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Agribusiness Perspectives – Paper 56

Collaborative Groups: Themes for Success and the Role of Universities

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February 28th, 2003

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Abstract

The development of supply chains in agriculture has resulted in improved efficiencies and greater returns but the distribution of benefits within the chain is just beginning to be considered.

Farmers, because they are perfectly competitive firms, face particular challenges in dealing with supply chains, which are otherwise composed of oligopolistic firms. In order to secure an equitable distribution of benefits from a supply chain, farmers will have to form some sort of group (e.g. a cooperative). Cooperatives, however, have a number of well-documented shortcomings as an institutional form.

This paper identifies factors associated with the successful formation of collaborative groups drawing on experiences in Australia and the United States. Key success factors common to both countries include strong leadership, planning, the development of effective standard operating procedures, the creation and sustenance of social capital, and the availability of outside assistance.

An agenda for research and outreach by universities and others is proposed.

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1 The Relevance Of Collaboration For Farmers

The creation of supply chains in agriculture is being driven, in large part, by a need to reduce costs/increase efficiencies in developed countries and the opportunities created by globalisation of agricultural markets. In the mature food markets of developed countries, firm profitability is largely driven by market share, which, in turn, is driven by firm efficiency. Supply chains are a key strategy for increasing the efficiency of the operational (e.g. logistics and inventory management) and support (e.g. human resources and research and development) activities of firms in the food sector (Dunne 2001).

Globalisation of markets, driven by trade liberalisation under the World Trade Organization and rising incomes in many developing countries, means the potential market for a given food product is increasing. With these potential rewards, however, come new challenges: dealing with exchange rate risk, increased competition from foreign suppliers, understanding consumer preferences in multiple markets, developing and enforcing quality assurance practices, creating systems that allow the tracing of products from production through to the consumer, higher capital demands, and risks posed by the domestic policies of countries around the world. Again, supply chains have developed to take advantage of the opportunities offered by globalisation and to mitigate the risks this process creates.

Supply chains are an important development in agricultural markets and much of the literature on supply chains have focused on the structures used to create supply chains and on measuring the benefits created. However, it is also important to consider how these benefits are distributed within the chain. For example, competition in local markets tends to decrease when supply chains are developed because contractual relationships replace arms-length transactions between rival firms and the number of firms in the market declines.

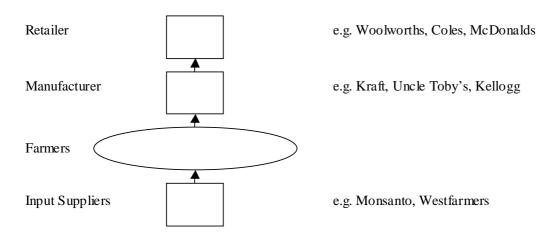
There is a long series of studies in the agricultural economics literature looking at the implications of increasing market concentration on the performance of markets (Azzam 1992; Azzam and Schroeter 1995; Bhuyan and Lopez 1997; Cassels 1933; Collins and Preston 1968; Holloway 1991; Koontz and Garcia 1997; Marion and Geithman 1995; and Nicholls 1941). For the most part, these studies show a slight loss in farmer welfare associated with increasing concentration. This is expected because the farm sector is a competitive market (large numbers of producers, undifferentiated products, relative ease of entry and exit) in which producers are price takers. As bidders for agricultural products shrink in number, economic theory (Sexton 2000) suggests that farmers will be relatively disadvantaged.

A common outcome to the development of agricultural supply chains is an increase in contract production. The U.S. and Australian poultry sectors and, increasingly, the pork sectors are examples of this trend. The role of farmers producing under contract for a supply chain is, typically, quite different from those producing the same output outside a chain. In many instances, contract farmers have little or no management input in the production process. Farmers outside these contract systems retain more entrepreneurial flexibility but also have to deal with the risks associated with agricultural production. The economic independence of farmers, in short, may be threatened by the development of supply chains in increasingly concentrated markets.

The development of supply chains, from the perspective of individual farm producers is problematic at best. Power in agricultural chains has, to date, been controlled by the agribusinesses and, increasingly, by the retail grocery stores.

Figure 1 illustrates the challenge for individual farmers; namely that they tend to be perfectly competitive firms (large number of relatively small firms that produce undifferentiated products) that have to deal with oligopolistic firms (limited number of large firms producing differentiated products) both upstream (input supplies) and downstream (manufacturers and retailers). Supply chains, it could be argued, constrict the power and scope for entrepreneurial initiative of farmers involved in them.

Figure 1: Typical Structure of Agricultural Supply Chains



Thus, the development of supply chains in the food and fibre sector probably increases the need for and, potentially, the returns to farmer collaborations. If farmers are to retain some entrepreneurial independence and capture some of the benefits created by supply chains, it is probably imperative that they develop some sort of collaborative organisations.

At a conceptual level, farmers can organise horizontally or vertically. Horizontal cooperatives, for example as advocated by Sapiro during the 1920s (Ingalsbe and Groves) and recently reconsidered by Levins (2001) with a different twist, focus on gaining bargaining power by controlling or brokering the sale of a substantial quantity of a particular type of product. Vertical cooperatives, in contrast, attempt to integrate multiple layers of production process into a producer-owned and controlled value chain. Examples of cooperatives practicing vertical coordination would include the new generation cooperatives in the United States and Fonterra Group Ltd in New Zealand.

It may also be in the public's interest to be concerned about the distribution of benefits within a supply chain and in the formation of farmer collaborative groups to ensure that producers get their fair share of these benefits. In the U.S. and Australia rural areas have higher rates of poverty and unemployment/underemployment than do urban areas (Kusmin 2001; Garnett and Lewis 1999). Further, different farm structures result in varying quality of life measures in rural areas. For example, Perry and Banker (2000) indicate that contract farmers are less likely to use local businesses when purchasing inputs or marketing outputs. This loss of local economic activity may be compounded by the trend toward farm consolidations and the tendency of these larger farms to by-pass local middlemen.

While forming a cooperative or a collaborative group may be the only option available to farmers as a response to the development of supply chains, it is not an assured solution. Cooperative organisations have a long history in Australia and the United States and have recorded both successes and failures. The focus of this paper is on the factors that increase the probability of successfully organising a farmer-controlled collaborative marketing business. The analysis draws on the lessons learned from efforts to create new collaborative organisations in the U.S. and Australia.

2 Formation Of Groups

A number of authors have analysed groups in terms of their reason for formation, the intensity of participation/impact, and critical performance variables. While not all of this research was done on cooperatives, the issues raised by these authors have direct relevance to this specific type of group.

2.1 Reason for Formation

Cook (1995) suggests that most traditional cooperative groups were formed for defensive reasons. For example, during the 1920s farmers in the U.S. and Australia formed a number of grain marketing cooperatives that built storage facilities to reduce their vulnerability to the railroads and other buyers/transporters of their commodities. Recent cooperative development in the United States (the so-called "new generation cooperatives" (NGCs)) and related collaborative groups in Australia have been more offensive in character. For example, Golden Oval, an egg liquefaction cooperative in Renville, Minnesota, U.S.A. was formed because corn growers saw an opportunity to add value to their grain by moving up the value chain. Growers across Australia formed the Australian Persimmon Export Company, which

successfully markets non-astringent persimmons under its own brand names into major export markets in Asia (Collins 1997). Febo (1987) and Smit and Darcey (1995) suggest groups form to achieve one or more of three general objectives: to reduce costs through increased purchasing power, to increase production through crop improvement or to increase profits by expanding markets.

2.2 Intensity of participation

Groups also function at different levels of intensity. Winer and Ray (1994) distinguish between:

- cooperation (short term, informal, sharing of information, partners remain distinct and separate);
- coordination (longer term, specific program, partners divide roles, share rewards); and
- collaboration (durable and pervasive relationship, fully committed partners, joint planning, pooled resources, shared rewards).

Winer and Ray (1994) indicate that keys to the development of a true collaborative relationship are a shared vision and joint decision-making.

3 Critical Performance Variables

Bleeke and Ernst (1995) studied more than 200 strategic alliances between businesses. They classified these collaborative arrangements into six categories: collision of competitors, alliances of the weak, disguised sales, bootstrap alliances, evolutions to sale, and complementary equals. These authors found that only alliances classified as "complementary equals" were durable and productive. These collaborations are characterised by partners that each bring something of value to the table and where each builds on the strengths of their partner rather than trying to fill their own gaps. The durability of these collaboratives depends upon the flexibility of the partners, maintenance of the balance of contributions, and establishment of clear, mutually beneficial goals. Successful business collaborations, therefore, tend to be based on "offensive" rather than "defensive" strategies and reflect an underlying equality or mutual dependence among the participants.

Another approach to this issue is to examine the processes and structures that have lead to success. Some of these processes and structures include: competent leadership, appropriate organisational structure, effective communication with members, cohesion and commitment of members, customer focus, and availability of adequate capital (Levine and Moreland 1990; Manwaring 1990; Tyson 1989; Watson 1995).

Competent and committed leadership is critical. This leadership must be committed to the group and its goals (Manwaring 1990; Levine and Moreland 1990) and have the skills to empower its members. For these reasons they need to be seen to be selected by the members.

Organisational structure is important because it influences members' perceptions and expectations of the group and affects communications and relationships between members and between members and management, which, in turn, impinge on group performance (Tyson 1989). A structure that encourages communications needs to be complemented by leadership that is also committed to communications. Outside facilitators can help with this, particularly in the early stages of group formation (Watson 1995).

Collaborative groups tend to fail when they lose cohesion and commitment. This can have many causes but loss of shared expectations and goals (Levine and Moreland 1990) is often a critical component of these failures. While homogenous group membership is one way of increasing the probability of cohesion and commitment, it is not necessarily optimal as diversity can lead to a wider variety of ideas and views. With a more diverse membership, however, the inevitable conflicts must be dealt with openly and resolved successfully (Manwaring 1990). This can lead to greater unity and cohesion. Once again facilitators can help with this challenge (Watson 1995).

Finally, customer focus and adequate capital are particularly important for groups hoping to compete and possibly gain an advantage over competitors (Anderson 1995; Manwaring 1990; Watson 1995). Customer relations and capitalisation are critical when groups are integrating vertically. Product quality and reliability of supply are two key issues particularly in export markets. Inability to raise sufficient capital has been another factor that has lead to failures in collaborative groups (Manwaring 1990). This issue interacts with cooperative structure and one reason driving the development of "new generation" cooperative structures (Cook 1995; Royer 1999).

4 Challenges Associated With Collaborative Groups

The ability of farmers to form and sustain cooperatives has always been challenging and current conditions in agricultural markets make these challenges somewhat greater. Royer (1999) summarises the institutional challenges facing cooperatives in terms of:

- Equity management issues (timely revolvement of member equity investments and acquisition of sufficient equity capital to compete with large investor oriented firms)
- Horizon issues (when the investment time horizon of the cooperative and of the members are poorly aligned)
- Portfolio issues (when the risk-reward preferences of the member and cooperative are poorly aligned)
- Principal-Agent issues (ownership and management of cooperative assets are vested in different people with different goals and incentive structures)
- Free rider issues (the difficulty of excluding non-members from some cooperative benefits such as more competitive prices paid for commodities)
- Influence cost issues (caused by increased heterogeneity of interests among the members of the cooperative)

To this list should be added a significant "missing hero" problem during the formation of cooperatives. The process of forming a cooperative is typically very time-intensive. For the person or group who forms the cooperative it is probable that the individual benefits they receive from the cooperative fail to cover their costs. In particular, the time costs associated with organising and conducting meetings with growers to sell the idea of the cooperative are rarely fully reimbursed.

5 Comparing Australian And U.S. Collaborative Groups

Given the potential importance of cooperatives or other collaborative groups to the future economic welfare of farmers, and the challenges farmers face in forming and sustaining them, it is important to understand the factors that are associated with successful collaborative groups. In independent studies looking at groups in Australia and in the U.S., a number of common factors associated with successful group development were identified.

5.1 The Australian Experience

Murray-Prior *et al.* (1998) studied 13 collaborative marketing groups in Western Australia. Participants in these groups were asked to rate the importance of 39 factors associated with collaborative marketing groups. Each factor was rated on a scale of 1 (very unimportant) to 7 (very important). Table 1 lists the ten factors identified by members of these marketing groups as being most important to the group's success.

At least four broad themes emerge from this list of success factors. First, these group participants identified strong leadership as a requirement for successful groups. The value they placed on strong leadership is reflected in the value they placed on the leader's commitment to the success of the group, acceptance of responsibility and active cultivation of the members' commitment to the group.

Second, these group participants felt that good internal communication channels are important. They felt it is important that groups communicate openly and share information freely. When confronted with differences, groups shouldn't try to paper over them but work to overcome them.

Third, the respondents felt that the group needs to have a clear reason for being. As noted above, collaborative business structures have a number of disadvantages, not the least of which are high transactions costs associated with start-up. It was important to the groups in the Murray-Prior et al. study that they address a clearly identified problem or opportunity, lay out clear and obtainable objectives and develop a plan for achieving their goals.

Finally, trust appears to be a critical factor for these groups. Trust is associated with the willingness of group participants to work through problems rather than simply leaving the group or ignoring the problem. Trust is also indicated by the need to develop unity and cohesion within the group.

	Factor	Ν	Mean Score
1	Commitment of manager to group	99	6.54
2	Open communications	99	6.41
3	Freely available information	99	6.35
4	Long range planning	98	6.35
5	Define marketing problem	100	6.32
6	Work to overcome differences	99	6.30
7	Manager accepts responsibility	98	6.29
8	Develop unity and cohesion	97	6.25
9	Clear, achievable objectives	100	6.23
10	Manager cultivates members' commitment	99	6.23

Table 1: Top Ten Success Factors, Australian Marketing Groups

Source: Adapted from Murray-Prior et al. p. 41.

In the Murray-Prior *et al.* study, the groups were asked to indicate not only the factors they felt were most important to the success of groups in general but also to assess the degree to which their particular group had been successful in cultivating these success factors. The authors were, thus, able to identify gaps between the perceived need for particular attributes and the actual attainment of that attribute by the group. Three years after the initial study, Murray-Prior and Field (1999) utilised this "gap analysis" to test the relevance of some of the key success factors identified in the initial study. Six of the 13 groups were revisited. The two groups rated least successful in the original study (in terms of the gap between importance and attainment) had gone out of existence and the two rated most successful were still operating. Thus, there is at least limited empirical support for the importance of the success factors discussed above.

The Murray-Prior and Field study also examined the factors groups identified as needed for on-going success. Their results suggest that the needs of successful groups evolve over time. Once collaborative groups are beyond their initial start-up phase the need to develop institutional structures that encourage and reward member commitment and also cope with changing business needs. Further, maturer groups need to devote more time and effort to the issue of leadership development and eventual succession. Successful on-going collaborative marketing groups have a strong focus on their ultimate customer and work to ensure a consistent supply of high quality products. Strong internal and external communications remain a key attribute of successful groups. Successful groups noted challenges associated with the start-up process when tangible benefits didn't come as quickly as some members had hoped or expected. Finally, members of successful groups valued the social benefits associated with group membership.

5.2 The U.S. Experience

Trechter and Jacobson (1996) identified success factors based on case studies of new groups involving multiple rural communities. In some cases the group participants were farmers and in others they involved primarily residents of small towns. They found both internal and external factors that were associated with the success or failure of groups. Table 2 summarises their findings.

Trechter and Jacobson indicate that the most important external factor for group success is a real or perceived problem. They also state that problems seem to be better motivators of group formation than opportunities, which is consistent with Cook's (1995) observation of the defensive origins of most traditional cooperatives. The availability of technical assistance and seed money often enabled the groups to do a preliminary feasibility study, hire a facilitator or establish the legal structure of the group. Finally, the endorsement of prominent local leaders (e.g. the mayor of a town) can lend legitimacy to the group, increase its visibility, and may increase the flow of resources (people and money) to the group.

Table 2: Success Factors for Start-Up Groups in the U.S. **External Factors:** Real or perceived problem Availability of technical assistance and seed money Endorsement by local leaders Internal Factors: Local leader committed to success Clear and attainable vision that identifies participant benefits Realistic expectations of start-up costs Trust within the group Early success for the group Workload distributed equitably Consistent representation by people with decision-making authority Good communications to internal and external audiences Source: Adapted from Trechter and Jacobson

The more important factors leading to success of the groups studied by Trechter and Jacobson were internal and the most important internal factor was inspired and committed local leadership. Experts from outside the group can bring resources and expertise that can help speed the process along but it is the local leadership that has the day-to-day responsibilities to see that necessary tasks are completed in a timely fashion. There is no substitute for strong local leadership. Successful groups also have a realistic sense of the time and energy it will take to create a functioning institution. They have a clear vision for what is to be accomplished, they make sure that representation at meetings during the start-up phase is consistent and involves people who can make decisions, they distribute the workload equitably, and they look for and celebrate early successes that illustrate the benefits of the group. Trust and strong communication links were also critical to the success of these groups.

6 Themes For Success

There are clearly a number of overlapping themes in these Australian and U.S. experiences with groups, themes that are consistent with the literature. In this section of the paper we identify the five areas in which successful groups seem to excel and identify implications for the education and extension efforts of universities and other public institutions.

6.1 Leadership

In both the Australian and the American groups the quality of leadership was probably the most important success factor. Clearly, during the start-up phase a group needs a leader that can keep the group on task, inspire confidence, and get things done. The leader needs to have the ability to remain committed over what is sometimes a lengthy birthing process and to overcome barriers that arise during the process. It is also interesting that the nature of leadership often changes as the group evolves from the start-up to the operational phase. For example, our experience suggests that during the start-up phase it is often advantageous to have leadership that could be characterised as "wild-eyed zealots". Leaders who feel strongly about the mission of the group and are determined to make the group succeed. Once a group has passed from the development to the operational phase, the leadership style that is most successful seems to have less zeal and more managerial expertise. Thus, identifying and cultivating the initial leader and developing provisions for succession to new leadership are both critically important.

6.2 Planning

While leadership may be the most important success factor for groups, planning is probably a close second. The two critical planning activities that successful groups seem to do well are clearly identifying the group's vision and objectives. The vision defines, in broad terms, why the group exists – what it wants to accomplish. The objectives are concrete results that will lead to the realisation of its vision. Because there are often quite high transactions costs associated with creating a group, having some objectives that can be realised within

a relatively short period of time (thereby highlighting the benefits of participation in the group) can be important.

6.3 Standard Operating Procedures

Successful groups seem to evolve standard operating procedures that help reduce the transactions costs associated with group formation. These procedures vary by group but often include such things as participation expectations, communication structures, and mechanisms for structural change. One of the most effective ways of killing a group that is attempting to form is to have inconsistent participation or participation by the wrong set of people. Inconsistent participation tends to result in substantial amounts of time being wasted at group meetings in order to bring those who missed earlier meetings up to speed on the current state of affairs and/or re-arguing issues that had been decided previously. Similarly, if participants at group meetings are not empowered to make decisions or don't represent the people who will ultimately benefit from the group, time is wasted and enthusiasm for the group wanes.

The transaction costs of forming or operating a group can soar if participation expectations are not clarified and enforced. Setting up the mechanisms and procedures that allow the group to communicate with their members and with external audiences is also important. Effective internal communications can streamline decision-making, increase member buy-in of the group's activities, and gather information about member satisfaction with the group is performance. External communications can help build markets and public awareness of the group and its vision. Finally, successful groups evolve to meet the changing needs of their members. Defining the mechanisms for allowing or encouraging this change is important. In part this is accomplished by the group's by-laws or constitution and in part by the culture the group develops. Groups formed for more "offensive" reasons may have an advantage in terms of developing a group culture that allows and values change.

6.4 Social Capital

Successful groups in both the U.S. and Australia develop social capital within the group. Social capital, according to Robison and Siles (1999) is "the potential benefits, advantages, and preferential treatment resulting from one person or group's sympathy and sense of obligation toward another person or group." In the context of group formation and operation social capital is important at a number of levels. First, in a number of instances, particularly in Australia, the groups were a source or producer of social capital. Members of the groups valued their participation because of the social and professional interactions they afforded. Second, social capital and trust can reduce the transactions costs associated with group formation and operations. If you have high social capital investments with the group, you are more likely to trust them to make the right decisions and reduce the amount of "due diligence" you do on a given decision. Finally, the development of social capital is frequently a precursor to making substantial progress on the formation of the group. In some of the groups studied by Trechter and Jacobson participants initially viewed others in the group as rivals or competitors. Until social capital had been developed, these participants were generally unwilling to seriously consider transforming a competitive relationship to a collaborative one.

6.5 Institutional Support

In many of the collaborative groups studied in Australia and the U.S. the groups received varying amounts of institutional support from universities, departments of agriculture, or other public and private institutions. In some instances this included monetary support (e.g. initial government support or agribusiness sponsorship of a number of farm groups in Australia) and in others it was in the form of logistical or technical support (e.g. facilitation of strategic planning efforts). Such institutional support is only a complement to (not a substitute for) local leadership and funding efforts but can be vitally important to the success of the group. In some instances institutional support is needed to provide specific technical information that the group would otherwise have difficulty obtaining (e.g. statistical data on marketing). In other instances, this support serves as external validation of the activities of the group, which may encourage them to push through the high up-front establishment costs. In yet other instances, technical support may come in the form of training or educational opportunities that enable the group to develop needed skills or competencies.

7 Implications For Universities

The premise of this paper is that the development of supply chains in agriculture is increasing the importance of farmer collaborative groups. Such groups could help improve or maintain the economic returns to farming, sustain rural economies, and increase social capital in rural areas. Universities can play a role in helping to develop and sustain these groups.

The institutional setting in the U.S. and Australia are substantially different. In the U.S. the Land Grant University system was founded on the principle that extension, or outreach, activities should be a central part of a university's mission. In Australia, universities focus on education and research, while extension is

primarily carried out by state departments of agriculture (which also have significant research efforts). Thus the implications of this research for supporting the formation and function of groups may be somewhat different in the two countries.

Five themes associated with the successful formation of groups in Australia and the U.S. have been identified: leadership, planning, the development of standard operating procedures, existence or development of social capital, and the availability of institutional support. Universities could have a direct role in addressing all of these themes except, perhaps, the creation of social capital in rural areas.

7.1 Universities and Leadership Development

Leadership is widely recognised as critical to the success of groups and businesses. However, like citizenship or entrepreneurship, we seem to know precious little about how to develop it. In a recent article surveying 54 studies, Collins concluded that, "there is a deficiency of real scholarly knowledge about leadership development." Collins also notes that the demands on and the returns to leadership in global organisations are greater than in traditional national organisations because of the greater complexities involved. Leadership skills in collaborative groups may also be different than those needed in traditional organisations, which tend to be more hierarchical. For example, given the pace of change in business today, the need for leadership skills in the area of strategic leadership are critical for all businesses. Collaborative groups clearly need this leadership skill but also demand very strong team management and communication skills. Universities have a role to play in research that defines leadership, how leadership can be developed and nurtured, and in developing outreach programs to enhance the leadership skills of farmers.

7.2 Universities and Planning Assistance

Planning helps ensure that participants in a group understand what the group is trying to achieve. In both the U.S. and Australian studies, clarity of goals was a critical success factor for collaborative groups. Universities can help groups with their planning effort at two levels. First, we can develop training manuals and workshops on planning to teach groups how to do their own planning (Olson 2001). Second, university personnel or those from other institutions with an outreach function may need to facilitate the planning process for groups, particularly those just forming.

7.3 Universities and Standard Operating Procedure Development

Identifying and documenting "best management practices" for collaborative groups of farmers is an important role for university researchers. For example, a typical response of farmer cooperatives to globalisation and the development of supply chains has been to get much larger, often through mergers and acquisitions. Frequently, one hears members of these larger cooperatives state that they see no or little difference between these mega-cooperatives and typical share corporations. Research on what members want and expect from their cooperatives would be very useful. Are there operational changes that can or should make in order to address member's loss of loyalty to and identity with larger cooperatives.

7.4 Universities and Institutional Support

Universities can help provide institutional support to farmer groups either directly or indirectly. In the U.S. the Extension Service, which is part of the Land Grant University system, provides direct institutional support, such as research on cooperative topics and facilitation of planning efforts. Currently in the U.S., most of the expertise that exists in academia with respect to cooperatives is heavily concentrated in the departments of agricultural economics. It would be useful to work with business schools and law schools, in particular, to develop cooperative curriculum relevant to these professions.

In Australia, there are many fewer academics with strong interests in cooperatives or other forms of collaborative groups. Further, there appears to be a much smaller supply of people with an understanding of cooperative issues in the legal, accounting, and business consulting communities. It would be helpful to include information about cooperatives in the curricula of schools that produce specialists in these fields.

In both countries, but particularly in Australia, universities could play a role in analysing the need for changes in public policies and laws as they relate to cooperatives. For example, it is reportedly contrary to Australian Competition and Consumers Commission (ACCC) for farmers to form bargaining cooperatives (they may contravene section 45 of the Trade Practices Act of 1974). University research could examine the pros and cons of changing this public policy. Australian university researchers could also expand their contacts with Department of Agricultural colleagues who have extension responsibilities in this area as a means of getting their research results on groups out to the relevant public.

8 Conclusions

Supply chains offer significant potential benefits, particularly to owners of these chains. Power within a chain is unlikely to be evenly distributed and may well shift over time. In supply chains in the food and fibre sector the most obvious power imbalance is between the oligopolistic firms that dominate input supply, food manufacturing and retailing and the perfectly competitive firms characteristic of the farming sector. If farmers are to deal with the supply chain oligopolists with something approaching equivalent amounts of bargaining power, they will have to form some sort of collaborative group.

Groups, such as cooperatives, tend to be difficult to form (high transactions costs) and difficult to manage (complex objective function, limited access to equity, etc.). Further, their record of success is mixed. Despite their documented shortcomings, they may be the only viable option for farmers who wish to participate in a supply chain, retain some entrepreneurial independence, and capture some of the benefits these chains create. Further, the cooperative business form is evolving in a variety of ways to address or mitigate structural weaknesses.

The development of new generation cooperatives, for example, effectively addresses the horizon, portfolio and free-rider problems associated with traditional cooperatives. The creation of Fonterra and Dairy Farmers of America illustrates that cooperatives can be created at a scale approaching that of the largest share corporations. The Australian Wheat Board (AWB) is evolving in yet another direction by creating a hybrid cooperative-share corporation. All three of these cooperative evolutionary paths are in their early phases and their ultimate success or failure is far from certain. What is clear, however, is that the cooperative structure continues to evolve in response to the social and economic conditions in which they must operate. University researchers and outreach personnel have important roles to play in this process.

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