
3. Trust will be an important factor in reducing opportunism between regional and local cooperatives.

Discussion of the first hypothesis follows; the latter two will be discussed in the context of survey results.

⁴ Reynolds observes, "The lack of systematic studies affecting organizational culture, and the ambiguous relationship between organizational culture and effectiveness suggest additional research. Two major factors should be considered in all future studies of organizational culture--distinctive industry norms and the organizational roles of the individuals." See Reynolds, Paul D., *Organizational Culture as Related to Industry, Position, and Performance: A Preliminary Report*, *Journal of Management Studies* 23(3), May 1986, 343.

Organizational Roles

Specialty grains present a potentially complex case of structural adjustment because gaining access to their benefits could require a considerable disruption of established methods of food and feed grain marketing. The variety of applications for specialty grains suggest that the decision to or not to adopt requires weighing the benefits and costs accruing to the departments of a local cooperative most affected by their use, feed, grain and agronomy.⁵ In this context, specialty grains present a particularly interesting case study of innovation because these departments are responding to different stages of the product life cycle⁶: genetic engineering has created new products and new growth opportunities for agronomy departments while feed and grain departments operate within mature, well-established product-market configurations.

Because managers of different departments within the cooperative are expected to have unique priorities, resources, and world views, the degree of commitment to an innovation--the strategy pursued by the cooperative--is expected to be the result of a process of internal competition for influence, bargaining, and compromise, subject to the overarching impact of the general manager and board of directors.⁷

This process of reconciling different commodity interests is similar to the one producers used when forming the cooperative. Producers continue to influence the cooperative through external coalitions; departments like feed and grain can be regarded as internal coalitions.^{8,9}

As producer-based external coalitions sift through potential demands and constraints on the cooperative's behavior, its goals and objectives emerge.

⁵ Although agronomy departments have an important role as purveyors of this new technology, only feed and grain departments were surveyed to simplify the study.

⁶ The importance of the PLC is stressed in Ruckert, Robert W. and Walker, Jr., *Orville Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence*, *Journal of Marketing*, 51 (Jan. 1987): 13.

⁷ To simplify the study and focus mainly on the interdepartmental relationships within locals, the impact of the board of directors was not considered.

⁸ A constituency-based theory of the firm is developed in Anderson, Paul F. *Marketing, Strategic Planning and the Theory of the Firm*, *Journal of Marketing*, 46 (Spring 1982), 19. This section applies his theory to cooperatives.

⁹ Cooperatives can also be viewed as coalitions of firms. See Staatz, John M., *Recent Developments of the Theory of Agricultural Cooperation*, Washington, D.C.: National Council of Farmer Cooperatives, *Journal of Agricultural Cooperation*, 1987.

These external coalitions also supply resources to the cooperative which legitimize its existence.

Organizational departments or functional areas best able to respond to these coalitions enhance their influence in the organization.

At the same time, cooperatives must retain sufficient flexibility to respond to environmental contingencies. Accommodating producer coalitions to ensure the stability and certainty of resource flows can ultimately limit such flexibility and autonomy. The cooperative's behavior--willingness to innovate--can then be seen as the outcome of the trade offs it has made between dependence on producer support and its need to respond to environmental contingencies, such as the emergence of specialty grains.

Differences in roles, expectations, and priorities were expected to be among those influencing these internal coalitions' response to IPG, and therefore questionnaire responses. Because the net impact of these factors was unclear, the interdepartmental approach used in this study was exploratory, not predictable.

General Managers-- They are responsible for determining the strategic direction of the cooperative, i.e., whether specialty grains would be compatible with the cooperative's resources and mission, either now or in the future. Their overriding concern is the mission and survival of the cooperative as a whole, while departmental managers focus on the common goal through the filter of their individual departmental goals.

Feed Managers-- They determine the ingredients used for manufacturing feed at the local cooperative. If specialty grains are used, the feed manager must arrange for special holding bins and manufacturing processes to maintain the grain's purity. This is a significant decision because a bin holding 1 million bushels, the minimum size, typically costs \$15 million to build.

Commitment to storage is also an issue. At peak harvest times, when storage is tight for commodity grain produced by farmer-members, specialty grain bins may be half empty. Specialty grains are also risky; high-oil corn is subject to "going out of condition" (becoming rancid) when stored. Even though high-oil

corn (HOC) is commonly regarded as more efficient than commodity (No. 2 yellow) corn in producing a high rate of gain in livestock, cheaper or more readily available energy substitutes are available, such as No. 1 white grease, a commodity byproduct from hamburger production or rendering operations. Grease is sprayed on the grain from a fat tank next to the feed mill. The drawback to this straightforward approach is the potential for fat clumps which can reduce feed efficiency.¹⁰

Feed managers are naturally interested in the bottom line--will customers purchase feed containing specialty grains? Unlike some grain managers who can get business by paying a penny a bushel higher than competitors, feed managers must move product to succeed. Moreover, daily feed sales subject the feed department to a disproportionate amount of cost allocation compared with other departments wherever revenue is more sporadic.

Grain Managers-- The largest department in the cooperative determines its primary function. For many locals that department is grain. The grain manager sells grain on behalf of member grain farmers or buys grain for milling or other processing operations of the cooperative. A grain manager may view specialty grains as an opportunity to expand into a new market with a different customer base than the export-oriented commodity grain market. If the local has a high volume from commodity grain, however, the special handling, testing, and transportation requirements of specialty grain may simply require too much adjustment in day-to-day business practices to be profitable or practical.

Managerial Sampling Design

Using RBS criteria to define large cooperatives, only locals with 1998 total annual sales of nearly \$15 million were chosen for the survey.¹¹ These cooperatives have departments and probably will have a feed manager (if selling feed) and a grain manager (if selling grain) or both on the staff

RBS categorizes local cooperatives as (1) selling both grain and feed; (2) completely specialized in feed sales (no grain); and (3) completely specialized in grain sales (no feed). The population of general managers is drawn from all three categories. The population of feed managers is drawn from cooperatives who sell both feed and grain plus those specialized in feed.

¹⁰ In a larger sense, substituting HOC for animal fats in feed constitutes a zero-sum game for agriculture as a whole since it transfers income from one agricultural sector to another. See Baumel, C. Phillip, et al., "GM Corn has impact on feed consumption," *Feedstuffs*, September 27, 1999.

¹¹ In 1999, RBS defined large cooperatives as those with annual sales of at least \$30 million.

The population of grain managers is likewise drawn from cooperatives who sell both grain and feed plus those specialized in grain.

Yearly fluctuations in grain prices substantially affect whether supply cooperatives with high grain throughput will be classified as grain cooperatives.¹² To capture cooperatives with a high volume of grain sales irrespective of a particular year's level of prices, supply cooperatives having (1) total sales of at least \$14.9M and (2) grain sales amounting to at least 39.5 percent of total sales were part of the group sampled.

Information collection was limited to 19 States that are major producers of corn, wheat, and soybeans according Field Crops Final Estimates 1992-97 (USDA/NASS, Statistical Bulletin No. 947, Dec. 1998). Utah and its two feed cooperatives that service pork producers, an important target market of specialized grains, were also included. The States were grouped into four regions: (1) North Central--Iowa, Minnesota, Wisconsin, South Dakota, and North Dakota; (2) Eastern Corn Belt--Illinois, Indiana, and Ohio; (3) South Central--Nebraska, Kansas, Missouri, Texas, and Oklahoma; and (4) West--Utah, Colorado, Montana, Oregon, Washington, and Idaho.

Using random sampling, 920 managers were polled, 386 from the North Central region; 256 from Eastern Corn Belt; 214 from South Central; and 64 from West.¹³ The number of feed or grain managers surveyed within a particular region was basically a third of the region's total sample.

Cooperative Culture

Restricting the survey to large cooperatives assumed that they probably had the financial resources to afford the retooling required for handling specialty grains, compared with their smaller counterparts.¹⁴ Although the survey's initial focus was the impact of managerial position on attitudes toward IPG, it was recognized that cooperative managers' willingness to

innovate is influenced not only by the mandate of their individual departments, but also by the culture or operating style of their particular local.

Cooperatives do have particular operating styles or cultures. Reynolds¹⁵ identifies different cultures and decision making norms as factors shaping cooperative mergers; Wadsworth asks whether important aspects of culture or identity are obliterated in the aftermath.¹⁶

Cooperatives also vary in their response to innovation. In reviewing the impact of loss of Government storage programs on local cooperatives, Steams, Cobia, and Warman looked for evidence of computerized accounting systems and quality of grain storage, among other factors, in determining progressiveness.¹⁷ They delineated three such categories of locals: progressive, intermediate, and conservative.

Progressive managers readily changed merchandising practices and participated in mergers and acquisitions--changes resisted by intermediate and conservative managers. Conservatives perceived fewer courses of action available to them than their counterparts, perhaps because they were less aggressive, less successful in raising margins, and their cooperatives were smaller. Steams, et al, observed, "It also appears conservative managers were unable to implement many of the changes they thought practical."¹⁸ In short, they did not make things happen.

A similar classification was used in this study, based on the premise that some cooperatives preferred to be at the forefront of new concepts while others had a "wait and see" attitude toward innovation.

Respondents described the operating style of their cooperative as either:

- a We value being "first" with new products, markets, and technologies, even though not all efforts prove to be profitable. We typically respond rapidly to early signals about areas of opportunity.

¹² RBS classifies a grain marketing cooperative using two characteristics: the value of the products marketed through transacted sales represents its largest source of business volume, and the cooperative markets only grain, or grain and other products. If it markets other products, grain accounts for the largest share of its marketing volume.

¹³ Sampling was done with a 90 percent confidence level and 5 percent level of precision.

¹⁴ It can be argued the small cooperatives in a survival mode might be more willing to dedicate their facilities to specialty grains. However, this study limited variation in size to focus on managerial variation.

¹⁵ Reynolds, Bruce, James J. Wadsworth and Donald A. Frederick, Cooperative Merger/Consolidation Negotiations--The Important Role of Facilitation. USDA: Rural Business-Cooperative Service, Cooperative Information Report 52, March 1996.

¹⁶ Wadsworth, James J. Cooperative Unification: Highlights from 1989 to Early 1999. USDA: Rural Business-Cooperative Service, RBS Research Report 174, September, 1999.

¹⁷ Steams, Larry, David W. Cobia, and Marc Warman, Strategies for Survival by Cooperative Country Elevators--Revisited, USDA: Rural Business-Cooperative Service, RBS Research Report 158, December 1997.

¹⁸ *Ibid.*, 8.

- b We seldom are "first" with new products. However, we monitor our major competitors to see if we can be second with a more cost-efficient, perhaps more innovative product.
- c We try to maintain a secure niche in a relatively stable product or area. We try to protect our domain by offering higher quality, superior service, lower prices, etc. We tend to ignore industry changes that have no direct influence on current areas of operation or commodity priorities.

These can be classified as "Innovator," "Follower" and "Status Quo" positions.¹⁹

These descriptions cast Innovators as highly proactive, curious, and more interested in maximizing sales than profits. From this, it is likely Innovators will have more experience with IPG than either Follower or Status Quo locals because they want to be "first." Followers take a more reasoned, financially cautious approach to innovation. Status Quo locals are autonomous, preferring to operate within established boundaries, geographic and otherwise. They are not risk takers.

Iowa's West Central Cooperative has developed this innovation-friendly approach over the past decade.²⁰ Noticing how rapidly some managers folded once they encountered obstacles, West Central concluded, "A key dimension of a culture based on innovation is that we must be willing to allow for experiments and accept failure!"²¹

Applications—Although the size of respondents was expected to automatically relegate them to the Innovator category, important features of cooperative culture correspond to the Status Quo position.

For grain cooperatives, the "secure niche" preferred by Status Quo locals could be the straightforward objective of getting producer-members the highest price. They would not dilute this focus even if lack of diversification increases financial stress on core services. "Service at cost," a cornerstone of cooperative philosophy²², would reinforce this by minimizing expenditures that could erode members' return.

At the extreme, such cooperatives would operate minimally maintained, fully depreciated facilities. The cooperative may even be operating in the red to provide basic services. Reynolds identifies feed mills as one of top money-losing services among local cooperatives in Oklahoma.²³ Such feed operations might be limited to mainly grind and mix mills because the cooperative cannot afford or justify advances like pelleting, biosecurity or computerized formulations. In fact, members' reluctance to finance needed facilities has been cited as a core problem in the grain producer-cooperative interface.²⁴

Under such operating constraints, the marketing practices of the cooperative are likely to be similarly streamlined—primarily buy-sell, where the cooperative functions as a middleman between grower and the next level of the marketing channel. (Ginder observes that the cooperative grain system has been developed on a buy-sell basis from its inception).²⁵ The cooperative's income then depends on the marketing margins (spread between the buying and resale prices) for grain. Some risk losing member business by trying to compensate for inadequate capitalization through maximizing the spread. Slowness in acknowledging basis movements and quickness in discounting grain could be the result of attempting to maintain themselves as a viable economic entity.

By default or design, the secure niche may also be a homogeneous customer base of relatively small, often older, diversified family farmers. The link between cooperative and customer is a trust based on familiarity ("We grew up together."). Established loyalties may mean that the cooperative neither gets new customers, nor loses the existing ones. Unlike more aggressive suppliers, such cooperatives are often particularly sensitive to farmers other suppliers might write off as inefficient.

²² "Service at cost is a generally accepted principle of cooperation. It usually is accomplished by the allocation of net margins to patrons on the basis of business done with the cooperative. This procedure may or may not result in all patrons receiving service at the cooperative's cost of serving their class of transaction." See Menzie, Keith L, Paul V. Preckel, and Lee F. Schrader, Cost-of-Service vs. Uniform Pricing in a Cooperative Feed Manufacturing and Distribution System, *Journal of Agricultural Cooperation*, 1987, 31.

²³ Reynolds, Bruce J., Decision-Making in Cooperatives with Diverse Member Interests, USDA: Rural Business-Cooperative Service, RBS Research Report 155, April 1997, 5.

²⁴ Thurston, Stanley K., Michael J. Phillips, James E. Haskell, and David Volkin. Improving the Export Capability of Grain Cooperatives, USDA: Farmer Cooperative Service, FCS Research Report 34, 53.

²⁵ Ginder, Roger. Restructuring the Grain Industry and Cooperatives Role. Ames, Iowa: Iowa State University Department of Economics Staff Paper, Rev. 1991, 14.

¹⁹ Gupta, Ashok K., S.P. Raj, and David Wilemon, A Model for Studying R&D-Marketing Interface in the Product Innovation Process, *Journal of Marketing*, 50 (Apr. 1986), 15. In their framework, Innovators are "Prospectors" Followers are "Analyzers," and Status Quo, "Defenders" and "Reactors."

²⁰ Seaman, Wayne, "The Chain is Only as Strong as the Weakest Link: The Need to Strengthen Human Capital in Cooperatives," *Farmer Cooperatives in the 21st Century Conference Proceedings*, Iowa State University, June 9-11, 1999.

²¹ *Ibid*, 43.

Developing a loyal customer base may be a necessary counterpart to the value placed on independence by their customers--their option to sell anywhere that they can get another penny a bushel. Cummins, et al., explain: "The grain producer tends to sell at the best price, often discounting the value of the services and overall benefits provided by the cooperative. . . even though the producer invests in the cooperative, an obligation to do business [with it] is often lacking."²⁶

Paradoxically, the value members place on independence also encourages them to form--and keep--their "own" cooperative, even if its marketing territory is small, limited to a county or two. Fulton observes, "Joint ventures and strategic alliances allow the local cooperatives to preserve their status as separate business entities and therefore, the loyalty and commitment of their members."²⁷

This parochialism contributes to a certain isolation, although members may not perceive it as such. Reynolds observes, "Members who prefer smaller, more localized cooperatives value their familiarity and acquaintance with the membership--a condition which is often diminished by consolidation with a cooperative outside their community!"²⁸ Parochialism may also affect another core issue in the producer-cooperative interface: whether producers can be served more effectively through unifying two adjacent cooperatives, a difficulty observed by Thurston, et al.²⁹

Independence is expressed in other ways. The local's grain is typically sold to the highest bidder, even if its own regional cooperative wants it. Describing the grain industry of the 1980s, Dahl observed, "Regional cooperatives have few captive customers among their affiliated locals. Their price bids must be competitive with investor-oriented firms (IOFs) or they lose the business."³⁰

Such opportunism among locals can carry over into other activities and result in situations where a noncooperative partner is valued or trusted more than the regional they own. While economics may make such choices valid in any particular instance, overall, the cultural emphasis on independence can lead to issues of ownership and control within the federated system. For example, although a group of locals owns the regional cooperative, some may not necessarily identify with it. At the extreme, the regional becomes just another agribusiness supplier, one that can be played off others to get the best deal.

While member affiliation with a particular regional cooperative may be tenuous from year to year in the local's search for the best deal, often the bedrock image or identity of the cooperative is intrinsically linked with the persona of its general manager. The late Truman Torgerson's comments reflecting on his experience managing Lake to Lake, dairy cooperative in Wisconsin suggest this possibility:

We have learned that the influence of the manager (chief executive officer), next to the loyalty of the members, exceeds all other influences. And the success of the cooperative depends on his integrity, skills, and ability in developing with directors a constructive business plan and policy that effectively meets various conditions as they arise.³¹

Cooperative managers have a pivotal role in fostering innovation. Those who define their role simply as moving more product than the previous year (e.g., fertilizer), may not see the need to develop new, more complicated services and products, such as precision agriculture and speciality grain. For some, marketing is simply a matter of, "You sell it for \$1.50; we'll sell it for \$1.49." Others, who literally try to maintain the status quo, may approach competition gingerly: "You stay in your territory and I'll stay in mine." This approach is changing, although, as managers become more willing to declare, "This county is mine."

²⁶ Cummins, David E., Francis P. Yager, Charles Hunley, Michael Kane and Bruce Reynolds, Cooperative Involvement in Grain Marketing. USDA: Agricultural Cooperative Service, ACS Research Report 38, August 1984, 14.

²⁷ Fulton, Joan R., Michael P. Popp, and Carolyn Gray, Strategic Alliance and Joint Venture Agreements in Grain Marketing Cooperatives. American Cooperation 1996 Yearbook, Washington, D.C.: National Council of Farmer Cooperatives, 2.

²⁸ Reynolds, Bruce, Specialization Networks Offer Alternative to Consolidation of Local Cooperatives, USDA: Rural Business and Cooperative Development Service, Farmer Cooperatives, February, 1995, 146.

²⁹ Thurston et al., 53.

³⁰ Dahl, Reynold P., "Structural Change and Performance of Grain Marketing Cooperatives," Journal of Agricultural Cooperation, 1991, 7.

Survey Results

Managerial Responses— The survey netted responses from 143 general managers; 49 feed managers, and 38 grain managers--a 25 percent response rate overall. General managers represented 62 percent of all respondents; feed managers, 21

³¹ Torgerson, Truman, Building Markets and People Cooperatively: The Lake of Lake Story. USDA: Agricultural Cooperative Service, 1990.

percent; and grain managers, 17 percent.^{32, 33} Returns were heavily skewed in favor of general managers, despite repeated follow-ups to other managers, a result which may demonstrate the primacy of that role within cooperatives.³⁴

More than 40 percent of managerial respondents were from the North Central region (Iowa, Minnesota, Wisconsin, South Dakota, and North Dakota) and 30 percent from the Eastern Corn Belt (Illinois, Indiana, Ohio) (Table 1).

Innovator Response—Overall, respondents were evenly divided among the categories of Innovator, Follower, and Status Quo (Table 2).³⁵ Regional distribution by innovative style is shown in Tables 3 and 4.

Survey Overview—Locals were instructed to select all responses or alternatives that described their situation. Survey topics are discussed in the following sequence:

- experience with IPG
- assessment of advantages and disadvantages; grain producer response;
- investment horizons;
- relationship with regional cooperatives;
- competition from vertical integration; and
- discussion and conclusions.

Experience with IPG

To ascertain links between IPG experience and attitudes, respondents indicated the volume of identity-preserved and commodity grain handled by their local during 1998 and expectations for 1999.³⁶

Corn

1998 IP Corn—Varieties include blue, hard endosperm, high amylose, high starch, organic, post harvest pesticide free, waxy, white, high oil (HOC), nutritionally dense/high protein, high lysine/opaque,

and low phytase.

Across the 135 respondents reporting, the average amount of such grains handled by their local was 142,000 bushels. Maximum amount handled was 2.3 million bushels. Sixty-three locals did not handle any IP corn.

At 257,000 bushels in 1998, Innovators' average IPG corn volume was almost double that of Followers and five times as much as Status Quo locals (Table 5). These were significant differences ($p > .005$) according to F-test values from an analysis of variance (Table 6). Statistically significant differences in average volume were not apparent between Innovators and Followers, nor between Followers and Status Quo locals.

The maximum volume handled among Innovator locals was 2 million bushels; 2.3 million among Followers, and 0.7 million bushels among Status Quo locals.

1998 Commodity Corn—The primary example of this category is No. 2 Yellow Corn. Across the 177 locals responding, the average amount handled was almost 4.2 million bushels. Maximum volume was 33.8 million bushels. Only 5 locals handled no commodity corn.

At about 7.3 million bushels, the average amount handled by Innovators exceeded Followers by almost 4 million bushels and Status Quo by 4.5 million bushels (Table 5). Only a slight difference existed between the average volumes of Followers and Status Quo locals. Innovators' volume compared with Status Quo was extremely significant ($p > .0001$), and compared with Followers, highly significant ($p > .001$) (Table 6).

Across respondents, an average of .03 of a bushel of IPG corn was handled for every bushel of commodity corn. Among Innovators and Followers, this ratio was .04 and among Status Quo, .02

The maximum amount of commodity corn handled among Innovator locals was almost 34M bushels, compared with 16M bushels for Followers, and 13M bushels for Status Quo locals. Maximum Innovator volume was twice that of Followers and 2.6 times that of Status Quo locals.

Anticipated 1999 IP Corn—The average anticipated volume was 246,000 bushels according to the 128 locals responding, representing a 42 percent increase over average 1998 volume. Maximum expected volume was 5 million bushels.

At 408,000 bushels, Innovators expected to almost double their average expected volume in 1999. Followers anticipated moving from 1998's 141,000

³² Total percentages may not add up to 100 due to rounding.

³³ Responses from managers provide the largest numerical basis for conclusions, and so are reported first.

³⁴ Such results negated the survey's random sampling.

³⁵ Where multiple managers were surveyed from the same local, some ratings of innovativeness may have differed. Few responses were received from multiple managers within the same cooperative, so such overlap was ignored.

³⁶ Minimum volume for all grains was zero.

bushels to 208,000 bushels. Status Quo locals anticipated a 241 percent increase—from 50,000 bushels to 168,000 bushels. Differences between innovator classes in expected outcomes were not statistically significant, however.

Expected 1999 Commodity Corn—The 162 respondents expected an average of 4.4 million bushels to a maximum of 35 million bushels.

Innovators expected to handle an average of 7.3 million bushels; Followers, 3.5 million bushels; and Status Quo, 3.2 million bushels. Respective maximums were 35 million; 14 million; and 20 million. Differences between all three groups were extremely significant ($p > .0002$); as well as between Innovator and Status Quo ($p > .0009$). The difference between Innovators' and Followers' expected commodity volume was highly significant ($p > .002$).

Wheat

1998 IP Wheat—Most wheat varieties—hard red winter, hard red spring, soft red spring, soft red winter, durum, hard white, and soft white—are typically considered wheat classes, with traits more inherent than genetically engineered.³⁷ Such traits constrain end uses to particular applications—pasta rather than confectionary goods. Wheat cannot be switched among alternative uses, while the default market for genetically engineered corn is the No. 2 yellow corn market.

Eighty-one locals did not handle IP wheat. Average volume of the 87 respondents was 60,000 bushels, with a minimum of zero and a maximum of 0.5 million bushels. When considering average volume by innovator class, differences were marked: Innovators averaged 41,000 bushels; Followers and Status Quo, 2,000 bushels each (Table 5). Differences between all three groups were significant ($p > .05$); as were the differences between Innovators and Status Quo ($p > .07$) and Innovators and Followers ($p > .09$) (Table 6).

1998 Commodity Wheat—The 126 respondents handled an average of 1 million bushels, with a maximum of 13 million bushels. Twenty-nine locals did not handle commodity wheat.

Innovators led again, handling an average of 2.1 million bushels, compared with Followers' 452,000

bushels and Status Quos' 905,000 bushels (Table 5). Innovators' maximum was 13 million bushels, with 9 million for Followers and 8 million for Status Quo. Differences between all three groups were highly significant ($p > .001$), as well as between Innovators and Followers ($p > .001$). Significant differences existed between Innovators and Status Quo ($p > .04$), but not between Followers and Status Quo (Table 6).

Anticipated 1999 IP Wheat—Among the 76 respondents reporting, average 1999 volume was expected to be 19,000 bushels, with a maximum of 750,000 bushels. The patterns apparent in actual 1998 bushels by innovative style were duplicated for 1999 expectations, although Innovators expected to almost double their volume (Table 5).

Expected 1999 Commodity Wheat—Average volume projected by the 108 respondents was 3.2 million bushels, to a maximum of 250 million bushels. Innovators anticipated 1.9 million bushels to a maximum of 10 million; Followers expected 7.3 million bushels to a maximum of 250 million; and Status Quo expected 748,000 bushels, to a maximum of 4 million bushels. Only differences between Innovators and Status Quo were significant ($p > .03$).

Soybeans

1998 IPG Soybeans—Varieties include tofu, high oleic, low linolenic, and high protein. The maximum volume among the 114 respondents reporting was 1 million bushels, with an average of 45,800 bushels. Seventy-five locals did not handle IP soybeans.

The average volume of Innovators was 100,000 bushels, to a maximum of 1 million bushels. Followers' average was 28,000 bushels, to a maximum of 260,000 bushels. Status Quo average was 23,000 bushels, up to 300,000 bushels (Table 5). Differences between all three groups were highly significant ($p > .03$); and between Innovator and Status Quo, significant at $p > .05$, and for Innovator and Follower compared, significant at $p > .07$ (Table 6).

1998 Commodity Soybeans—The maximum volume for the 166 respondents was 22 million bushels, with an average of 1.6 million bushels. Only 10 locals did not handle generic soybeans.

Innovators' average volume was 2.5 million to a maximum of 15 million bushels (Table 5). Followers' average volume was 1.1 million to a maximum of 4

³⁷ Sparks, Inc., has observed that no biotech wheat product has been commercialized yet due to the presumed greater difficulty in its genetic modification and scientific delay.

million bushels. Status Quo average volume was 1.4 million to a maximum of 22 million bushels. Differences between all three groups were highly significant ($p > .01$); between Innovators and Status Quo significant ($p > .06$); between Innovators and Followers, highly significant ($p > .002$); and not significant between Followers and Status Quo (Table 6).

Anticipated 1999 IPG Soybeans—The maximum expected volume for the 144 respondents reporting was 28 million bushels, at an average of 1.8 million bushels.

Innovators anticipated an average of 169,000 bushels, to a maximum of 2 million bushels (Table 5). Followers anticipated an average of 109,000 bushels, also to a maximum of 2 million bushels. Status Quo foresaw an average of 76,000 bushels, to a maximum of 1 million bushels. None of these differences were significant (Table 6).

Anticipated 1999 Commodity Soybeans—The average anticipated volume among the 144 respondents was 1.7 million bushels, to a maximum of 28 million bushels (Table 5). Innovators expected to average 2.6 million bushels, to a maximum of 15 million bushels, and for Followers it was an average of 1.1 million bushels, to a maximum of 4 million bushels. Status Quo expected to average 1.6 million bushels, to a maximum of 28 million bushels. Significant differences existed between all three groups ($p > .08$) (Table 6). Only the difference between Innovators and Followers was highly significant ($p > .01$).

IPG Handling Premiums

Locals reported their typical commodity grain handling margins are generally 10 cents/bushel. Industry observers said that an IPG premium much beyond that would place local elevators at a serious competitive disadvantage, potentially precluding a cooperative role in the specialty industry. Cunningham and Unnevehr report a survey of Midwestern grain handlers indicated they paid a premium to the farmer of 30 cents/bushel above the market price, and the "country elevator usually received that amount plus ten cents more from whomever they delivered to."³⁸ Low premiums are also supported by test results from

Bremer County, Iowa, where local elevators incurred an additional handling charge of only 5 cents/bushel when handling high oil corn, compared with conventional corn.³⁹

Survey results from locals indicated 61 percent of general managers wanted a premium of at least 10 cents/bushel, making IPG, at a minimum, twice as expensive as conventional grain (Table 7). Grain and feed managers were more willing to accept lower premiums.

Interest in larger premiums persisted when innovative style was considered, especially among Status Quo locals (Table 8). Yet, Innovator locals were almost twice as likely as Status Quo locals to charge a premium below 10 cents, 35 percent versus 18 percent. Follower locals fell in between at 28 percent. Moreover, Follower and Status Quo locals were almost three times as likely as Innovator locals not to know IPG handling costs.

Recent industry opinion regards IPG as a product still in many ways unknown, including handling costs. Nevertheless, survey evidence shows Innovator locals specializing in IP corn (i.e., handling over the survey's average of 142,000 bushels) are considerably more likely to have lower handling costs--65 percent charged less than a 10 cent/bushel premium (Table 9).⁴⁰ These managers have transferred the volume-driven mentality of the commodity sector to IPG, to use facilities as intensively as possible--which suggests getting into IPG may be something of an "all or nothing" proposition.

Specialized IPG Services

IPG involvement can be regarded as growing from simple activities to complex ones like manufacturing pasta or handling high volumes of multiple varieties. From the standpoint of volume, results showed locals were at two extremes--either heavily or barely involved. Further survey results revealed that, irrespective of grain species, keeping up with developments in the IPG market was the most popular activity pursued by locals (Tables 10-12). Providing technical information and seed distribution followed in importance, although each was pursued by less than 20 percent of respondents.⁴¹ Processing activities--milling, crushing, refining--and grain quality or composition assays--were rarely conducted.

³⁸ Cunningham, Carrie J. and Laurian J. Unnevehr, Market Segmentation for Genetically Modified Corn and Soybean Exports. Presented at Transitions in Agbiotech: Economics of Strategy and Policy," June 24-25, 1999, Washington, D.C., 9.

³⁹ Baumel, 23.

⁴⁰ Small sample size for Follower and Status Quo precluded generalizations about their practices.

⁴¹ Bias from a small number of respondents may explain why Follower wheat activities were less concentrated in outlook monitoring.

IPG Handling Capabilities

Physical involvement with IPG demands specialized resources. Respondents ranked their capabilities for handling several key aspects of IPG, from seed distribution and access to cleaning, drying, and storage (Table 13). Cooperatives reported their most significant weaknesses in grain testing, e.g., (1) NIR--near--infrared technology--to measure composition, and (2) assays for grain quality, fat content, etc. A lesser concern, but nevertheless reported by 60 percent of all managers, was the scarcity of bins at the elevator during the peak harvest period. Commitment to IPG probably cannot happen by the cooperative sector as a whole unless infrastructure is substantially improved in these areas.

Combining "excellent" and "adequate" ratings revealed cooperatives were strongest in obtaining and distributing IPG seed, including accessing seed exchanges when needed, and providing technical support. Grain cleaning and drying facilities appeared to be suitable for the present, with 57 percent of all managers providing a combined favorable rating, but probably not adequate for greater stress on the existing system.

Managers were largely consistent on these issues, irrespective of position (Table 14). Differences by innovative style were also not apparent (Table 15).

Buyer Availability

Buyer availability has generally been considered to be a moot issue for IPG insofar as most grains are grown under contract for a specific user and therefore would not be sold on the open market. Demand is expected to generate its own supply, not the reverse. Nevertheless, about 20 percent of managers routinely experienced difficulty finding buyers (Table 16). More than 25 percent of Status Quo cooperatives also experienced problems, compared with 15 percent of Innovators and 23 percent of Followers. Whether evaluated by managerial position or innovative style, the consensus was that more development is needed to identify potential IPG buyers.

The survey asked whether buyers were readily available or required effort--particularly market development--to locate (Table 17). More Eastern Corn Belt locals than those in other regions reported buyers required little or no work to identify. Cooperatives from the South Central region stressed the need for more market development.

IPG Feed

Twenty five percent of all managers reported their local had manufactured IPG-based feed during 1998-99 (Table 18). Manufacturing was more frequent among Innovators (37 percent) than Followers (27 percent) and Status Quo (10 percent).

IPG Advantages and Disadvantages

Trait Preferences

When choosing traits for seed originated (sold) by their locals, the priority among managers was maximizing net returns for grain producer-members, followed by compatibility with grain facilities and expertise (Table 19). Accessibility of traits was third, indicating specific genoplasm, as a "manufactured" product, may have limited availability.

Feed concerns influenced choice for 10 percent of respondents, via interest in traits lowering ration cost or increasing feed efficiency, or those directly supporting locals' own feed manufacturing. Sensitivity to such issues was particularly marked among feed managers. Maximizing producers' returns, facility compatibility, or trait access were markedly more important among general managers than feed managers. Grain managers were generally in accord with general managers.

Results suggest locals' priorities are independent of other agribusinesses. Little support was demonstrated for the food or feed operations of regionals or investor-owned firms, implying minimal vertical coordination and integration between locals and others in the supply chain.

When considered by innovative style, the overwhelming priority was maximizing grain producer return, (80 percent, Status Quo locals; 76 percent, Innovators; and 72 percent, Followers (Table 20)).⁴² Compatibility with grain facilities and supporting locals' feed manufacturing were a distant second and third.

IPG Advantages

Concern about members' returns also skewed perception of IPG advantages: 24 percent of all managers viewed IPG as a way for members to diversify and increase revenue (Table 21). Second was IPG's potential as a new opportunity for cooperatives, and third, the competitive edge conferred by these grains--a factor less apparent to feed managers than others.

⁴² It is not clear why preferences according to managerial position should be more diverse than those revealed by innovative style.

Feed managers were more enthused about IPG's role in higher quality feed rations and increased feed efficiency, while grain managers viewed IPG as a new product opportunity.

The member focus demonstrated in trait preferences and perceived advantages undoubtedly reflect cooperatives' reason for being. Wadsworth says that the ultimate goal of cooperatives undergoing industry change should be to serve producer members in the most efficient and beneficial way.⁴³ This benefit may be self-limiting, however. Citing cooperatives' historically limited role in grain exports, Ginder observes, "the system tended to concentrate on activities directly related to the grain and farm products produced by the farmers who owned the system."⁴⁴

"New opportunities" dominated member returns as the primary advantage of IPG irrespective of innovative style, particularly among Follower locals, who may be seeking a way to take their cooperative to the next level (Table 22). Second among Status Quo locals was IPG as a way for members to diversify and increase revenue. Innovators' second priority, maintaining a competitive edge in grain marketing, as well as Followers, high quality feed rations, exhibit a subtle but telling difference in emphasis from Status Quo. The latter appears to be driven by a singular focus of raising the prices members receive for grain, a goal other locals may pursue indirectly through more varied approaches.

IPG Disadvantages

The need for premiums to drive change at each level of the grain marketing system and questions regarding the "true" value of a product produced outside the open market have frequently been considered obstacles to IPG's adoption. These and other issues were evaluated in a lengthy survey question. Responses have been grouped according to whether they reflect (1) overall system concerns, i.e., the need for premiums and end-use demand to drive the IPG market; (2) grower issues; or (3) concerns about changes in the day-to-day practices of cooperative elevators.

Grower commitment was the salient issue among managers: Were returns sufficient to sustain farmer interest enough to develop a consistent market, given the potential for yield drag (reduced yields arising from limited pollination or other factors) (Table 23)? Elevator obstacles ranked second as a group, mainly

reflecting the need for considerable or expensive facility adjustments required to accommodate IPG, and loss of income and flexibility from blending—a standard revenue-generating practice in the industry.

Specialty seed grain appears to be a market apart from seed distributed by farmers. Despite industry concerns about competition from farmer-dealers, cooperative managers did not see a potential conflict of interest.

Status Quo locals particularly were concerned about maintaining established operating practices and facilities (Table 24). Ten percent of Status Quo were concerned about the need for potentially expensive facility adjustments, compared with 5 percent of Followers and 1 percent of Innovators. Twenty-five percent of Status Quo were concerned about IPG's impact on the revenue and flexibility offered by grain blending, compared with 14 percent of Followers and 10 percent of Innovators. Blending different grains to reach an average No. 2 quality is diametrically opposed to the segregation and purity required for IPG marketing.

Innovator managers were looking toward future developments in IPG, insofar as 17 percent said, "Multiple (stacked) traits interest us more than the current single trait emphasis of IPG."

Grain Producer Response

For any agricultural cooperative, paying attention to many different grower trends would seem to be a necessary part of business. In contrast, the survey's definition of Status Quo managers was those who "tend to ignore industry changes that have no direct influence on current areas of operation or commodity priorities." And, in fact, the aptness of this description showed in their observations regarding four aspects of farmer behavior: extent of IPG adoption and trend over the past year; size of producer adopting IPG; and producer size most likely to increase.

1999 Farmer Adoption—Respondents predominately saw IPG having a scattered impact on farmers within their marketing territory (Table 25). Grain managers particularly saw evidence of IPG adoption. Nine percent of all managers did not know what impact IPG had within their area.

Sixteen percent of Innovators saw IPG making substantial inroads, measured by farm numbers or sizes, compared with 7 percent of Followers and 1 percent of Status Quo (Table 26). Twelve percent of Status

⁴³ Wadsworth, 4.

⁴⁴ Ginder, 16.

Quo did not expect IPG to have any impact in the future on producers in their marketing territory. Only 5 percent each of Followers and Innovators felt the same. Fourteen percent of Status Quo said they didn't know the extent of farmer adoption in their territory, compared with 4 percent of Innovators and 7 percent of Followers.

Trend from 1998 to 1999—About 40 percent of respondents saw increased planting from 1998 to 1999, coinciding with industry observations (Table 27). Sixty percent of Innovators observed increased planting, compared with 36 percent of Followers and 26 percent of Status Quo (Table 28). Only 4 percent of Innovators did not know what the trend was, along with 12 percent of Followers and 21 percent of Status Quo. Pfeffer and Salancik observe that organizational environments are not given realities; they are created through a process of attention and interpretation.⁴⁵ Here, it is evident cooperative managers see what they look for. If they are interested in IPG they study producer trends.

Size of Producer Adopting IPG—Among respondents, almost 50 percent saw IPG adoption taking place predominately among large producers with 500 to 1,500 acres (Table 29). Grain managers were more definitive about this aspect of IPG than general and feed managers. Almost 20 percent saw IPG adoption occurring regardless of producer size. Another 20 percent of managers simply didn't know.

Findings were similar when evaluated by innovative style (Table 30). Thirty percent of Status Quo didn't know the trend, along with 18 percent of Followers and 13 percent of innovators.

Product Size Likely To Increase—Here again, large producers predominated, whether considered by managerial opinion or innovative style (Tables 31-32). Those who didn't know were 17 percent of Status Quo, 16 percent of Followers, and 14 percent of Innovators.

Causes of Turnover—Inadequate premiums, yield drag, and limited elevator storage were the leading reasons accounting for turnover among contract growers, according to managers (Table 33). The significance of elevator availability highlights the importance of cooperative infrastructure to back up

members' planting intentions.

Grain and feed managers in particular believed IPG was too much work for producers compared with other grains, an observation made by only 3 percent of general managers. Departmental managers perceived a higher level of producer concerns about elevator storage and perceptions of a small and inconsistent market, leading to a "wait and see" response by producers.

Investment Horizons

A particularly appropriate role for locals identified by industry observers is bargaining on behalf of growers for inputs and prices. This is an unconventional role for grain and supply cooperatives, but the special demands of IPG have opened to question many established roles and behaviors. These and related issues were examined in a series of questions exploring the various dimensions of investment: the anticipated accommodation required for IPG; preferred ways of integrating IPG into the business; and willingness to wait for a satisfactory ROI (return on investment).

Anticipated Impact on Locals—Virtually no managers anticipated making major adjustments in their grain operations to accommodate IPG (Table 35). Almost half expected to be making at least some adjustments and 30 percent expected to have minimal involvement with IPG—"business as usual." Only 2-3 percent concluded IPG would have no impact on their local. Close to 20 percent didn't know what to predict.

These findings were duplicated by innovative style (Table 36). Curiously, 21 percent of Innovators didn't know what to expect, compared with only 11 percent of Followers and Status Quo. Given Status Quo's low receptivity to the many aspects of these grains, it is possible they had already decided not to handle IPG.

Preferred IPG Activities—For 25 percent of all respondents, coordinating feeding of cooperative- or member-owned livestock with member-produced IPG was the most attractive option (Table 37). Twenty-three percent chose developing strategic alliances with IPG seed companies or technology developers. Bargaining regarding producers' contract terms of inputs was chosen by 17 percent, the same percent who saw themselves jumping in and out of the IPG

⁴⁵ Pfeffer, Jeffrey and Gerald R. Salancik, *The External Control of Organizations*. New York: Harper & Row, 1978, 13.

business as warranted by grain prices.

Innovators were highly in favor of feeding live-stock (43 percent) compared with 33 percent of Followers and 18 percent of Status Quo (Table 38). The latter liked being an in-and-outer in response to grain prices, 40 percent compared with 9 percent of Innovators and 22 percent of Followers.

From these results, it is not inconceivable to advocate a bargaining role for local cooperatives. The caveat is that they prefer more traditional roles of feeding livestock or pursuing strategic alliances--roles with which they are more familiar.

Return on Investment--Fully 50 percent of all respondents wanted to wait and see how the IPG market develops before they would consider investing (Table 39). Twenty-five percent were willing to wait from 2 to 5 years for a satisfactory return on an investment of at least \$250,000, a benchmark used to qualify as a major investment. This, and the 14 percent willing to wait 5 years suggest cooperative managers have some appreciation of the time required for investments to mature

By innovative style, however, a different consensus emerges. Sixty-two percent of Status Quo wanted to "wait and see," compared with 36 percent of Innovators and 51 percent of Followers (Table 40). Innovators were almost 3 times as likely as Status Quo locals to be willing to wait from 2 to 5 years for a satisfactory payoff

Clearly, Status Quo locals were skittish about committing investment resources to IPG. Innovators favored a bolder approach, reflecting their priority on being industry leaders and greater willingness to risk losses.

Relationship with Regional Cooperatives

Competition with Locals

Most local cooperatives are members of one or more regional cooperatives upon whom they rely for advanced grain marketing programs; further assembly

and processing; assisting in modernizing and constructing grain facilities; and providing merger and other economic and legal assistance.⁴⁶

The ties between regionals and locals have always been weaker than in other commodities because most grain locals can and do market independently of regionals' own assembly and marketing efforts. As member grain producers routinely seek the best price on their own,⁴⁷ so do their locals. This independence has shrunk the grain volume available to regionals; limited the cooperative presence in export markets; and generated a gradual pullback by regionals from what is considered to be a commodity "first handler" business for cooperatives. Alliances with investor-owned firms such as Cargill or ADM appear to have filled in the blanks in the regional-local interface.⁴⁸

The scope of regionals' services to locals is also changing. They are frequently considered too stretched to adequately serve member locals.⁴⁹ This may not matter for large successful locals, who may no longer require the regional's services and bypass it.⁵⁰ It may well matter for less successful locals who can be considered "a burden to the regional cooperative."⁵¹ Such locals may not be able to afford the service fees increasingly required to gain access to specialized services and technical assistance offered by regionals to member cooperatives. Other neighboring locals may become the source of such services, perhaps as a prelude to a merger or joint venture. Or, the local may become a division of a regional cooperative, in a merger process called "regionalization."⁵² The latter, in particular, has been perceived by locals as a potential threat to their autonomy and the integrity of the federated system.⁵³

Interviewed locals appear to be defining regionals more as global-reach food companies than as grain cooperatives (particularly as locals themselves enter exporting). Regionals' identity as service providers for locals also appears to be diminishing--unless locals are willing to merge with the regional. Regionals appear to be specializing in one arena and locals in another.

⁴⁶ Grain Cooperatives, USDA: Agricultural Cooperative Service, Cooperative Information Report 1, Section 15, Revised September 1990, 30.

⁴⁷ Cummins, 14.

⁴⁸ Examples are joint ventures between Ag Processing Inc and ADM; Growmark and ADM; and AGRI Industries and Cargill. See Warman, Mar, Cooperative Grain Marketing: Changes, Issues, and Alternatives, RBS unpublished ms., 1992.

⁴⁹ Hogeland, 1995, 16.

⁵⁰ Fulton, Joan R. and Robert P. King, "Relationships among Information Expenditure, Economic Performance, and Size in Local Grain Marketing Cooperatives in the Upper Midwest," *Agribusiness* 9(2), 1993, 144.

⁵¹ *Ibid.*

⁵² Stevens, Bob, "Regionalization: A Tool for Maintaining a Cooperative Presence," *American Cooperation* 1998. Washington, D.C.: National Council of Farmer Cooperatives, 39.

⁵³ "Genex-Harvest States starts move to linked system," *Feedstuffs*, December 21, 1998, 20.

As the cooperative sector enters the IPG business, this specialization and division of labor could preclude the procurement competition between large locals and their regionals that ultimately forestalled meaningful cooperative participation in export markets. Global market development is considered a prerequisite for maximizing IPG's potential--high oil corn, for example, can have particular value in hot climates that cannot store grease. Yet entrenched perceptions of competition between the two levels of the federated system could circumscribe cooperative participation in this further evolution of the grain market.

To explore this, locals were asked how much they competed with their regional cooperative in the commodity grain business. For a quarter of all managers, specialization was evident because the regional served different markets than the local (Table 41). For 28 percent, very little competition occurred because the local partnered with the regional in key activities. Competition did hang on among a third of respondents, driven by the need to maximize grain prices for producer-members. Only 10 percent reported considerable competition, such that the regional was one of their chief competitors in the grain business. Diminished regional participation in grain may account for this response. Managers were consistent in these viewpoints, aside from those feed managers who considered their local above competition because it was a superlocal or so-called "mini-regional."

Important differences were evident by innovative style (Table 42). Partnering diminished competition for at least 32 percent of Innovators and Followers but only 19 percent of Status Quo locals. Getting the best price for growers drove 40 percent of Status Quo locals to compete as necessary with their regionals, compared with 22 percent of Innovators and 32 percent of Followers.

Preferred Regional Participation

Asked how they preferred to work with their regional in IPG activities, 43 percent of managers said, "work closely as a partner" (Table 43). Fifteen percent would like their regional to invest in IPG food or feed processing operations to complement locals' raw material acquisitions. This may be considered a very limited endorsement of upstream integration by regionals. Some interest was expressed in alliances with other locals or with technology/seed companies.

By innovative style, a slightly greater percent of Status Quo expected the regional to partner with them; more were also concerned about potential competition from regionals (Table 45). Innovators were particularly

interested in pursuing alliances with technology developers/seed companies, a finding which echoes comments by interviewed locals: In IPG, what do regionals bring to the table?

If locals decide not to participate in IPG marketing or handling, regionals could decide to go it alone, a move consistent with their evolving sphere of activity in food processing. Confronted with this possibility, 42 percent of respondents expressed concern that regionals might bypass locals (Table 45). Yet, 37 percent were willing to interpret regional involvement as a foundation for their future efforts. Responses expressing slight reservations or an unequivocally endorsing direct participation were rejected. From this it seems apparent that how regionals enter IPG could make member locals pleased or not.

Direct participation was highly acceptable to 24 percent of Innovators; 10 percent of Followers, but only 8 percent of Status Quo (Table 46). Similarly, 51 percent of Status Quo were concerned about being bypassed, compared with 34 percent of Innovators and 46 percent of Followers. Almost one-third of Innovators and Status Quo were willing to regard direct participation as a foundation for their own efforts, however, along with 42 percent of Followers.

By managerial position or innovative style, locals overwhelmingly rejected the notion that they or their regionals should stay out of IPG. So, although there is some polarity among responses by innovative style, a certain amount of flexibility exists--which regionals can either cultivate or override.

Partnering Advantages

Many possibilities were listed in the survey to determine what aspects of regionals appealed to locals considering IPG activities. Among all managers, the primary advantages were regionals' alliances with other system participants (15 percent); global market access/share uncertainty and risk (both, 13 percent); and their potential to offer a total system, from seed to food or feed (11 percent) (Table 47). The relatively small percent for each item probably results from the large number of potential advantages contained within the survey question.

Consistent with locals' evolution to a position of less day-to-day dependence on regionals, only 4 percent cited their technical production expertise as an advantage. Another four percent said they trusted regionals more than other partners, another indication that the traditional regional-local interface is changing significantly.

Historically, regionals have wholesaled their manufactured inputs to locals and provided research and technical support. Locals have been, in theory, the retailer, providing credit and customer technical support.⁵⁴ Yet regionals have increasingly gone direct to customers, blurring traditional boundaries, and in the process, perhaps throwing all aspects of traditional roles open to question.

If trust is defined as the "expectation that one's exchange partner will not act opportunistically,"⁵⁵ then regionals have, to a degree, failed their locals by going direct, because, "The possibility of opportunistic behavior by a partner generates the most salient transaction costs in the alliance context."⁵⁶ Increasing alliances with noncooperative partners can then be understood as a sanction imposed on regionals by locals, a loss of repeat business with the same partner.⁵⁷ Regionals then lose out on "character-based trust," where firms more readily trust others socially similar to themselves.⁵⁸ Such trust is an important safeguard or control mechanism in alliances, reducing or eliminating the need to "spell everything out" before proceeding.

Fuzzy and permeable boundaries between locals and regionals may be attributed to the fact that the survival of the federated cooperative system has always been implicitly predicated on double margins or from the farmer perspective, double markups. Such conflicts can only be minimized by carefully circumscribed, nonoverlapping roles. But the shrinking customer base for locals has introduced a destabilizing element in the federated system by forcing locals to serve larger marketing territories to survive. In the process, they have co-opted many of the activities formerly the exclusive domain of regionals.

For both regionals and locals to survive as a system, it becomes increasingly important to scope out activities exclusive to each. Interviews and survey results coincide here, by identifying system alliances and networks and building a global presence as proper activities for regionals, things locals are only equipped to do only in rare instances.

The importance of system alliances and global access became even more prominent when innovative style was considered (Table 48). Also important here was regionals' potential for a "total system" encompassing the entire production and marketing channel. Innovators in particular favored alliances 35 percent, versus 28 percent of Followers and 22 percent of Status Quo.

Partnering Disadvantages

The most pronounced disadvantage to regional partnering concerned the pivotal role of farmer-members, how to get sufficient return per acre to sustain their interest in IPG, cited by 24 percent of all managers (Table 49). This issue, and sharing margins with regionals, preoccupied grain managers, in particular. Feed managers stressed the potentially sluggish response induced by regionals' administrative layers and the need to sustain a low-cost supplier position by minimizing input costs. Potentially conflicting priorities between regional and local also concerned them. General managers were more likely than their feed or grain counterparts to see no disadvantages at all to partnering with regionals.

Having adequate technical support to deliver new technology to farmers was not considered a particular hurdle, perhaps because locals have evolved their own internal pool of expertise, making technical support from regionals less critical.

Status Quo locals were particularly concerned that IPG would not deliver enough return/acre to farmers, another reflection of their mandate to provide high prices to growers. They, along with Followers, had twice the concern of Innovators about sharing IPG margins with regional partners. This again demonstrates Status Quo's' emphasis on autonomy and independence.

It is important to note that, across innovative styles, aside from concern about returns/acre, most locals said there was no disadvantage to working with their regional in IPG.

⁵⁴ Halverson, Duane, *The Need for Cooperative Restructuring in Light of the Changing Structure of Agriculture and Changing Markets: Is a Seamless System Possible?*, Proceedings, Farmer Cooperatives in the 21st Century, 1998, 26.

⁵⁵ Gulati, Ranjay, *Does Familiarity Breed Trust: The Implications of Repeated Ties for Contractual Choice in Alliances*, *Academy of Management Journal*, 1995, 38(1), 89.

⁵⁶ *Ibid.*, 99.

⁵⁷ *Ibid.*, 93.

⁵⁸ *Ibid.*, 95.

Competition from Vertical Integration

Industry observers have been concerned that the contract production and producer-processor relations found in the broiler and pork industries will be replicated in the grain industry as IPG-contract production spreads.⁵⁹ Coffey asks bluntly, "Will pork, beef, sheep, grain, and vegetables all eventually wind up in total integration akin to the present broiler system?"⁶⁰ He anticipates local farm suppliers might be bypassed insofar as farm customers (contract growers) are required to buy supplies from the contractor--the typical situation in pork and poultry.

To determine whether locals were equally concerned, they were asked if their local cooperative was concerned that IPG developers/suppliers will take over the grain market just as large integrators have made inroads in the pork market and other agricultural products.

In fact, locals were concerned that integration would be replicated in the grain industry. Fifty-five percent agreed (strongly or somewhat) and 26 percent disagreed (strongly or somewhat) (Table 51).

By innovative style, 14 percent of Status Quo agreed strongly, compared with 7 percent of Innovators and 11 percent of Followers (Table 52). The "agree somewhat" response was concentrated in the Innovator and Follower categories: essentially 50 percent each, compared with 35 percent for Status Quo. The Innovator response may have been moderated by their willingness to pursue alliances with technology developers/seed companies.

Perhaps as another reflection of their relative indifference to the IPG market, 24 percent of Status Quo had no opinion, compared with 14 percent of Innovators and 19 percent of Followers.

Discussion and Conclusions

This study began with the premise that changes by local cooperatives would occur through a process of balancing the conflicting interests and resources at var-

ious managerial levels, not unlike the process experienced by producers when forming the cooperative. Survey results from 230 managers found that such a constituency-based model of innovation did not describe local cooperatives' response to the innovation of identity-preserved grains (IPG). With minor exceptions, feed and grain department managers agreed with the priorities of their general manager: cooperatives spoke with one voice.

Despite internal consistency and uniformity of size, cooperatives differed markedly in their receptivity to innovation, which can be attributed to their operating style or culture. At one extreme, cooperatives took a circumscribed view of their activities and domain, largely limiting themselves to a single overriding objective: getting the best grain price for member producers. At the other extreme, cooperatives operated in a multidimensional world where many avenues and perhaps some money-losing detours could ultimately achieve a similar end. Cooperatives were found between these extremes but overall they resembled, in volume and attitudes, the more constricted cooperatives.

Yet either group, uni- or multidimensional, was successful by the standard of annual sales, a minimum of \$14.5 million. By this standard, each could afford to innovate. Nevertheless, the singular focus of the unidimensional cooperatives may have insulated them from a wider world view. If their grain marketing approach gives them adequate sales and volume today, they may not look for evidence that their approach may be less successful tomorrow.

Although changes among producers would be expected to trigger adjustments in the cooperatives they own, survey results showed that unidimensional cooperatives were slow to acknowledge such changes. Unlike their more progressive counterparts, they saw less evidence of producers adopting IPG in their marketing territory and were less likely to observe relevant characteristics of such producers, like size. How much of this operating style is due to members' mandate is not clear. The motto of a prominent Midwestern local, "We change--but only when farmers need us to change," highlights what for many locals is a cultural imperative.

For multidimensional locals, the cultural priority placed on being first and willingness to bet on new products, like specialty grain-based feed, appears to be underwritten by relationships with regional cooperatives and IOFs. These cooperatives emphasize interdependence, while unidimensional cooperatives appear more likely to retain the independence and isolation

⁵⁹ Hamilton, Neal D., *Tending the Seeds; The Emergence of a New Agriculture in the United States*. *Drake Journal of Agricultural Law* (1), 1996. See also, Hamilton, "Why Own the Farm If You Can Own the Farmer (and the Crop)? Contract Production and Intellectual Property Protection of Grain Crops. *Nebraska Law Review* 73 (48), 48-103.

⁶⁰ Coffey, Joseph, D. *Ag Analysis: Alternatives to the Integration of Agriculture*, *Cooperative Farmer*, Richmond, Virginia: Southern States Cooperative, July-August 1997.

that is the historical norm of grain cooperatives, including a competitive, if not adversarial, relationship with regional cooperatives.

Recorded dimensions of cooperative culture have emphasized that cooperatives, like their farmer-owners, are conservative, cautious, slow to react, and highly independent. A new cooperative culture is emerging to take its place along this established framework to include managers who continually scan the environment for new opportunities, who spread risk by partnering, and who are psychologically at ease with the time required for new investments to mature. Such managers are, however, not quite ready to engage in bargaining activities on behalf of IPG contract growers. Their preference is for activities closer to their experience, feeding cooperative-owned livestock with member-produced IPG grain, for example.

These results indicate local cooperatives can and should be segmented by regional cooperatives or others addressing their needs. That is, they should group locals according to behavioral traits, such as (1) the primary objective or focus of the cooperative (e.g., a single-minded focus on maximizing grain price versus more multidimensional objectives); (2) willingness to tolerate financial uncertainty; (3) responsiveness to prior innovations; and (4) willingness to move outside established product or geographic boundaries; and develop programs accordingly. These are all aspects of decision-making style.

Locals particularly valued regional cooperatives' potential to develop system-wide alliances and their global market access, things they themselves are poorly positioned for. Some expressed concerns about regionals' proceeding independently of locals in pursuing IPG activities. Trust did not rank high as a motivator for associating with regionals over other potential partners. Many locals have reached a point of less day-to-day dependence on regionals, making them less willing to automatically turn to the nearest regional when seeking alliances and partnerships.

Next to feeding livestock, locals envisioned themselves pursuing strategic alliances with IPG seed companies or technology developers. These findings suggest regionals need to be aggressive in putting partnerships and alliances in place which compensate for shortcomings of the cooperative sector. Otherwise, raw materials and product could ultimately be siphoned from the cooperative system as locals build alliances on their own with noncooperative partners.

Because the specialty grain market has been slower to develop than anticipated, no wholesale accommodation to its requirements is immediately

required by the cooperative sector. It is likely that cooperative managers will have time to see which pockets of opportunity offered by particular grains are worth cultivating. Controversy over the grains role in food and feed will give managers needed time to improve their infrastructure and testing capabilities.

Nevertheless, survey results strongly suggest IPG are primarily attractive to those cooperatives already deeply committed to the grain industry, as evidenced by their greater volumes of commodity corn, wheat, and soybeans. These managers have transferred the volume-driven mentality of the commodity sector to IPG, to use facilities as intensively as possible. This suggests IPG may be something of an "all or nothing" proposition. It is likely that many cooperative managers will continue their focus on commodity grain for as long as possible.

The subtle drawbacks to this position may not be immediately apparent. Some industry observers believe the costs of separation are often greater than what profits can capture, making share gain in so-called "soft assets" (the relationship with the customer) the primary incentive for participating in IPG. Such assets are an indispensable advantage in a rapidly consolidating agribusiness environment. As supply chains lock into place, some cooperatives may never be able to compensate for delayed entry into IPG. Other observers conclude IPG will eventually represent the cream of the grain crop, making the commodity sector a lower quality, residual market.

Although the magnitude of specialty grains' impact may not meet initial industry projections, they will bring more testing and quality control into the domestic industry. Managers focused solely on commodity grains will probably resist these changes and become poorly positioned to compete in an evolving marketplace requiring greater precision. For them, specialty grains are a core industry by themselves, requiring too high a cost in cultural change and specialized resources to pursue. For multidimensional managers, it is clear that specialty grains are a subset of a core grain industry and so, an inevitable component of their operations.

Table 1--Region of Respondents, Managers

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
Region:				
West (Utah, Colorado, Montana, Washington, Idaho Oregon)	9	2	5	7
North Central (Iowa, Minnesota, Wisconsin, South Dakota, North Dakota)	36	61	54	44
Eastern Corn Belt (Illinois, Indiana, Ohio)	37	14	22	30
South Central (Nebraska, Kansas, Missouri, Texas, Oklahoma)	18	23	19	19
	---	---	---	---
Total	100	100	100	100

Table 2--Innovator and Managerial Classification of Respondents

	Manager*							
	General		Feed		Grain		Total	
	N	Percent	N	Percent	N	Percent	N	Percent
Innovator	42	30	21	47	10	28	74	33
Follower	44	32	13	29	17	47	75	34
Status Quo	52	38	11	24	9	25	73	33
	---	---	---	---	---	---	---	---
Total	138	100	45	100	36	100	220	100

* Total manager distribution was 143 general managers; 49 feed managers; and 38 grain managers.

Table 3--Region of Respondents, Innovative Style

	Innovator Category		
	Innovator	Follower	Statu Quo
	Percent		
Region:			
West (Utah, Colorado, Montana, Washington, Idaho, Oregon)	9	3	12
North Central (Iowa, Minnesota, Wisconsin, South Dakota, North Dakota)	51	46	33
Eastern Corn Belt (Illinois, Indiana, Ohio)	19	33	37
South Central (Nebraska, Kansas, Missouri, Texas, Oklahoma)	20	18	18
Total	100	100	100

Table 4--Innovator Distribution Within Respondent Regions

	Innovator Category			N	TotalPt.
	Innovator	Follower	Status Quo		
	Percent				
Region:					
West	39	11	50	18	100
North Central	39	36	25	25	100
Eastern Corn Belt	21	38	41	41	100
South Central	33	34	33	42	100

Table 5--Grain Volume by Innovative Style

	Average Volumes Handled								
	Corn			Wheat			Soybeans		
	Innovator	Follower	Status Quo	Innovator	Follower	Status Quo	Innovator	Follower	Status Quo
	-1,000 Bushels								
a IPG Bushels, 1998	257	141	50	41	2	2	100	28	23
N =	(42)	(44)	(42)	(20)	(29)	(34)	(33)	(38)	(39)
b Commodity Bushels, 1998	7,298	3,378	2,787	2,119	452	905	2,545	1,109	1,419
N =	(48)	(60)	(61)	(31)	(41)	(49)	(47)	(54)	(58)
c Expected IPG Bushels, 1999	408	208	168	79	3	2	169	109	76
N =	(37)	(45)	(38)	(17)	(27)	(29)	(30)	(37)	(35)
d Expected Commodity Bushels, 1999	7,310	3,543	3,230	1,898	7,348	748	2,577	1,144	1,661
N =	(44)	(54)	(57)	(27)	(36)	(42)	(43)	(47)	(54)

Table 6--Comparative Grain Volumes, Innovative Style

	Corn			Wheat			Soybeans		
	N	F statistic	Prob > F	N	F statistic	Prob > F	N	F statistic	Prob > F
IPG Bushels, 1998:									
Innovator/Follower/Status Quo	128	3.30	.04	83	3.14	.05	110	3.54	.03
Innovator/Status Quo	84	8.32	.005*	54	3.40	.07	72	4.16	.05
Innovator/Follower	86	1.47	.23	49	2.94	.09	71	3.45	.07
Follower/Status Quo	86	1.68	.20	63	.01	.94	77	0.17	.68
Commodity Bushels, 1998 :									
Innovator/Follower/Status Quo	169	12.27	.0001**	121	5.18	.001*	159	4.34	.01*
Innovator/Status Quo	109	16.69	.0001**	80	4.40	.04	105	3.49	.06
Innovator/Follower	108	11.89	.001*	72	7.70	.001*	101	9.83	.002*
Follower/Status Quo	121	1.00	.32	90	1.81	.18	112	0.55	.46
Expected IPG Bushels, 1999:									
Innovator/Follower/Status Quo	120	1.39	.25	73	3.76	.03	102	0.65	.52
Innovator/Status Quo	75	2.13	.15	46	3.96	.05	65	1.46	.23
Innovator/Follower	82	1.54	.22	44	3.57	.07	67	0.41	.52
Follower/Status Quo	83	0.10	.75	56	0.16	.68	72	0.22	.64
Expected Commodity Bushels:1999									
Innovator/Follower/Status Quo	155	9.11	.0002*	105	0.77	.47	144	2.55	.08
Innovator/Status Quo	101	11.81	.0009*	69	4.94	.03	97	1.52	.22
Innovator/Follower	98	10.26	.0018	63	0.46	.50	90	7.84	.01*
Follower/Status Quo	111	0.20	.66	78	1.06	.31	101	0.80	.37

Table 7-- IPG Handling Margins, Managers

Q. On average, what premium over your normal grain margin is required for your local to handle IPG?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
Cents/bushel:				
a At least 25	25	13	14	21
b 20-25	12	13	15	13
c 15-19	11	13	6	11
d 10-14	13	13	8	12
e 5-9	9	8	17	10
f 3-5	8	7	14	9
g 0-3	4	2	8	5
h None	4	9	0	4
i Don't know.	--	--	--	--
Total	100	100	100	100

Table 8-- IPG Handling Margins, Innovative Style

Q. On average, what premium over your normal grain margin is required for your local to handle IPG?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
Cents/bushel:			
a At least 25	20	11	33
b 20-25	13	12	13
c 5-19	16	11	6
d 10-14	7	18	10
e 5-9	14	9	6
f 3-5	13	7	6
g 0-3	4	7	3
h None	4	5	3
i Don't know	7	20	20
	--	--	--
Total	100	100	100

Table 9-- IPG Handling Margins, Managers and Innovative Style, with Above Average IP Corn

Q. On average, what premium over your normal grain margin is required for your local to handle IPG?

	Innovator Category			
	Innovator	Follower	Status Quo	All Managers
	-----Percent-----			
Cents/bushel:				
a At least 25	0	29	0	8
b 20-25	12	0	50	10
c 15-19	12	0	0	8
d 10-14	6	14	0	8
e 5-9	29	0	50	23
f 3-5	24	14	0	19
g 0-3	6	43	0	15
h None	6	0	0	4
i Don't know	6	0	0	6
	--	--	--	--
Total	100	100	100	100

Table 10-- IPG Services Provided by locals, Managers

Q. What IPG-related services does your local currently provide?

	All Managers		
	Corn	Wheat	Soybeans
	-----Percent-----		
a IPG seed distribution.	15	13	17
b Technical information/services	18	15	18
c Milling, crushing, refining.	6	2	1
d Quality assays.	5	6	4
e Grain composition assays.	8	5	5
f Financial services, production credit.	10	14	11
g Partnering with other companies or cooperatives to build business.	13	10	12
h Monitor outlook as basis for future involvement.	26	35	31
	--	--	--
Total	100	100	100

Table 11-- IPG services provided by locals, Managers

Q. .What IPG-related services does your local currently provide?

	Corn			Wheat			Soybeans		
	General	Feed	Grain	General	Feed	Grain	General	Feed	Grain
	Percent								
a IPG seed distribution.	16	16	14	12	12	5	19	14	16
b Technical information/services.	18	19	16	14	15	20	17	21	18
c Milling, crushing, refining.	6	7	2	1	4	5	1	1	3
d Quality assays.	4	5	4	6	8	5	4	3	3
e Grain composition assays.	8	9	10	6	4	5	5	6	5
f Financial services, production credit.		11	10	6	12	23	10	11	14 8
g Partnering with other companies or cooperatives to build business.	12	13	16	12	4	10	13	10	9
h Monitor outlook as basis for future involvement.	25	21	31	36	31	40	30	30	37
	--	--	--	--	--	--	--	--	--
Total pct.	100	100	100	100	100	100	100	100	100

Table 12-- IPG Services, Innovative Style

Q. .What IPG-related services does your local currently provide?

	Corn			Wheat			Soybeans		
	Innov ator	Follower	Status Quo	Innov ator	Follower	Status Quo	Innov ator	Follower	Status Quo
	Percent								
a IPG seed distribution	0	2	3	5	13	13	0	7	6
b Technical information/services	3	11	15	0	13	6	7	9	13
c Milling, crushing, refining	0	2	5	0	0	0	0	0	0
d Quality assays	2	2	0	5	0	0	0	2	0
e Grain composition assays	3	9	5	5	13	0	2	2	3
f Financial services, production credit	10	11	0	10	13	6	15	13	0
g Partnering with other companies or cooperatives to build business	17	11	18	10	13	13	9	7	16
h Monitor outlook as basis for future involvement	64	52	55	65	38	63	67	61	63
	--	--	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100	100	100

Table 13-- IPG Capabilities, Managers

	All Managers		
	Excellent	Adequate	Needs Improvement
	Percent		
a Provide IPG seed access distribution on a timely basis.	33	42	25
b Ability to access IPG seed exchanges when needed.	16	48	37
c Provide technical information on traits, planting, insects, etc.	30	43	28
d Bins for separate IPG storage at elevator during peak harvest for all grains.	7	33	60
e NIR (near-infrared technology) to measure grain composition.	10	11	79
f Ability to assay grain quality, fat content, etc.	5	16	79
g Grain cleaning and drying facilities.	16	41	42
	-- --	-- --	-- --
Total	100	100	100

Table 14-- IPG Capabilities, Managers

Q. How do you rate your current capabilities for physical and technical aspects of IPG?

	Excellent			Adequate			Needs Considerable Improvement		
	General	Feed	Grain	General	Feed	Grain	General	Feed	Grain
	Percent								
a Provide IPG seed access distribution on a timely basis.	29	36	49	42	50	32	29	14	19
b Ability to access IPG seed exchanges when needed.	15	19	16	43	55	57	42	26	27
c Provide technical information on traits, planting, insects, etc.	29	34	28	36	57	51	35	10	22
d Bins for separate IPG storage at elevator during peak harvest for all grains.	7	7	6	36	22	34	57	70	60
e NIR (near-infrared technology) to measure grain composition.	10	12	6	8	18	15	82	71	78
f Ability to assay grain quality, fat content, etc.	3	14	0	15	20	14	81	66	86
g Grain cleaning and drying facilities.	17	10	18	36	49	55	46	41	27

Table 15-- IPG Handling Capabilities, Innovative Style

Q. How do you rate your current capabilities for physical and technical aspects of IPG?

	Excellent			Adequate			Needs Considerable Improvement		
	Innovator	Follower	Status Quo	Innovator	Follower	Status Quo	Innovator	Follower	Status Quo
	Percent								
a Provide IPG seed access/distribution on a timely basis	49	31	14	38	47	45	13	22	41
b Ability to access IPG seed exchanges when needed.	51	24	13	40	51	38	9	24	50
c Provide technical information on traits, planting, insects, etc.	29	10	5	48	53	39	23	37	55
d Bins for separate IPG storage at elevator during peak harvest for all grains.	12	1	10	43	28	23	45	70	67
e NIR (near-infrared technology) to measure grain composition.	20	6	5	17	11	7	64	83	88
f Ability to assay grain quality, fat content, etc.	11	1	4	28	15	5	61	84	91
g Grain cleaning and drying facilities.	18	7	25	46	45	34	35	48	41
	--	--	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100	100	100

Table 16-- Availability of IPG Buyers

Q. If your cooperative markets IP grain, how difficult has it been to find buyers for the grain on a timely basis?

	Managers				Innovative Style		
	General	Feed	Grain	All	Innovator	Follower	Status Quo
	Percent						
a Buyers are readily available.	3	0	13	5	8	2	5
b With a little work, it's possible to find sufficient buyers.	14	15	17	14	19	10	16
c From time to time, it can be difficult to find buyers.	24	26	22	24	26	29	13
d Buyers are generally hard to find.	22	21	21	22	15	23	26
e More market development is needed to identify current and prospective buyers.	37	38	27	34	32	35	39
	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100

Table 17--Availability of Buyers for IPG Grain, Region

Q.If your cooperative markets IPG, how difficult has it been to find buyers for the grain on a timely basis?

	West	North Central	Region Eastern	South
	Com Belt		Central	
	Percent			
a. Buyers are readily available.	0	3	9	4
b. With a little work, it's possible to find sufficient buyers.	0	15	19	8
c. From time to time, it can be difficult to find buyers.	50	25	26	13
d. Buyers are generally hard to find.	17	26	14	29
e. More market development is needed to identify current and prospective buyers.	33	32	32	46
	-- --	-- --	-- --	-- --
Total	100	100	100	100

Table 18-- IPG Feed Manufacturing

Q. During the 1998-99 period, has your cooperative manufactured feed containing IPG?

	Managers				Innovative Style		
	General	Feed	Grain	All	Innovator	Follower	Status Quo
	Percent						
Yes	24	37	32	28	37	27	10
No	76	63	68	72	63	73	90
	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Total	100	100	100	100	100	100	100

Table 19--Trait Preferences, Managers

Q.What is most important to your local when choosing value-added seed traits to originate

	Manager			
	General	Feed	Grain	All
	Percent			
a Minimizing conflict of interest with our member-farmers who are also seed dealers.	4	1	2	3
b Lowering cost of feed rations or increasing feed efficiency for our livestock producer-members.	10	24	12	13
c Improving our feed-based strategic alliances, i.e., with pork or poultry integrators.	4	14	4	6
d Supporting our local's food processing activities.	2	1	3	2
e Supporting our regional's food processing activities.	3	0	3	2
f Supporting food processing operations of agribusinesses other than cooperatives.	2	1	1	2
g Supporting our local's feed manufacturing.	7	22	6	10
h Supporting our regional's feed manufacturing.	1	2	2	2
i Market access, easy availability	17	7	18	15
j Compatibility with our grain handling facilities and expertise.	22	10	19	19
k Maximizing net returns for our grain producer-members.	27	18	31	26
Total	100	100	100	100

Table 20--Trait Preferences, Innovative Style

Q.What is most important to your local when choosing value-added seed traits to originate?

	Innovator Category		
	Innovator	Follower	Status Quo
	Percent		
a Minimizing conflict of interest with our member-farmers who are also seed dealers.	0	0	0
b Lowering cost of feed rations or increasing feed efficiency for our livestock producer-members.	0	0	0
c Improving our feed-based strategic alliances, i.e., with pork or poultry integrators.	0	0	0
d Supporting our local's food processing activities.	0	0	0
e Supporting our regional's food processing activities.	0	1	0
f Supporting food processing operations of agribusinesses other than cooperatives.	0	0	0
g Supporting our local's feed manufacturing.	7	11	11
h Supporting our regional's feed manufacturing.	0	1	2
i Market access, easy availability.	4	3	2
j Compatibility with our grain handling facilities and expertise.	13	11	6
k Maximizing net returns for our grain producer-members.	76	72	80
Total	100	100	100

Table 21-- IPG Advantages, Managers

Q. What are the advantages to your local in handling IPG?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a Way for members to diversify, increase revenue.	26	21	23	24
b Get ahead of the curve in a new market product.	5	5	10	6
c Need IPG to supplement commodity business.	8	3	8	6
d Growth potential sufficient to justify involvement.	6	3	8	6
e Helps maintain competitive edge in grain marketing.	14	7	14	12
f Increased feed efficiency.	8	14	9	10
g Higher quality feed rations.	10	22	7	12
h Improve milk or meat quality, taste, shelf life.	3	6	3	4
i IPG offer new opportunities for cooperatives.	20	18	18	19
	-----	-----	-----	-----
Total	100	100	100	100

Table 22-- IPG Advantages, Innovative Style

Q. What are the advantages to your local in handling IPG?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a Way for members to diversify, increase revenue.	9	9	21
b Get ahead of the curve in a new market product.	4	1	0
c Need IPG to supplement commodity business.	1	6	3
d Growth potential sufficient to justify involvement.	7	1	0
e Helps maintain competitive edge in grain marketing.	19	11	16
f Increased feed efficiency.	4	9	5
g Higher quality feed rations.	16	16	16
h Improve milk or meat quality, taste, shelf life.	3	7	6
i IPG offer new opportunities for cooperatives.	34	40	32
	-----	-----	-----
Total	100	100	100

Table 23-- IPG Disadvantages, Managers

	Manager			
	General	Feed	Grain	All
-----Percent-----				
System obstacles:				
a Premiums required for each system participant (farmer, local, end-user).	6	8	9	7
b End use market is insufficiently developed.	8	9	7	8
c "True" or appropriate market value for IPG difficult to determine.	9	11	9	9
d IPG market could be undermined by substitutes.	3	3	2	3
Grower obstacles:				
e Net returns/acre may be too low to sustain farmer interest.	12	12	11	12
f Need sufficient acres to guarantee a consistent market.	15	11	11	14
g Production shortfalls from yield drag.	13	8	14	12
h IPG competes with seed distributed by member-producers.	0	1	1	0
Elevator/Cooperative Obstacles:				
i Need considerable or expensive facility adjustments.	12	13	11	12
j Need considerable or expensive transportation adjustments.	3	3	1	3
k Cost of educating growers, customers, about benefits	2	3	5	3
l Loss of flexibility, revenue, from blending.	9	3	11	8
m. Fat tanks ultimately more reliable, cheaper.	3	9	4	5
n Multiple (stacked) traits interest us more than current single trait emphasis.	5	5	4	5
	-----	-----	-----	-----
Total	100	100	100	100

Table 24-- IPG Disadvantages, Innovative Style

	Innovator Category		
	Innovator	Follower	Status Quo
-----Percent-----			
System obstacles:			
a Premiums required for each system participant (farmer, local, end-user).	0	4	0
b End use market is insufficiently developed.	4	1	1
c "True" or appropriate market value for IPG difficult to determine.	6	1	3
d IPG market could be undermined by substitutes.	0	1	0
Grower obstacles:			
e Net returns/acre may be too low to sustain farmer interest.	17	14	4
f Need sufficient acres to guarantee a consistent market.	14	12	12
g Production shortfalls from yield drag.	13	27	16
h IPG competes with seed distributed by member-producers.	0	0	1
Elevator/Cooperative Obstacles:			
i Need considerable or expensive facility adjustments.	1	5	10
j Need considerable or expensive transportation adjustments.	3	0	3
k Cost of educating growers, customers, about benefits	3	1	6
l Loss of flexibility, revenue, from blending.	10	14	25
m. Fat tanks ultimately more reliable, cheaper.	11	11	6
n Multiple (stacked) traits interest us more than current single trait emphasis.	17	7	10
	-----	-----	-----
Total	100	100	100

Table 25--Farmer Adoption of IPG, Managers

Q. During 1999, how have farmers in your local's marketing territory accepted (planted) IPG?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a IPG has made substantial inroads, measured by farm numbers or sizes.	8	2	16	8
b Some impact--here and there we see interest and activity among area farmers.	52	62	64	56
c No impact as yet, but we expect this to change.	23	20	8	20
d No impact, and this is not likely to change.	9	8	7	8
e Don't know.	8	9	5	9
Total	100	100	100	100

Table 27--Fluctuations in Farmer Adoption of IPG, Managers

Q.How has farmer acceptance (planting) of IPG changed from 1998 to 1999?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a No difference between 1998 and 1999.	35	29	18	30
b 1999 brought increased planting over 1998.	35	46	59	41
c Farmer planting of IPG is lower during 1999.	18	11	11	15
d Don't know.	12	14	12	13
Total	100	100	100	100

Table 26--Farmer Adoption of IPG, Innovative Style

Q.During 1999, how have farmers in your local's marketing territory accepted (planted) IPG?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a IPG has made substantial inroads, measured by farm numbers or sizes.	16	7	1
b Some impact--here and there we see interest and activity among area farmers.	59	61	47
c No impact as yet, but we expect this to change.	15	20	26
d No impact, and this is not likely to change.	5	5	12
e Don't know.	4	7	14
Total	100	100	100

Table 28--Fluctuations in Farmer Adoption of IPG, Innovative Style

Q. How has farmer acceptance (planting) of IPG changed from 1998 to 1999?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a No difference between 1998 and 1999.	21	32	40
b 1999 brought increased planting over 1998.	60	36	26
c Farmer planting of IPG is lower during 1999.	15	19	13
d Don't know.	4	12	21
Total	100	100	100

Table 29--Producer Size and Adoption of IPG, Managers

Q. In your marketing territory, what size producer has adopted IPG?

	Manager			
	General	Feed	Grain	All
	Percent			
a Producers have uniformly adopted IPG regardless of size.	16	18	19	17
b Mostly very large producers (1,500 acres+).	5	7	8	6
c Mostly large producers (500-1,500 acres).	48	44	56	48
d Mostly small producers (1-500 acres).	8	12	11	9
e Don't know.	23	20	6	20
	--	--	--	--
Total	100	100	100	100

Table 31--Producer Size and Commitment to IPG, Managers

Q. Among the following producer sizes, who are the most likely to increase IPG acreage to 10 percent or more of their total acreage?

	Managers			
	General	Feed	Grain	All
	Percent			
a Producers who increase IPG acreage will do so regardless of size	23	16	13	20
b Very large producers (1,500 acres+).	11	13	12	12
c Large producers (500-1,500 acres).	43	39	52	44
d Small producers (1-500 acres).	8	18	5	9
e Don't know.	14	13	17	15
	--	--	--	--
Total	100	100	100	100

Table 30--Producer Size and Adoption of IPG, Innovative Style

Q. In your marketing territory, what size producer has adopted IPG?

	Innovator Category		
	Innovator	Follower	Status Quo
	Percent		
a Producers have uniformly adopted IPG regardless of size.	25	16	10
b Mostly very large producers (1,500 acres+).	6	7	6
c Mostly large producers (500-1,500 acres).	52	49	41
d Mostly small producers (1-500 acres).	4	10	13
e Don't know.	13	18	30
	--	--	--
Total	100	100	100

Table 32--Producer Size and Commitment to IPG, Innovative Style

Q. Among the following producer sizes, who are the most likely to increase IPG acreage to 10 percent or more of their total acreage?

	Innovator Category		
	Innovator	Follower	Status Quo
	Percent		
a Producers who increase IPG acreage will do so regardless of size.	21	18	21
b Very large producers (1,500 acres+).	11	12	11
c Large producers (500-1,500 acres).	49	44	39
d Small producers (1-500 acres).	6	10	13
e Don't know.	14	16	17
	--	--	--
Total	100	100	100

Table 33-- Producer Turnover, Managers

Q. What are the primary causes of turnover among contract growers?

	Manager			
	General	Feed	Grain	All
	Percent			
a Inadequate premiums.	18	18	14	17
b Actual or perceived yield drag.	19	8	11	15
c Difficulty finding customers.	5	5	4	5
d Market is too small and unreliable.	8	10	11	9
e Difficulties accessing desired traits or varieties.	4	0	0	2
f Multiple traits not available.	1	0	0	1
g Market easily saturated for some traits.	2	0	7	2
h IPG too much work compared with other grains.	3	13	14	7
i Insufficient technical information available for farmers.	2	0	0	1
j Farmers want to keep open (noncontract) markets for grain.	3	0	0	2
k Seed and other inputs too expensive.	6	3	0	4
l Planting conditions too unreliable.	2	0	0	1
m. Too much competition from other enterprises.	2	0	0	1
n Farmers want to see IPG market develop further.	5	10	11	7
o Limited on-farm IPG storage.	7	10	7	8
p Limited elevator IPG storage.	7	18	14	11
q Transportation expense or limitations.	1	5	7	3
r Restrictions on saving seed.	4	0	0	2
	--	--	--	--
Total	100	100	100	100

Table 34-- Producer Turnover, Innovative Style

Q. What are the primary causes of turnover among contract growers?

	Innovator Category		
	Innovator	Follower	Status Quo
	Percent		
a Inadequate premiums	6	0	25
b Actual or perceived yield drag.	6	22	0
c Difficulty finding customers.	0	0	13
d Market is too small and unreliable.	6	0	0
e Difficulties accessing desired traits or varieties.	0	0	13
f Multiple traits not available.	0	0	0
g Market easily saturated for some traits.	0	0	0
h IPG too much work compared with other grains.	6	11	0
i Insufficient technical information available for farmers.	6	0	0
j Farmers want to keep open (noncontract) markets for grain.	0	0	0
k Seed and other inputs too expensive.	6	0	13
l Planting conditions too unreliable.	6	0	0
m. Too much competition from other enterprises (pork, GPS, etc.).	6	0	0
n Farmers want to see IPG market develop further.	6	0	25
o Limited on-farm IPG storage.	6	11	0
p Limited elevator IPG storage.	13	56	13
q Transportation expense or limitations.	13	0	0
r Restrictions on saving seed.	13	0	0
	--	--	--
Total	100	100	100

Table 35--Anticipated Impact of IPG on Locals' Operations, Managers

Q.In the next 3 years (1999-2001), how much impact will IPG have on your local's operations?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a Substantial impact--we anticipate overhauling or making major adjustments in our grain operations to accommodate IPG.	2	2	0	2
b Noticeable impact--we expect to be making several adjustments to accommodate the requirements (production, handling, etc.) of IPG.	41	60	58	48
c Little impact--we expect "business as usual" to continue in our grain business.	33	26	29	30
d No impact.	3	2	3	3
e Don't know--the impact and significance of IPG isn't clear.	21	11	11	18

Table 37-- IPG Activities Preferred by Locals, Managers

Q.In the next 3 years (1999-2001) can you see your local cooperative ...

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a Bargaining regarding inputs or contract terms on behalf of farmer-growers of IPG.	18	10	21	17
b Investing in an IPG processing facility with your regional cooperative or other locals.	6	7	8	6
c Developing strategic alliances with IPG seed companies or technology developers.	25	19	21	23
d Developing strategic alliances with privately owned grain companies.	17	7	6	13
e Coordinating feeding of cooperative or member owned livestock with member-produced IPG.	16	46	26	25
f Jumping in and out of the IPG business as grain prices warrant.	18	12	19	17
	-----	-----	-----	-----
Total	100	100	100	100

Table 36--Anticipated Impact of IPG on Locals' Operations, Innovative Style

Q.In the next 3 years (1999-2001), how much impact will IPG have on your local's operations?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a Substantial impact--we anticipate overhauling or making major adjustments in our grain operations to accommodate IPG.	2	2	0
b Noticeable impact--we expect to be making several adjustments to accommodate the requirements (production, handling, etc.) of IPG.	41	60	58
c Little impact--we expect "business as usual" to continue in our grain business.	33	26	29
d No impact.	3	2	3
e Don't know--the impact and significance of IPG isn't clear .	21	11	11
	-----	-----	-----
Total	100	100	100

Table 38-- IPG Activities Preferred by Locals, Innovative Style

Q. In the next 3 years (1999-2001) can you see your local cooperative . . .

	Innovator	Follower	Status Quo
	-----Percent-----		
a Bargaining regarding inputs or contract terms on behalf of farmer-growers of IPG.	6	8	7
b Investing in an IPG processing facility with your regional cooperative or other locals.	4	3	2
c Developing strategic alliances with IPG seed companies or technology developers.	25	17	20
d Developing strategic alliances with privately owned grain companies.	12	17	13
e Coordinating feeding of cooperative or member owned livestock with member-produced IPG.	43	33	18
f Jumping in and out of the IPG business as grain prices warrant.	9	22	40
	-- --	-- --	-- --
Total	100	100	100

Table 39-- Payoff Horizon for IPG Investments, Managers

Q. If your local makes a substantial investment in IPG technologies or infrastructure (>\$250K), how long will it wait for a satisfactory return on investment (ROI)?

	Manager			
	General	Feed	Grain	All
-----Percent-----				
a Would wait and see how market develops before considering investing.	43	59	63	50
b Less than 1 year.	0	2	0	1
c 1-2 years.	10	9	8	10
d Between 2-5 years.	26	25	22	25
e Over 5 years.	20	5	7	14
	-- --	-- --	-- --	-- --
Total	100	100	100	100

Table 40-- Payoff Horizon for IPG Investments, Innovative Style

Q. If your local makes a substantial investment in IPG technologies or infrastructure (>\$250K), how long will it wait for a satisfactory return on investment (ROI)?

	Innovator Category		
	Innovator	Follower	Status Quo
-----Percent-----			
a Would wait and see how market develops before considering investing.	36	51	62
b Less than 1 year.	0	1	0
c 1-2 years.	11	8	10
d Between 2-5 years.	36	26	14
e Over 5 years.	17	14	13
	-- --	-- --	-- --
Total	100	100	100

Table 41--Relational Style with Regional Cooperative, Managers

Q. In the commodity grain business, how much do you compete with your regional cooperative?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a None; the regional serves different markets than the local.	27	18	31	25
b None; we are a superlocal or 'mini-regional.'	3	9	5	5
c Very little; the regional and our local are partners in key activities.	28	29	24	28
d Some; we have to do what's needed to get the best price for our members.	31	35	28	32
e Considerably; in the grain business we consider the regional one of our chief competitors.	11	8	11	10
	-----	-----	-----	-----
Total	100	100	100	100

Table 43--Preferred Specialty Grain Relationship with Regional, Managers

Q.How do you prefer to work with your regional in IPG activities?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a We would expect our regional to work closely as a partner with us.	42	41	48	43
b We want our regional to invest in IPG food or feed processing operations to expand our market.	14	19	16	15
c We would prefer that our regional does not compete with us in IPG.	10	12	16	11
d We are concerned regionals will proceed with IPG without involving locals.	11	5	6	9
e We prefer to form alliances with other locals.	11	12	4	10
f We prefer to form alliances with technology developers/seed companies.	11	10	8	10
g Our regional has better things to do than pursue IPG marketing.	2	0	2	2
	-----	-----	-----	-----
Total	100	100	100	100

Table 42--Relational Style with Regional Cooperative, Innovative Style

Q.In the commodity grain business, how much do you compete with your regional cooperative?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a None; the regional serves different markets than the local.	25	27	21
b None; we are a superlocal or 'mini-regional.'	8	1	6
c Very little; the regional and our local are partners in key activities.	33	32	19
d Some; we have to do what's needed to get the best price for our members.	22	32	40
e Considerably; in the grain business we consider the regional one of our chief competitors.	11	7	14
	-----	-----	-----
Total	100	100	100

Table 44--Preferred Specialty Grain Relationship with Regional, Innovative Style

Q.How do you prefer to work with your regional in IPG activities?

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
a We would expect our regional to work closely as a partner with us.	37	38	44
b We want our regional to invest in IPG food or feed processing operations to expand our market.	14	19	12
c We would prefer that our regional does not compete with us in IPG.	10	11	15
d We are concerned regionals will proceed with IPG without involving locals.	7	10	7
e We prefer to form alliances with other locals.	13	10	10
f We prefer to form alliances with technology developers/seed companies.	17	10	9
g Our regional has better things to do than pursue IPG marketing.	1	3	3
	-----	-----	-----
Total	100	100	100

Table 45--Desirable Regional Cooperative Participation in IPG, Managers

Q.If your local cooperative decides not to participate in IPG marketing or handling, to what extent would you accept your regional cooperative's direct participation (independent of your local)?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a Regional direct participation is very acceptable to our local.	12	15	19	14
b Even though we don't currently participate, we view regional participation as a foundation for our future involvement in IPG.	36	36	41	37
c Our local would have reservations about local participation.	5	10	7	6
d We are concerned about regionals bypassing the local cooperative system.	45	39	34	42
e We don't want to be involved with IPG, nor do we want our regional to be.	1	0	0	1
	-----	-----	-----	-----
Total	100	100	100	100

Table 46--Desirable Regional Cooperative Participation in IPG, Innovative Style

Q.If your local cooperative decides not to participate in IPG marketing or handling, to what extent would you accept your regional cooperative's direct participation (independent of your local)?

	Innovator Category		
	Innovators	Followers	Status Quo
	-----Percent-----		
a Regional direct participation is very acceptable to our local.	24	10	8
b Even though we don't currently participate, we view regional participation as a foundation for our future involvement in IPG.	32	42	32
c Our local would have reservations about local participation.	10	1	6
d We are concerned about regionals bypassing the local cooperative system.	34	46	51
e We don't want to be involved with IPG, nor do we want our regional to be.	0	0	3
	-----	-----	-----
Total	100	100	100

Table 47--Regional Partnering Advantages, Managers

Q.What are the advantages to working with your regional cooperative in IPG?

	Manager			
	General	Feed	Grain	All
	-----Percent-----			
a Share uncertainty and risk.	12	11	18	13
b Share costs	8	9	7	8
c Access to complementary technologies, processing.	8	10	7	8
d Reducing innovation period.	2	4	1	2
e Regional has "big picture."	6	2	4	5
f Potential to expand product range.	9	8	6	8
g Global market access.	11	15	16	13
h Technical production expertise.	4	4	3	4
i Contracting and legal expertise.	6	7	4	6
j Regional offers total system from seed to food or feed.	10	14	12	11
k Potential to test system to work out bugs.	3	4	3	3
l Regionals' alliances with other system participants.	16	10	16	15
m. Trust regional more than other partners.	6	2	3	4
	--	--	--	--
Total	100	100	100	100

Table 48--Regional Partnering Advantages, Innovative Style

Q.What are the advantages to working with your regional cooperative in IPG?

	Manager		
	Innovator	Follower	Status Quo
	-----Percent-----		
a Share uncertainty and risk.	0	4	2
b Share costs	3	4	0
c Access to complementary technologies, processing.	0	3	2
d Regional has "big picture."	0	1	5
e Potential to expand product range.	1	4	9
f Global market access.	16	13	13
g Technical production expertise.	3	3	3
h Contracting and legal expertise.	6	10	6
i Regional offers total system from seed to food or feed.	16	19	16
j Potential to test system to work out bugs.	3	1	8
k Regionals' alliances with other system participants.	35	28	22
l Trust regional more than other partners.	9	8	9
m. None of the above.	7	0	5
	--	--	--
Total	100	100	100

Table 49--Regional Partnering Disadvantages, Managers

Q.What are the disadvantages or limitations (if any) to working with your regional cooperative in IPG?

	Manager			
	General	Feed	Grain	All
	Percent			
a None	14	9	8	12
b Bureaucracy within regional slows response.	17	17	10	16
c Margin would need to be shared with regional.	13	19	23	16
d Regional's priorities conflict with local's.	7	12	4	8
e Having right people to deliver new technology to farmers.	6	5	4	6
f Lowering feed or grain cost to be low cost supplier.	5	13	3	7
g Determining how to distribute new technology.	3	1	1	2
h Regional resources allocated across many locals (spread too thin).	6	7	8	7
i Regional's processing operations incompatible with our choice of IPG traits.	3	2	0	2
j How to get sufficient return per acre to sustain farmer interest.	24	15	37	24
	---	---	---	---
Total	100	100	100	100

Table 50--Regional Partnering Disadvantages, Innovative Style

Q.What are the disadvantages or limitations (if any) to working with your regional cooperative in IPG?

	Innovator Category		
	Innovator	Follower	Status Quo
	Percent		
-			
a None	22	11	15
b Bureaucracy within regional slows response.	10	6	9
c Margin would need to be shared with regional.	7	14	13
d Regional's priorities conflict with local's.	10	3	9
e Having right people to deliver new technology to farmers.	4	10	1
f Lowering feed or grain cost to be low cost supplier.	6	10	3
g Determining how to distribute new technology.	0	0	4
h Regional resources allocated across many locals (spread too thin).	10	7	6
i Regional's processing operations incompatible with our choice of IPG traits.	1	4	1
j How to get sufficient return per acre to sustain farmer interest.	28	31	38
	---	---	---
Total	100	100	100

Table 51--Parallels Between Pork and Grain Industries, Managers

Q. How much do you agree with this statement: Our local cooperative is concerned that IPG developers/suppliers will take over the grain market just as large integrators have made inroads in the pork market and other agricultural products.

	Managers			
	General	Feed	Grain	All
	-----Percent-----			
Agree Strongly	13	0	14	10
Agree Somewhat	46	39	49	45
No Opinion	18	29	12	19
Disagree Somewhat	18	30	22	21
Strongly Disagree	6	2	4	5
Total	100	100	100	100

Table 52--Parallels between Pork and Grain Industries, Innovative Style

Q. How much do you agree with this statement: Our local cooperative is concerned that IPG developers/suppliers will take over the grain market just as large integrators have made inroads in the pork market and other agricultural products.

	Innovator Category		
	Innovator	Follower	Status Quo
	-----Percent-----		
Agree Strongly	7	11	14
Agree Somewhat	50	49	35
No Opinion	14	19	24
Disagree Somewhat	23	19	24
Strongly Disagree	7	3	4
Total	100	100	100

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Rural Business-Cooperative Service
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