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Success Factors for New Generation Cooperatives¹

Jared G. Carlberg ^aⒺ, Clement E. Ward ^b, and Rodney B. Holcomb ^c

^a *Assistant Professor, Department of Agribusiness & Agricultural Economics, University of Manitoba, 353-66 Dafeo Road, Winnipeg, Manitoba, Canada.*

^b *Professor and Extension Economist, Department of Agricultural Economics, Oklahoma State University, 308 Agricultural Hall, Stillwater, Oklahoma, USA.*

^c *Associate Professor, Department of Agricultural Economics, Oklahoma State University, 308 Agricultural Hall, Stillwater, Oklahoma, USA.*

Abstract

The goal of this research was to determine success factors for New Generation Cooperatives (NGCs). A self-explicated approach was used to assess the importance of various factors grouped in broad categories using data collected from a mailout survey of NGC managers. Results suggest that factors in the “Planning and Development” and “Financing and Costs” categories are considered to be critically important by NGC managers, though differences in factor rankings exist between managers of enterprises involved in the processing of different commodities.

Keywords: New Generation Cooperative, self-explication

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Ⓔ Corresponding author: Tel: + 204-474-9827

Email: carlberg@Ms.UManitoba.CA

Other contact information: C. Ward: ceward@okstate.edu; R. Holcomb: holcomb@okstate.edu;

Introduction

Agricultural producers have long sought to capture a greater share of the downstream value their commodities create. As rural population and incomes dwindle, the need to do so is becoming increasingly more pressing. Farmers have a long tradition of cooperative behavior, both in purchasing inputs and in collectively marketing their raw commodities. In 2002, there were 2.8 million members in 3,140 farmer cooperatives in the United States. These enterprises employed over 166,000 people, earned net income of over \$3.1 billion, and had net worth of nearly \$20 billion (USDA-RBS). Though the part cooperatives have played in shaping the landscape of U.S. agriculture has been a prominent one, cooperatives have largely been limited to marketing and farm supply roles, and generally have engaged in processing activities only to a limited extent. Rogers and Marion hypothesize that these traditional cooperatives have historically lacked the financial resources to forward integrate into that type of value-added activity. Royer and Bhuyan show that if a cooperative is able to devise a non-price method of restricting the quantity of raw product that it handles, it will be profitable to forward integrate into processing activities.

In an effort to add value to their products, farmers have begun to vertically integrate, often in the form of New Generation Cooperatives (NGCs). Typically, an NGC retains the traditional cooperative tenets of one member/one vote (though this may vary by state) and dividends based on patronage, but has two important additional characteristics (Stephanson, Fulton, and Harris). The first is delivery rights tied to share issuance. Investors in NGCs typically help fund construction or purchase of a processing facility through the purchase of shares which entail the obligation to deliver one unit of the applicable commodity per share. This addresses the undercapitalization problem cited by Rogers and Marion. The second unique NGC characteristic is restricted membership. Membership is limited to those who provide the equity capital (and thus incur the risk) for the venture, and new shares are generally not issued unless the processing facility requires expansion. Such a condition of membership provides a non-price method of restricting the amount of raw product handled. This is cited by Royer and Bhuyan as necessary for cooperative forward integration into value-added processing. Usually, shares in NGCs can be traded, although the approval of the NGC board of directors is often required. This practice is intended to prevent private corporations from acquiring control of the cooperative. Cook proposes a four-stage model of cooperative genesis, growth, and demise, and shows how NGCs are a natural outcome in the process.

Torgerson asserts that research is essential to learning about the success and failure of cooperatives. The purpose of this paper is to determine the relative importance of various factors to the success of NGCs, and then to make recommendations for the management of NGCs and other types of value-added agribusinesses. In the late 1980s, Sexton and Iskow identified factors important to

cooperatives' success based on a survey of members and management. This research adds to their work, but focuses specifically on new generation cooperatives, most of which have formed since their research was conducted. In addition, this research exclusively targeted managers, enabling them to identify success factors. Data from a mail-out survey of NGC managers is used to determine those factors considered critical to success for these value-added enterprises. Important factors for success across all NGCs, as well as for those in specific agricultural sectors, are identified.

Results of the research reported here will quantify the perceptions that exist about the factors important to NGCs. These enterprises have purposes and goals that are distinct from traditional cooperatives, but are also distinct from investor owned firms. As such, knowledge about those factors important to NGC success can provide guidance to both existing and new NGCs, as well as to extension agents and government personnel who are involved in their development. As well, the results reported here can be generalized to the management of most value-added agribusinesses, especially those in the formative and early operational stages.

Self-Explicated Factor Rankings

Opinions of NGC managers on the factors important to the success of their enterprises were obtained via a mailed survey, sent out early in 2002. The list of potential respondents came mainly from the Illinois Institute for Rural Affairs' (IIRA) "Directory of New Generation Cooperatives", a listing of all new generation co-operatives known to the IIRA in the U.S. A few additional NGCs were identified via discussions with extension personnel and an internet search. A list of 72 potential respondents was identified, representing most of the NGCs in existence at the time. Each NGC was contacted in advance to identify a suitable recipient and solicit participation, and the survey was then mailed accordingly. Reminder letters were sent two and four weeks after the initial letter.² After these three mailings, a 75% response rate was attained. The instrument asked respondents to identify their position within the NGC; in most cases the survey was completed by the general manager, although in some cases it was the CEO or another senior manager.³ Respondents were then placed into one of five groups, each representing closely related commodities or processing activities. If a respondent did not clearly fit into one of the five commodity/activity groups, it was placed in a sixth group, which included one anonymous response. Table 1 identifies the six groups and gives the number of respondents in each.

² Repeat mailings, while potentially expensive, help increase response rates and reduce nonresponse bias (Warde; Salant & Dillman). A few examples of recent applied analyses employing repeat mailings include Vergara et al.; Jensen et al.; Wachenheim and Lesch; and Bernard, Pesek and Fan.

³ There was no evidence of differences in factor rankings between general managers and CEOs or other senior managers.

Table 1: Groupings of NGC Survey Respondents

Group	Respondents	Activity/Commodity
1	14	Corn Processing/Ethanol/Energy
2	6	Livestock
3	7	Processed/Semi-processed Foodstuffs
4	7	Oilseed & Wheat Processors
5	10	Table Vegetables/Organic/Seafood
6	6	Other
Total	50	

A self-explication approach is used to rank success factors. This approach, originally designed for use in multiattribute utility estimation (Huber, Sahney & Ford; Huber), is the foundation for many of the modern tools used to measure and predict consumer preferences, including hybrid conjoint analysis (Green, Goldberg and Montemayor), adaptive conjoint analysis (Johnson), and customized conjoint analysis (Srinivasan and Park). Respondents were presented with ten broad categories, each containing five factors, and were requested to rank the factors in each category from most important within the category (rank = 1) to least important (rank = 5). Each rank was used only once in each category. Srinivasan and Park note that self-explication minimizes the information overload problem that would result if the entire set of factors had to be considered simultaneously. Only five factors needed to be considered at a time, rather than each of fifty total possibilities. Self-explication next required the NGC managers to rank the categories themselves, from most important (rank = 1) to least important (rank = 10). These category rankings serve as the importance weights in calculating overall preference scores for the individual factors.⁴ The scores are the product of the within-category factor ranking and the category ranking itself (Green; Srinivasan & deMaCarty).

Once scores have been calculated for each factor, preferences can be pooled by averaging the scores for each factor over all respondents (Allenby, Arora & Ginter; Dubas & Mummalaneni; Simonson & Taversky). These averaged scores can then be interpreted as a measure of the relative importance or unimportance of the associated factors within the context of the set of factors being considered. Caution should be exercised in interpreting the relative importance of closely scored factors; nevertheless, it is clear that highly ranked factors within highly ranked categories are regarded as critical to their success by NGC managers.

⁴ The literature reveals several possibilities for assigning importance weights. Green and Krieger discuss a number of options (ranking of preferences, constant sum, ranking within a subset of preferences, etc.). Srinivasan and Park outline alternatives for importance weights, including equal weighting. Green observes that ordered categories, ratings, and constant sum point allocations are the main types of response data used.

Table 2: NGC Success Factors and Categories

<i>Category (Avg. Rank)</i> Factors	<u>Rank</u> Cat. Cum.	<u>Score</u>	<i>Category (Avg. Rank)</i> Factors	<u>Rank</u> Cat. Cum.	<u>Score</u>
<i>Planning/Development (3.7)</i>			<i>Product Related (5.6)</i>		
local champion/leader	1 1	7.21*	product quality	1 7	9.69**
steering committee	2 3	8.60*	customer service	2 22	14.32**
feasibility study	3 5	9.15**	tech. incorporated	3 35	18.55*
alliance/partnership	4 21	14.23	product uniqueness	4 41	20.23
proximity to other successful co-ops	5 26	16.24	brand recognition	5 44	22.11
<i>Financing & Costs (3.9)#</i>			<i>Industry Related (6.1)#</i>		
low operating costs	1 2	8.29*	reputation	1 19	14.10*
member capital base	2 4	8.67**	market size	2 29	16.84
low financing costs	3 12	12.45	no. of competitors	3 37	19.31
output price stability	4 17	13.65	competitors' prices	4 39	19.88
input price stability	5 20	14.18	economic climate	5 43	21.10
<i>Managerial (4.0)##</i>			<i>H.R./Organizational (6.6)#</i>		
mgrs. know industry	1 6	9.22	labour force quality	1 18	14.00**
experienced mgrs.	2 8	10.35*	internal communication	2 27	16.82*
full-time gen. mgr.	3 10	11.22**	comm. with Board	3 34	18.37*
continuity of mgt.	4 13	12.86**	comm. with members	4 45	22.88
ongoing mgr. training	5 31	17.27	use of outside experts	5 47	26.20
<i>Operational (4.7)##</i>			<i>Logistics (6.9)##</i>		
selling/mkting. effort	1 9	10.80**	proximity to inputs	1 25	15.94*
risk management	2 14	13.22	trans/dist infrastructure	2 33	18.31
volume of business	3 16	13.59*	site selection	3 40	19.98*
targeted customer base	4 23	14.35**	proximity to customers	4 42	20.88**
vertical integration	5 36	19.06	geographical member dispersion	5 50	29.90
<i>Strategic (5.5)</i>			<i>Gov't/Regulatory Environment (7.3)</i>		
product focus	1 11	11.96*	co-op existence laws	1 24	15.78
business strategy	2 15	13.52	co-op tax advantages	2 30	17.09*
multiple market sales	3 28	16.83*	gov't agency funding	3 38	19.38**
planning/checking	4 32	17.65**	demand enhanced by regulation	4 48	26.44
enforcement of member agreements	5 46	24.10	gov't planning support	5 49	27.87

Note: For the category average rankings, ## indicates a statistically significant difference in average ranking between a category and the next highest-ranked category at the $\alpha = 0.10$ significance level; # indicates a statistically significant difference in average ranking between a category and the second next-highest ranked category. * and ** asterisks are analogously used to denote differences between factor scores within categories.⁵

⁵ Mann-Whitney tests carried out on the within-category factor rankings supported the results of the tests of equivalence between preference scores. There were no cases where a significant difference was found between preference scores for two factors but not between within-category factor rankings.

Table 2 shows the categories and factors, the average category ranking, and the within-category ranking and the averaged score for each factor. Because distributional assumptions about the category rankings and averaged factor scores should not be made, a non-parametric test is needed to detect statistically significant differences in average scores between factors in the same category. The Mann-Whitney test, a powerful non-parametric alternative to the two-sample t-test, is used (Harnett & Murphy). Lowry notes that the effect of replacing raw measures (in this case, respondent factor scores) with ranks allows users to focus on the ordinal relationships between the raw measures – relatively more or less important, in this case – without assuming that the raw measures derive from an equal-interval scale. Test results are presented in Table 2 and explained in the note beneath. For instance, in the “planning and development” category, “local champion/leader” had a higher score than “steering committee”, but the scores are not statistically different at the 10% significance level. However, the score for “local champion/leader” is statistically higher than that for “feasibility study”. And the score for “feasibility study” is statistically higher than for “alliance/partnership”. The methodology used here is but one means of estimating the importance of each factor and making comparisons within and across industry groups. Even though the factors are assigned overall scores, one should be hesitant to interpret any single factor as most or least important. Rather, factors should perhaps be viewed as relatively important or unimportant, vis-à-vis other factors, in the aggregate opinions of NGC managers.

The importance of factors in the “planning and development” stage is evident – three of the five factors with the highest overall preference scores come from that category. This is due in part to the fact that so many of the respondents are fairly new businesses, with the overwhelming majority having been in operation for less than ten years. Accordingly, difficulties encountered in the early stages of operation and, more importantly, the successes achieved by struggling through these difficulties are likely still fresh in respondents’ minds. Overall, the existence of strong local leadership in the beginning stages was recognized as critically important across all respondents, as was the related “steering committee”. Cooperative development personnel can relate stories of how now-successful NGCs were sustained through their earliest days by the tireless efforts of organizers who refused to let a good idea die. In many cases, these local champions spend considerable amounts of their own time and money organizing meetings to garner support for a start-up. Also from the “planning and development” category, “feasibility study” was chosen as one of the most important factors of the fifty considered.

Two factors from the “financing and costs” category were also among those success factors identified as extremely important to the success of value-added cooperatives. “Low operating costs” had the second highest preference score, and in fourth place was “member capital base”. The former was important across all types of NGCs. In

some cases, large NGCs exist in industries that are quite competitive, in terms of both output and input prices, and businesses can only affect their margins by controlling operating costs. For other, smaller cooperatives, certain types of fixed costs must be spread across relatively few units of output, and there are few opportunities to take advantage of economies of scale. For this reason, operating costs for the cooperative must be carefully monitored, and paying for management or sales expertise, a marketing campaign, or even part-time staff may not be feasible. A sufficient pool of member capital is also critically important to most NGCs. Oftentimes, a processing facility must be purchased or constructed, and the cost of doing so can run into the tens of millions of dollars for even a modest facility. Lenders are usually unwilling to back such a project without at least forty or fifty percent of capital provided by members in the form of equity. Sometimes, even once a plant is completed, further injections of capital are required of members. A number of potentially successful value-added cooperatives have failed because of a lack of either start-up money or operating capital.

Factor Rankings by Commodity Groups

Ethanol NGCs

Table 3 shows the five highest-scored factors for respondents in each of the six NGC groups. The largest group, with 14 respondents, consists of cooperatives engaged in the production of ethanol from corn. Farmer-owned ethanol plants account for 40% of total ethyl alcohol production in the U.S. (Urbanchuk). Livingston et al. note that for Northeast Missouri Grain, project leaders played an important role in educating producers about what was at that time the first NGC in Missouri, and that they were also instrumental in encouraging that state to update its legal institutions to be able to accommodate the new type of venture. Similar experiences in other areas help explain why, as Table 3 shows, strong local leadership during the developmental phases was rated as a very important success factor for ethanol NGCs.

“Strong selling/marketing effort” was also scored very highly by ethanol NGCs. The importance of this factor to co-operatives in this group is somewhat unique; it was not scored among the most important factors by NGCs in any other commodity group. Thongchua, Powell, and Lawless observe that marketing is one of the toughest challenges facing Southwest Minnesota Agrifuels Co-op, majority owner of Ethanol2000, LLP. A strong selling/marketing effort is important to ethanol NGCs because the market for their output has become increasingly competitive: in 2003, 74 ethanol plants produced 3.5 billion gallons of the fuel additive; another 13 plants representing 500 million gallons were expected to come on-line in 2004 (Urbanchuk). With such a large number of potential competitors, a good marketing plan is critically important for profitability.

Table 3: Top Five Success Factors by Group – Factor Scores

Rank	Group					
	Ethanol	Livestock	Food Processing	Wheat/Oilseed	Organic	Other
1	local champ.	local champ.	operating costs low	labour force quality	customer service	mgrs.w/ ind.know.
2	selling/mkting	product quality	mgrs. w/ ind. know.	market size	product quality	member capital
3	full time G.M.	multiple mkt. sales	steering committee	steering committee	local champ.	local champ.
4	member capital	member capital	low finance costs	feasibility study	unique product	steering committee
5	feasibility study	reputation	member capital	product quality	operating costs low	operating costs low

Tiffany and Eidman note that ethanol plant managers play a critical role in maintaining product throughput and good conversion rates of corn to ethanol. Additionally, general managers of ethanol plants are often responsible for procurement of inputs, managing personnel, dealing with member concerns, marketing the final product, and a myriad of other day-to-day tasks. Many ethanol NGCs have production capacities between 15 and 40 million gallons per year, which typically does not allow for the hiring of specialized managers to handle the diverse responsibilities outlined above. Thus, the general manager must be capable of handling all of these duties, and it is for that reason that “full-time general manager” was scored highly for the success of ethanol NGCs.

Construction of a new processing facility is necessary for almost every group hoping to form an ethanol co-operative, and the costs associated with doing so can be considerable. Given construction costs of up to \$2.00 per gallon of yearly capacity, even a relatively small facility producing 15 million gallons per year could cost as much as \$30 million to build. Karg relates the experience of Adkins Energy, an ethanol NGC that was able to raise only \$9 million of the \$16 million needed for plant construction. As a result, the organizing group was forced to take on partners in order to complete financing – not an uncommon occurrence for ethanol NGCs. It is thus evident why “member capital base” was scored highly by ethanol NGCs.

Related to the significance of a strong local champion or leader is the importance of carrying out a feasibility study for any new large-scale enterprise, also considered important by managers of ethanol NGCs. It is critical that a prospective ownership group gauge producer interest in the NGC, determine the availability of inputs, assess the suitability of available sites, evaluate prospective partners for

design/construction of the processing facility, and carry out various other tasks to ensure that the project is feasible before embarking on the road to full-scale production. In discussing the formation of Golden Triangle Energy Cooperative, Fink describes a feasibility study as a “key ingredient” to the success of that NGC. Many other authors and NGC development experts have echoed that sentiment, noting that failure to plan properly is often a recipe for failure when organizing a value-added enterprise.

Livestock NGCs

There were six respondents engaged in various value-added activities grouped together into the “livestock” category of NGCs. Many such enterprises are inspired by the success of U.S. Premium Beef (USPB), an NGC that initially acquired a significant ownership stake in Farmland National Beef, thus gaining access to its lucrative branded beef sales. Subsequently, the demise of Farmland allowed USPB to acquire the entirety of Farmland National Beef. USPB has been successful at not only enhancing returns for producer-members, but also at helping those producers raise better animals by providing significant carcass data feedback and pricing on a carcass-merit grid. As Table 3 shows, the presence of a strong local champion/leader was identified as being critically important for livestock NGCs. Holz-Clause notes that the early organizing efforts were integral to the success of USPB. Because of the notorious independence of livestock producers, a strong early organizing effort is critical to generate sufficient interest in what generally turns out to be a very expensive proposition.

Merlo argues that the beef industry’s reputation as a whole has suffered from its inability to produce a consistent, convenient product that is as affordable as chicken or pork. The inextricably linked factors “product quality” and “reputation” were scored quite highly for livestock NGCs. The importance of these factors is not surprising given the emergence of branded products as the most profitable elements in the line of livestock originating consumer-ready products. Livestock NGCs who have hoped to emulate the success of USPB have found it difficult to do so without the ready-made brand recognition that USPB acquired through its interest in Farmland National Beef.

One of the reasons for the demise of Pork America’s short-lived foray into hog processing was the difficulty of selling into the markets for various cuts and byproducts, according to a former board member (Miller). Similarly, for beef processors, there are distinct markets for cuts from the various primals and sub-primals, as well as for trimmings and byproducts such as hides, bones and offal/renderings. Marketing the whole animal and its byproducts is thus one of the most important tasks falling to managers of this type of cooperative. Thus, it is not surprising that “multiple market sales” was identified as an important success factor for livestock NGCs. Selling into international markets can also be important

for these NGCs, for instance, USPB sells into more than five dozen countries, and has field offices in South Korea and Japan.

“Member capital base” was selected as an important factor for the success of livestock NGCs. Oftentimes, livestock producers want to vertically integrate into processing in order to capture what they perceive to be excess rents being earned by meatpackers. But packing plants are very expensive to build, and even the cost of purchasing a recently abandoned facility can be prohibitive. For instance, Great Lakes Pork Cooperative was unable to raise the necessary funds to acquire a plant previously used for veal production in South Bend, Indiana (Campbell). In the later mid-1990s, Northern Plains Premium Beef was unable to generate sufficient capital to proceed with its plans for an integrated beef production, processing, and marketing enterprise. Even start-up costs can strain the resources for start-up NGCs; the cost of hiring a consultant to carry out a feasibility study combined with legal costs and administrative expenses can approach one million dollars for a new enterprise. Given high start-up and construction cost for processing facilities, it is easy to see why livestock NGCs depend critically upon a sufficient member capital base for success.

Food Processing NGCs

Seven NGCs that process commodities into table-ready or oven-ready products were placed together into a “processed/semiprocessed foodstuffs” group. Cooperatives engaged in the processing of sugar beets, table nuts, coffee, poultry, and eggs were included in this category. The NGCs in this group are distinct from those in other groups in a number of important ways: they are often older businesses, typically are engaged in very capital-intensive processing activities, often control a large share of the domestic market for their products, and many are readily identifiable with easily recognizable brand names.

As Table 3 shows, “low operating costs” was chosen as the factor most important to the success of cooperatives in this group. This is due in part to the complex nature of the operation of this type of NGC: Bushette describes, for instance, the multifaceted system employed by Golden Oval, an egg processing cooperative, for keeping their laying hens comfortable and for cracking, separating, and further processing eggs. Also, a number of the NGCs in this group operate in industries with very tight margins. For instance, Boland and Barton (2000) note that the sugar and corn sweetener industry, in which a number of NGCs operate, pricing is extremely competitive. As such, firms must focus on controlling operating costs, as they may not be able to exert much influence over output prices.

Given the competitive, often low-margin nature of the sectors in which some food processing NGCs operate, effective management can often be the difference between success and failure. Holmes and Curry observe that when Kraft Foods decided to

close its turkey processing plant in West Liberty, Iowa in 1996, the Iowa Turkey Growers Cooperative placed a great deal of importance upon selecting the right person to serve as the general manager of the plant, which the producers were able to purchase. They also relate how it was in large part due to that manager's contacts and expertise in the industry that West Liberty Foods was able to gain a toehold in the market. That NGC is now widely considered one of the most successful in the country, and helps illustrate why "managers with industry knowledge" was identified as an important success factor for food processing NGCs. Also identified as critical was "steering committee", again demonstrating the importance of planning in the early stages of NGC formation.

"Low financing costs" was ranked highly by food processing NGCs for two reasons: first, the investment in fixed assets can be considerable for this type of enterprise. Often, plant upgrades and expansions are financed, at least in part, through borrowing. Second, a few NGCs in this group have been actively expanding through acquisitions. For example, American Crystal Sugar acquired the assets of a number of small sugar beet processing companies in the last few years, as well as constructing a molasses desugarizing plant and taking a controlling interest in the start-up ProGold LLC. With an interest expense in 2003 of \$16.871 million on long-term debt of almost \$287 million (American Crystal Sugar 2003 annual report), it is clear that financing costs are an important consideration for that firm.

Also important to NGCs in this group was "member capital base". It is important that start-up food processing ventures, with significant plant and equipment costs, are sufficiently capitalized. Holmes and Curry relate how West Liberty Foods was financially sustained during its earliest stages only by cash infusions from members. In the case of the Michigan Turkey Growers Cooperative, a mere 15 producers were responsible for the equity necessary to acquire and renovate a processing plant for their birds when Bil-Mar Foods unexpectedly canceled production contracts. Total costs to acquire and refurbish the facility approached \$20 million (Kopenkoskey).

Wheat/Oilseed NGCs

Farmer-owned cooperatives that process wheat or oilseeds (mainly soybeans) were considered as a single group; there were seven such NGCs responding to the survey. A few of the wheat processing businesses in this group were vertically integrated all the way from farm production to sales of bakery or partially-baked products; others were engaged in the production of pasta from durum semolina. On the oilseed side, most respondents consisted of producer groups who had banded together to purchase or construct a facility for processing their soybeans because no suitable facility was located close to them, or because they were dissatisfied with pricing arrangements being offered by existing processors. Commonalities were that both types of NGCs in this group were almost without exception less than five years old,

and that they had taken an ownership position in a processing facility at considerable risk and expense to producers. These factors may make this group seem similar to ethanol NGCs – but wheat and oilseed processing cooperatives typically are not favored by having their demand enhanced by regulatory factors, nor do they receive the same levels of financial assistance as do ethanol producing cooperatives.

Managers of NGCs dedicated to the processing of wheat or oilseeds identified “labour force quality” as critical to the success of their enterprises. Though the processes through which these businesses refine their products is not particularly labor-intensive, it is nevertheless the case that careful supervision and maintenance of the operation of plant equipment is crucial. Also, since many of these NGCs are located in small rural centers – indeed, NGCs are often viewed as a strategy for local economic development – the supply of semi-skilled labor can be viewed as a precious commodity, indeed. For NGCs vertically integrated into consumer-ready products, skilled labor can be even more difficult to find. For instance, in a case study of Mountain View Harvest Cooperative, Carter notes that scarcity of trained labor is the biggest concern of in-store bakery operators.

The cost of construction of a new facility or purchase of an existing one is considerable for a wheat or soybean processing NGC. In some cases, the financial commitment required of producer/members seems considerable given what some view as very limited delivery rights attached to membership. For instance, Carter notes that at Mountain View Harvest, 400 shares were offered at \$12,500 each. In return, farmers could deliver 900 bushels per share – wheat production from between twenty and thirty acres – to the co-op. Farmers generally expect farm-gate returns for their commodities to improve due to NGC memberships, but often membership only provides a hedge for only a very small proportion of farm production. Not only is market size for producer commodities a concern, the size of the market for the NGC’s products is also important. Walzer and Holmes argue that for the Southwest Iowa Soy Cooperative, not enough emphasis was placed on identifying and/or establishing markets prior to beginning operations. The failure of that cooperative, for this and other reasons, demonstrates the importance of “market size” for wheat and oilseed NGCs.

As with other commodity groups, wheat and oilseed processing NGCs described factors in the “planning and development” category as being critically important to their success, identifying “steering committee” and “feasibility study” in particular. Holcomb and Kenkel discuss the importance of planning activities to the success of Value Added Products, a successful Oklahoma NGC producing partially baked bread products. Zeuli et al. assert that South Dakota Soybean Processors would never have come to fruition were it not for the dedication of the steering committee toward construction of a much-needed processing facility. As an important element of the early planning for a new processing venture, feasibility studies are a must –

they will determine producer interest in the new venture, availability of inputs, and potential markets for the finished product. The president of Minnesota Soybean Processors described a feasibility study as the “first step” toward construction of its plant (Lemke).

“Product quality” was also selected as an important success factor for this type of NGC. Boland et al. note that providing consistent quality to customer specifications is one of the principle competitive advantages in the pasta producing industry. Dakota Growers Pasta, now a corporation but for most of its history an NGC, has taken advantage of consistent quality and both brand name and private label production to become extremely successful. For oilseed processors, quality of oil and the ability to produce suitable meal consistent with specific protein requirements for animal feed is of considerable importance – Boland and Barton (2003) observe that in the soybean crushing industry, firms compete on product quality, among other factors.

Organic/Vegetable/Seafood NGCs

The second-largest NGC group consisted of ten enterprises engaged in the marketing of organic or conventional table vegetables and seafood. This is a unique category of cooperatives – often, NGCs are thought of as requiring considerable financial outlays by producer-members to fund the purchase or construction of large-scale processing facilities. For organic/vegetable/seafood NGCs, this is not necessarily the case. Rather, for a number of the cooperatives in this group, adding value to their produce consists of little more than assembling boxes of produce at some common collection point to be collectively marketed to customers by a single seller. Sometimes, there are as few as a dozen members in these cooperatives; other times, there are several hundred, marketing under well-known brand names. In any case, these cooperatives qualify as NGCs because they are closed cooperatives where members have banded together to add value to their products. As will be explained below, the factors that are important to the success of this type of enterprise are often quite different than those for other kinds of NGCs.

A number of NGCs marketing organic products and/or vegetables have found that close contact with customers has helped facilitate repeat and growing sales. In some cases, sales by NGCs are occurring to buyers who were previously supplied by individual members, and it has been important for these cooperatives to demonstrate the superior buyer support that they can offer – perhaps that is why “customer service” was rated as critically important for this type of enterprise (Table 3). Huber and Parker describe how the GROWN Locally Cooperative has instituted a 24/7 web interface to make it easier for customers to take stock of what produce is available and place orders whenever it is most convenient for them. Similarly, CROPP, the nation’s largest organic cooperative, places a toll-free

number on all its packaging and carries out surveys of customers to learn about their preferences and needs (King).

Two factors from the “product related” category were ranked among the most important by managers of vegetable/organic NGCs. One of them was “product quality” – no surprise given that consumers of these products expect consistent good taste and freshness. Lerman and Parliament observe that lack of quality can keep producers from earning the quality premiums that they rely upon for profitability. Providing high quality produce was cited by Lawless as one of the reasons for the success of Home Grown Wisconsin. Also ranked highly by vegetable/organic NGCs was “unique product”. There are two main reasons for this: first, purchasers of organic food are not only interested in the natural production of the products they buy because of health concerns, they also place importance upon the social and environmental benefits that organic production often represents (Dimitri and Richman). As such, organic products, and in some cases non-organic locally grown products, are seen as unique. Second, branded sales have become important to some of the NGCs in this category. Sales of products in the “Organic Valley” branded line have been tremendously important to the success of CROPP (Powell and Lawless).

Strong local leadership in the planning stage was identified as an important success factor for vegetable/organic NGCs. King describes how in the early days of the Whole Farm Cooperative, one local leader was responsible for much of the early marketing effort, contacting local food service growers and undertaking internet-based marketing in an effort to generate sales. Similarly, Heartland Organic Marketing Cooperative, one of the earliest NGCs (formed in 1992), would never have come to be were it not for the organizing efforts of two local leaders (Merrett). That NGC was a successful marketer and exporter of organically-grown soybeans for over a decade, but in late 2003 it was dissolved.

For many of the NGCs in this group, margins provided by the uniqueness of their products are barely enough to justify or even provide for the hiring of a manager or salesperson for the cooperative – especially if higher returns from collective marketing are expected by members. The selection of “low operating costs” as an important success factor by NGCs in this category reflects this circumstance. Even though there are significant premiums to be earned for organic or locally grown products, there are substantial per-member costs for operations of cooperatives with relatively few members. As such, minimization of costs is an important consideration for these businesses.

Other NGCs

Six of the respondents did not fit into any of the categories described above and so were placed together in the “other” group. Their activities range from forestry to alfalfa production to wine production, as well as two so-called “producer alliances”,

and one anonymous response. Each of the five factors this group identified as important were also identified as very important by at least one of the other NGC groups. This further demonstrates that even though there are important differences among the rankings of various factors by certain groups, there are commonalities between them that represent the importance of particular factors to all types of NGCs.

Summary and Conclusions

New Generation Cooperatives are becoming increasingly common as agricultural producers strive to increase their share of the value produced by their commodities. NGCs, distinguishable from traditional cooperatives by limited delivery rights and restricted membership, often require large initial investments on the part of members. These enterprises retain the important cooperative principles of one-member/one vote (although some states allow flexibility in this area) and dividends based on patronage, but are more akin to investor-owned firms than their traditional counterparts. As such, the factors influencing success for NGCs may not be exactly the same as for those on either end of the ownership spectrum. Nevertheless, the lessons learned here can apply to all types of agribusinesses – not just NGCs.

The purpose of this paper was to determine the importance of various factors to the success of New Generation Cooperatives. To do so, a self-explicated approach was used whereby within-category factor rankings were weighted by category importance rankings to arrive at an overall score for each factor for each respondent. Preferences were then pooled by averaging scores across all respondents as well as across members of six NGC commodity groups. There were both important differences and striking similarities in factor rankings between these groups – some factors are important to all NGCs, whereas others are important only for particular NGCs, depending on the type of value-added activity they carry out.

These results should aid in the development of new NGCs as well as in the management of existing ones, and in the operation of other types of agribusinesses. Based on the research reported here, three key recommendations for persons or groups involved with NGC development can be made:

- *Planning is paramount.* Most NGC managers identified factors in the planning and development category as critically important to success.
- *Control your costs.* Running a tight ship with respect to operational costs and minimizing financing costs helps protect the bottom line.

- *One size does not fit all.* Though some commonalities (such as the above) exist among successful NGCs, factors important to NGC success can vary significantly depending upon commodity group.

Examples of NGCs that have failed due to poor planning or operation abound. Cognizance of the factors which are important to a particular type of NGC should help raise the success rate for NGCs, and for all value-added agribusinesses, and thus enhance opportunities for producers to capture more of the value that is added to their commodities. Producer-owned, value-added agribusinesses can make important contributions to agricultural producers and to rural areas, keeping people and resources from relocating elsewhere. It is in helping accomplish that goal that the results presented here are most important.

References

- Allenby, G.M., N. Arora, and J.L. Ginter. "Incorporating Prior Knowledge into the Analysis of Conjoint Studies." *Journal of Marketing Research* 32(1995):152-62.
- American Crystal Sugar. 2003 Annual Report. Internet site:
<http://www.crystalsugar.com/coopprofile/a.report.03.pdf> (accessed May 15th, 2004).
- Bernard, J.C., J.D. Pesek, Jr., and C. Fan. "Delaware Farmers' Adoption of GE Soybeans in a Time of Uncertain U.S. Adoption." *Agribusiness* 20(2004):81-94.
- Boland, M., D. Barton, and C. Freberg. "Dakota Growers Pasta: Vertical Integration in the Durum Wheat and Pasta Manufacturing Industry." *Case Research Journal* 21(2001):35-57.
- Boland, M. and D. Barton. "South Dakota Soybean Processors: Joint Ventures and Strategy." Arthur Capper Cooperative Center Case Study Series No. 02-14, Manhattan, 2003.
- Boland, M., and D. Barton. "American Crystal Sugar Company: Diversification in the Corn Sweetener Industry." Arthur Capper Cooperative Center Case Study Series No. 02-11, Manhattan, 2000.
- Buschette, P. "Golden Oval." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Campbell, D. "Great Lakes Pork Co-op adjusts plan to seek alternative packing plant." *Rural Cooperatives* 70(3)(2003):4-8.

- Carter, D. "Going Against the Grain: The Story of the Mountain View Harvest Cooperative." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Cook, M.L. "The Future of U.S. Agricultural Cooperatives: A Neo-Institutional Approach." *American Journal of Agricultural Economics* 77(1995):1153-59.
- Dimitri, C. and N.J. Richman. "Organic Foods: Niche Marketers Venture into the Mainstream." *Agriculture Outlook* Washington DC: U.S. Department of Agriculture – Economic Research Service, June-July, 2000.
- Dubas, K.M., and V. Mummalaneni. "Self-Explicated and Full-Profile Conjoint Methods for Designing Customer-Focused Courses." *Marketing Education Review* 7(1997):35-48.
- Fink, R. "Golden Triangle Energy Inc. Ethanol Plant." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Green, P.E., and A.M. Krieger. "Attribute Importance Weights Modification in Assessing a Brand's Competitive Potential." *Marketing Science* 14(1995):253-70.
- Green, P.E. "Hybrid Models for Conjoint Analysis: An Expository Review." *Journal of Marketing Research* 21(1984):155-69.
- Green, P.E., S.M. Goldberg, and M. Montemayor. "A Hybrid Utility Estimation Model for Conjoint Analysis." *Journal of Marketing* 45(1981):33-41.
- Harnett, D.L., and J.L. Murphy. *Statistical Analysis for Business and Economics*, First Canadian Edition. Addison-Wesley, Don Mills, ON, 1993.
- Holcomb, R.B., and P. Kenkel. "Before the Bricks and Mortar: A Case Study of a New Generation Cooperative's Planning Process." *Journal of Agribusiness* 22(2004): 77-91.
- Holmes, M.S., and D. Curry. "Iowa Turkey Growers Cooperative and West Liberty Foods." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Holz-Clause, M. "U.S. Premium Beef." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Huber, G., and K. Parker. "GROWN Locally Cooperative." Ames, IA: Practical Farmers of Iowa, 2002.

- Huber, G.P. "Multiattribute Utility Models: A Review of Field and Field-Like Studies." *Management Science* 20(1974):1393-1402.
- Huber, G.P., V.J. Sahney, and D.L. Ford. "A Study of Subjective Evaluation Models." *Behavioral Science* 14(1969):483-89.
- Illinois Institute for Rural Affairs. *Directory of New Generation Cooperatives*, September 1999.
- Jensen, K.L., B.C. English, R.J. Menard, and Y. Zhang. "An Evaluation of Tennessee Soybean Growers' Views on a New Generation Co-operative to Produce Biodiesel." *Journal of Agribusiness* 22(2004):107-17.
- Johnson, R.M. "Adaptive Conjoint Analysis." *Sawtooth Software Conference on Perceptual Mapping, Conjoint Analysis, and Computer Interviewing*. R.M. Johnson, ed. Ketchum, ID: Sawtooth Software Inc.(1987):253-65.
- Karg, P.J. "Fill 'er up!" *Rural Cooperatives* 67(3)(2000):7.
- King, R. "Collaborative Marketing: A Roadmap and Resource Guide for Farmers." Research report BU-07539, University of Minnesota Extension Service, St. Paul, 2000.
- Kopenkoskey, P.R. "After losing Bil-Mar business, turkey farmers launch their own venture." *The Holland Sentinel* June 20, 1999.
- Lawless, G. "Home Grown Wisconsin: The Story of a New Producer Cooperative." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Lemke, D. "All About Added Value" *Ag Innovation News* 10(1)(2001).
- Lerman, Z., and C. Parliament. "Comparative Performance of Cooperatives and Investor-Owned Firms in US Food Industries." *Agribusiness* 6(1990):527-40.
- Livingston, K., R. King, A. Reynolds, and D. Trechter. "Northeast Missouri Grain Processors, Inc. Community Case Study." Columbia, MO: Report for the U.S. Department of Agriculture Fund for Rural America, 1998.
- Lowry, R. *Concepts and Applications of Inferential Statistics*. Poughkeepsie, NY: Vassar College, 1999. Accessed online at: <http://faculty.vassar.edu/lowry/webtext.html>
- Merlo, C. "A Co-op for the Cowboys." *Rural Cooperatives* 65(1)(1998):2-9.

- Merrett, C.D. "The Role of Value-Added Cooperatives in Rural Economic Development: The Case of Heartland Organic Marketing Cooperative." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Miller, D. "Producer-Owned Co-op Trips in Tough Market." *National Hog Farmer*, January 15, 2003.
- Powell, M., and G. Lawless. "CROPP Cooperative: The Cooperative Regions of Organic Producer Pools." Lincoln, NE: North Central Initiative for Small Farm Profitability, 2003.
- Rogers, R.T., and B.W. Marion. "Food Manufacturing Activities of the Largest Agricultural Cooperatives: Market Power and Strategic Behavior Considerations." *Journal of Agricultural Cooperation* 5(1990):59-73.
- Roper, S. "Modeling Small Firm Growth and Profitability." *Small Business Economics* 13(1999):235-52.
- Royer, J.S., and S. Bhuyan. "Market Incentives for Cooperative Forward Integration into Processing Activities." *Competitive Strategy Analysis for Agricultural Marketing Cooperatives*. Ronald W. Cotterill, ed. Boulder, CO: Westview Press, 1994.
- Salant, P., and D.A. Dillman. "How to Conduct Your Own Survey." New York, NY: John Wiley & Sons, Inc., 1994.
- Sexton, R., and J. Iskow. *Factors Critical to the Success or Failure of Emerging Cooperatives*. Giannini Foundation Information Series No. 88-3. Giannini Foundation of Agricultural Economics, University of California, Davis, 1988.
- Simonson, I., and A. Tversky. "Choice in Context: Tradeoff Contrast and Extremeness Aversion." *Journal of Marketing Research* 29(1992):281-95.
- Srinivasan, V., and P. deMaCarty. "Predictive Valuation of Multiattribute Choice Models." *Marketing Research* 11(2000):29-34.
- Srinivasan, V., and C.S. Park. "Surprising Robustness of the Self-Explicated Approach to Customer Preference Structure Measurement." *Journal of Marketing Research* 34(1997):286-91.
- Stephanson, B., M. Fulton, and A. Harris. *New Generation Cooperatives: Rebuilding Rural Economies*. Center for the Study of Co-operatives, University of Saskatchewan, Saskatoon, SK, 1995.

- Thongchua, N., M. Powell, and G. Lawless. "Southwest Minnesota Agri-Fuels Cooperative." Lincoln, NE: North Central Initiative for Small Farm Profitability, 2002.
- Tiffany, D.G., and V.R. Eidman. "Factors Associated with Success of Fuel Ethanol Producers." Staff Paper P03-7, Department of Applied Economics, University of Minnesota, St. Paul, 2003.
- Torgerson, R. "Research key to expanding co-op knowledge and understanding." *Rural Cooperatives* 68(2)(2001):2.
- U.S. Department of Agriculture – Rural Business Service. Internet site: <http://www.rurdev.usda.gov/rbs/coops/data.htm> (accessed May 31st, 2004).
- Urbanchuk, J.M. "The Contribution of the Ethanol Industry to the American Economy in 2004." Wayne, PA: LECG, 2004.
- Vergara, O., K.H. Coble, T.O. Knight, G.F. Patrick, and A.E. Baquet. "Cotton Producers' Choice of Marketing Techniques." *Agribusiness* 20(2004):456-79.
- Wachenheim, C.J., and W.C. Lesch. "U.S. Executives' Views on International Agribusiness Education in the United States: An IAMA Membership Survey." *International Food and Agribusiness Management Review* 7(2004):42-59.
- Walzer, N. and M. Holmes. "Case Study of Southwest Iowa Soy Cooperative." Macomb, IL: Illinois Institute for Rural Affairs, 2000.
- Warde, W.D. "Sampling Methods." Department of Statistics, Oklahoma State University, Stillwater, OK, 1990.
- Zeuli, K., G.A. Goreham, R. King, and E. van der Sluis. "Dakota Growers Pasta Company and the City of Carrington, North Dakota: A Case Study." St. Paul, MN: Report for the U.S. Department of Agriculture Fund for Rural America, 1998.