

# **Cooperatives and Contracting in Agriculture: The Case of West Liberty Foods**

Roger Ginder, Brent Hueth, and Philippe Marcoul

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**Center for Agricultural and Rural Development  
Iowa State University  
Ames, Iowa 50011-1070  
[www.card.iastate.edu](http://www.card.iastate.edu)**

*Roger Ginder is professor, Brent Hueth is associate professor, and Philippe Marcoul is assistant professor in the Department of Economics, Iowa State University.*

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Questions or comments about the contents of this paper should be directed to Brent Hueth, 371 Heady Hall, Iowa State University, Ames, IA 50011-1070; Ph: (515) 294-1085; Fax: (515) 294-0221; E-mail: [bhueth@iastate.edu](mailto:bhueth@iastate.edu).

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## **Abstract**

The West Liberty Foods turkey cooperative was formed in 1996 to purchase the assets and assume operations of Louis Rich Foods (an investor-owned processing firm), which, at the time, announced the imminent shutdown of its West Liberty, Iowa, processing facility. We study the creation and performance of this “new generation” cooperative using field interviews with grower members and company management. We describe changes, before and after the buyout, in the contractual apparatus used for procuring live turkeys, and in the communication requirements, work expectations, and financial positions of growers. During the private ownership period, most of the inputs (except labor and facilities) were provided by the firm; there was substantial supervision of the growers’ actions; growers faced little price and production risk; and growers’ equity was due largely to ownership of land and other farm assets. Our interviews reveal that, after cooperative formation, growers were exposed to considerable additional risk; monitoring of growers by the firm was less intensive; grower time and effort commitments to turkey production increased substantially; and a significant fraction of firm (cooperative) equity came from growers’ willingness to leverage their farm and personal assets (and hence indirectly their existing relationships with local lenders). We argue that some of these changes are consistent with a financial contract where asset pledging and its corollary risk generate higher work effort by growers and a reduction in agency rents. These economies likely compensate for an organizational deadweight loss traditionally associated with cooperative governance.

**Keywords:** Cooperatives, procurement, financial contracting, agriculture

# **COOPERATIVES AND CONTRACTING IN AGRICULTURE: THE CASE OF WEST LIBERTY FOODS**

## **Introduction**

The last two decades have witnessed the emergence of a mode for agricultural cooperation that appears, from an organizational standpoint, to be a departure from the tradition of cooperatives with open membership and a small up-front financial commitment. So-called new-generation cooperatives (NGCs) have a defined (or closed) membership, require significant up-front equity from joining members, have transferable and appreciable equity shares, and are structured with voting rights that are proportional to members' delivery obligations. Economists and other cooperative scholars have investigated the characteristics of NGCs and argue that they represent an organizational innovation that improves long-run investment incentives (e.g., Cook and Illiopoulos, 1999; Harris et al., 1996).

The rise of NGCs, and their apparent popularity with growers, is intriguing because it raises questions concerning their economic role, relative to investor-owned firms. As noted by Cook and Chaddad (2004), most of these grower cooperatives are engaged in processing and have either replaced an exiting investor-owned firm (IOF) or have initiated processing operations in "niche" markets. Why are these cooperatives able to operate when private investors are not? More generally, what are the relative advantages and disadvantages of the NGC organizational structure?

The objective of the present work is to suggest potential answers to these questions in the context of a particular example: West Liberty Foods (WLF) of Iowa. This cooperative, which is owned by Iowa turkey growers, replaced a privately owned company in 1996 and has been operating successfully since that time. The special interest we have in this case

comes from the fact that it contrasts the logic of two organizational modes—cooperative and private—one replacing the other. As we describe in more detail in the next section, most existing research on the nature of the NGC structure contrasts this cooperative organizational mode with other *cooperative* structures. While useful as a means of documenting the nature of organizational innovation across time, this form of comparison is not helpful in contrasting the relative merit of cooperative and investor-owned structures. We describe changes, before and after the buyout, in the contractual apparatus used for procuring live turkeys, in the financial position of growers, and in the communication and work expectations of growers. From these observations, we try to infer potential sources of relative advantage for the cooperative structure.

Briefly, our analysis reveals that the conversion of the IOF to a cooperative resulted in three broad changes. First, farmer members pledged many of their farm and personal assets to participate in the cooperative. Second, the production contract with growers became more highly powered: contracted growers now faced greater price and production risk *and* stood the risk of losing a substantial portion of their personal wealth in the event the firm failed. Moreover, our interviews reveal that growers capitalized on their information regarding production possibilities to optimize the form of the production contract used within the cooperative. Third, growers assumed responsibility for turkey production activities that were once provided by the firm, *and* substantially increased their involvement in turkey processing operations.<sup>1</sup> We argue that some of these changes can be understood in the context of a financial contracting model where asset pledging and the assumption of risk generate higher work effort by growers and a reduction in agency rents—and that these changes likely compensate for an organizational deadweight loss associated with cooperative governance.

Before turning to a description of WLF, we briefly discuss other research on cooperation in agriculture. This will help clarify the similarities and differences between our study and other studies on the determinants of success in cooperative undertakings.

Given the descriptive nature of our data, we do not test any formal hypotheses or propose definitive answers to the questions noted above. Our more modest goal is to suggest, based on observations from this example (and from other published research), various hypotheses that might be formally tested in future work and to provide some guidance for how this can be carried out.

## **Related Literature**

### **The cooperative as a basic vertical integration process and the role of incentives and information asymmetries**

The formation of a processing cooperative is an example of a vertical integration process. The economic literature has identified several aspects that limits vertical integration through cooperative undertakings. The necessity to maintain assets can create difficulty when these assets are jointly owned and when the number of members becomes important. Free-riding behavior among members and lack of monitoring can become accute when the production team is quite large. Thus, it may be optimal to replace joint ownership with a single private investor who intensely monitors workers (Dow, 2003).

Another set of limitations affecting cooperative undertakings is the existence of moral hazard coupled with limited access to capital. Indeed, once a loan has been obtained by cooperative members, there is often a certain amount of leeway as to how to spend this money; in this setting moral hazard arises naturally, as members can easily substitute loans for production and saving effort.<sup>2</sup> As a result, the cost of capital is likely to be higher for cooperative undertakings and this may explain why they are seldom observed (Bonin et al., 1993). Similarly, it is argued that cooperative members are reluctant to invest major fractions of their wealth in a cooperative project because of the risk they incur by doing so (Pencavel, 2001). Major equity requirements and important risk taking underlies the present cooperative case study, where we show that members had to collateralize most of their assets to borrow the necessary equity.

In the traditional transaction-cost literature, the organization of production that

emerges is one that minimizes transaction costs. Thus, in this view, the emergence of vertical integration, or some form of exclusive dealings, arises when it can efficiently replace market-intermediated activities. When one contrasts these two ways of organizing transactions, several characteristics are noticeable. First, when transactions are organized through markets, agents' incentives to produce efficiently tend to be more powerful than when transactions are operated within a single integrated entity. Second, information tends to flow more freely within than across organizations. This apparent trade-off between the power of incentives and the impact of information asymmetry is well recognized in the organization theory literature. Williamson (1975) discusses the costs of information collection and the impacts of moral hazard when it comes to vertical integration. He argues that integration is likely to result in smaller costs of information collection (p. 86). As argued by Hansmann (1996), cooperatives constitute organizational entities that can credibly compete or substitute for investor-owned firms in specific circumstances.

### **New generation cooperatives in agriculture**

The rise of the NGC has been essentially within the realm of the food processing sector and it is associated with a decline in growers' net income (Torgerson, 2001). Most of the NGCs created recently were created *ex nihilo* or replaced IOFs that were planning to exit.<sup>3</sup> Related to this latter point, Hueth and Marcoul (2005) argue that a cooperative organization with strictly positive up-front equity can emerge as a unique equilibrium organizational structure, even though it generates less surplus than an IOF. This is possible because in the cooperative organization, initial investments are funded and guaranteed by growers and this leads to a reduction in agency rents. However, such an organization emerges only when the joint returns to farming and processing are small and insufficient to cover both the investment costs of processing and the agency rent earned by growers. In such a model, the cooperative organization represents a device to reduce the agency rent enjoyed by growers.

A growing economic literature is developing on NGCs. Harris et al. (1996) describe

the organizational features of such organizations and contrast them with traditional cooperatives. Cook and Illiopoulos (1999) also study the emergence of NGCs. They argue that there was a “cooperative fever” in the beginning of the 1990s and that more than 80% of cooperative formations in the Upper Midwest during this period were non-traditional. Cook and Chaddad (2004) and Chaddad and Cook (2004) develop a typology of agricultural cooperatives based on property rights. They argue in particular that unlike traditional cooperatives, NGCs enhance members’ incentives to invest by allowing members to have transferable and appreciable residual claims.

Besides theoretical contributions, a growing number of case studies of NGCs have attempted to describe the features of NGCs and other cooperatives. Zueli et al. (2001) study the formation of the Dakota Growers Pasta Company, an NGC of durum growers established in 1998. The authors generally focus on the impact of this NGC on the local community and argue that it was beneficial overall. Carlberg et al. (2004) carry out surveys concerning the success of NGCs. The results of their study echo our findings regarding the importance of the initial capitalization and member involvement. Most of the cooperative boards that are surveyed ranked these aspects as “highly important for the success of the cooperative.” Our contribution to this strand of the literature is to contrast NGC operations with the IOF counterpart.

### **Cooperatives and the organization of production**

Several other case studies have analyzed organizational factors important for explaining the management of contractual relationships with members. This research is related to ours in that it provides further evidence that the cooperative financial structure leads to different contract arrangements, relative to what would be observed in an investor-owned organization; it also provides further confirmation that cooperatives are viable in economic environments that cannot support investor-owned firms.

Guinnane (2001) uses business records of German credit cooperatives during the period 1883-1914 to study the determinants of their importance in rural German areas.

Credit cooperatives used money deposited by members and non-members to extend loans to members. Guinnane's work shows that those institutions have prevailed essentially because of their ability to obtain superior information on potential loan applicants and to impose sanctions on defaulting members. Several characteristics explain that this was indeed possible. First, rural cooperatives were operating on a very limited but exclusive geographical and population scale, where reputational concerns of members were paramount. To stimulate peer pressures among their members, the typical cooperative relied on co-signers; thus, sanctions for non-repayment usually took the form of irreversible damages to the borrower's *and* cosigner's reputations.<sup>4</sup> Moreover, the exclusive territories reinforced incentives for repayment by ensuring that a borrower-member who defaulted would not be able to borrow again. Finally, these cooperatives usually had *unlimited-liability* structures. This feature implied that non-borrowing members were generally at risk if unwise loans were extended. Guinnane argues that this feature was crucial in order to guarantee the credit cooperative a reliable and costless source of information.

Whereas German credit cooperatives relied on intangible concepts such as *social capital* and *reputational concerns* of borrowers to achieve repayment, Henriksen and Hviid (2004) develop the idea that laws favorable to long-term contracting may be an essential ingredient for the prevalence of cooperatives. They study dairy cooperative formations and operations in Denmark before World War I. They argue that the success of these undertakings essentially hinged on their ability to obtain a steady supply of milk for long periods. Using the minutes of the board of these cooperatives, they show that dairy cooperatives were able to achieve this goal by writing and enforcing long-term contracts that prevented the exit of members. It appears that the Danish legal system, which systematically enforced these contracts, was instrumental in the cooperatives'. They also give several hints as to why private investors were *not* successful in the dairy business, although the same contracting tools were readily available to them. In particular, they



stress the importance of milk adulteration testing<sup>5</sup> and argue that growers could not easily trust a private investor to objectively test milk quality. This represents another example in which the cooperative ownership structure leads to a different type of contractual arrangement with members.

We now turn to a description of the formation of the West Liberty Food growers' cooperative.

### **Description and Analysis of West Liberty Foods**

#### **Turkey production contracts before and after the formation of the West Liberty Food Cooperative**

*Producing turkeys: From one-day-old turkeys to sliced luncheon meat.* It takes approximately 20 weeks to obtain a young adult turkey ready for slaughter. This process is usually carried out in specialized facilities where growers start to feed turkeys when they are one or two days old. Turkeys are fragile and their growth is constantly monitored to optimize feed-to-meat conversion ratios.

Besides specialized facilities and labor, other essential inputs to growing turkeys are the feed, "litter," and liquid propane. The composition of turkey feed is a mix that evolves over the production process. It is mainly composed of corn, soybeans, and a cocktail of vitamins and minerals necessary for bird growth. The turkeys are raised on a floor covered with litter that absorbs turkey excrement; the litter is removed periodically and used as fertilizer in crop production. This litter thus represents a small but valuable by-product of turkey growing. Finally, liquid propane is used to dry feed and heat the facility. When the facility is too cold, the birds burn calories to generate warmth, and this reduces the rate of weight gain.

When turkeys arrive at maturity, the birds are slaughtered and processed promptly. A crucial aspect of processing (not unique to turkey production) is the importance of having a constant supply of turkey at the plant. The plant has high fixed costs and can incur huge losses if supply drops or is not constant over time. As we will show, this aspect is

important in understanding the form of the production contracts that are implemented under the two different ownership structures, before and after the creation of the cooperative.

*Structure of procurement contracts and bird ownership before 1996.* Before the formation of the WLF cooperative, the West Liberty plant was operated by Louis Rich, a subsidiary of Kraft Food Corporation. Louis Rich relied on two different ways of procuring turkeys, as it faced two relatively distinct populations of growers: one from the southeastern region and the other from the central region of Iowa.

In the central region of Iowa, contracts were structured to allow for heavy involvement of Louis Rich in growers' operations. Louis Rich contracted for purchase of young turkeys from a third party and arranged for delivery to growers. These turkeys remained the property of Louis Rich through the entire growing and harvesting period. Aside from the facility itself, the growers' only responsibility was to care for the turkeys; other significant inputs like food, litter, and veterinary services were provided by Louis Rich. The contract usually took the form of a "take-it-or-leave-it" offer to growers, with a flat fee paid at delivery for each turkey, and a bonus/penalty provision contingent on feed-conversion ratios and bird mortality.<sup>6</sup> In southeastern Iowa, Louis Rich was far less involved in growers' operations. The number of birds and the unit price were specified, and growers were then in charge of the entire growing process, including acquisition and management of the production inputs. In both regions, contract conditions were uniform across growers.

Central Iowa growers faced much less risk than growers in the southeast. Most importantly, central growers were completely insulated against price variation in the cost of feed. Although the litter was provided by Louis Rich, growers were subject to an allowance in relation to the number of birds they received. This restriction seems to be explained by the potential for moral hazard in the use of litter, which, as emphasized earlier, generates valuable fertilizer. The central Iowa contract also seems to have been

less demanding, in that the work effort required to source feed and veterinary services in the southeast involved significant extra cost.

There are two differences in the characteristics of growers across these regions that may help explain the different types of contracts that were used. First, growers in the southeast operate at a much smaller scale and are more diversified. This latter fact may lower the cost of risk bearing, and thus lower the cost of using the “lighter” contractual apparatus observed in the southeast. Similarly, growers in the southeast mostly come from a community of Mennonites and there is anecdotal evidence of informal group risk sharing in these communities.

In the next section, we begin our description of changes that occurred—in financial position of growers and in the contractual apparatus for turkey procurement—as a result of cooperative formation.

#### **Cooperative formation: “Pledging the farm”**

In mid-1996 Louis, Rich officially announced to its contract producers that it would stop turkey processing at the end of the year and close the West Liberty plant. At that point, the market for turkey meat was depressed, and eventually Kraft Food decided to withdraw from the processing business. After some initial uncertainty, it became clear that no private investor was willing to buy out Louis Rich and assume operations of the West Liberty plant.

The growers were conscious that there was no alternative to this plant and that they would have to quit growing turkeys. As a result, a group of 47 growers formed with the objective of creating a growers’ cooperative that would own and operate the West Liberty plant.<sup>7</sup> Several major problems needed to be solved before the cooperative could be formalized: the group of growers needed *money to buy the plant*, they needed *expertise to run* the plant, and they also *needed customers* for the turkey meat.

In November 1996, a management team was formed and hired by the growers. The newly hired CEO was a specialist of turkey processing and had extensive experience with

the cooperative setting. During the same time, negotiations with Louis Rich were taking place.<sup>8</sup> By continuing operations and not releasing the plant employees, Louis Rich could save severance payments worth more than the plant value itself. As a result, Louis Rich initially committed to purchase no less than 50% of the meat produced by the cooperative during the first years of operations. This initial deal solved part of the problem of finding customers.

The last important problem for the growers was to find the up-front equity necessary to purchase the plant. Most of this capital was collected through private loans that were extended to growers by local banks. This financial effort was considerable and resulted in most growers having at least some of their land (or other personal assets) collateralized. Such loans were especially difficult to obtain for those who had few physical assets to collateralize.

During the first years of operations, the cooperative went through three consecutive recapitalizations. These recapitalizations were triggered by liquidity shortages due to depressed turkey prices and higher input prices.<sup>9</sup> The processing operations were losing money. In the initial financial setup, members were asked to add \$1 in equity for each turkey they would deliver. Then, one year later, the board decided to add another \$1 per member for each bird, doubling the initial commitment. Finally, in a third round, the unit turkey price was lowered by \$1.50 for every member. These consecutive demands for cash caused the exit of several, mostly older, members.<sup>10</sup>

Two results of these recapitalizations bear remark. First, the members who chose to stick with the organizations saw much of their wealth transferred from their farms into cooperative equity. Second, more than one interviewee remarked that successive recapitalizations acted like a self-selection mechanism in which only the relatively “good” growers decided to stay within the cooperative structure.

Although it is hard to quantify the second effect, all of our interviews indicate that the first effect explains several institutional features observed in the new organization.<sup>11</sup> We

believe that this particular aspect is one of the main sources of internal efficiency of the cooperative. In particular, it explains the apparent success of the cooperative in implementing new delivery contracts. The next section describes the main stages of the design of this new contract and its characteristics.

### **The cooperative contract: Learning and efficiency**

Although, one possible option for the cooperative was to replicate the contractual terms that Louis Rich had with its growers, it seems that this possibility was never seriously considered. The growers were conscious that the financial structure of the cooperative was equivalent to the growers being residual claimants for the cooperative output. As argued before, nearly all of them had transferred a substantial portion of their wealth into cooperative equity. Thus, failure of the cooperative was simply not an option for most of them.<sup>12</sup> As a result, the growers allowed the board to set up a contractual structure for *all* growers that closely resembles the contract used by the southeastern growers, and that is therefore significantly more “arm’s length” than the central Iowa contract used by Louis Rich.

In the current procurement contract, grower-members own the turkeys grown on their farms, and the unit delivery price is specified in advance. The contract is thus close to a pure *fixed-price* contract.<sup>13</sup> In this contractual relationship, the cooperative no longer shares the input costs, as the growers have to purchase all of the input necessary to grow the turkeys. This contract is a high-powered incentive scheme and it is undoubtedly *less demanding*, in term of monitoring and administrative costs, than the agreement that Louis Rich had with its central Iowa growers. Nevertheless, this contract was seen by some members as too risky. Ultimately, the cooperative had to introduce some risk-sharing into the contract and the delivery price is now contingent upon the future price of key inputs such as corn and soybeans. This removes some of the risk that members would face as truly independent growers.

The cooperative has spent considerable time budgeting costs in order to arrive at a

“fair” price for grower-members. Our interview with the chairman of the board revealed that growers’ experience was crucial in evaluating growers’ costs. Growers were asked to organize meetings to study every major component of cost. One interviewee noted how, during these meetings, they discovered that what was budgeted by Louis Rich for inputs, such as litter, was much higher than necessary. This anecdote arguably demonstrates how a private processor had less information of the growers’ costs than the cooperative was able to obtain. Apparently, this was possible because the members understood that it was in *their* interest to reveal their private information about costs.

The new contract was not much of a change for the southeast Iowa members who had similar contractual terms with Louis Rich prior to the buyout. This is in contrast to the central Iowa growers who had to adapt themselves to these new contractual conditions. When asked about the way they perceive their situations now and then, our interviews with central Iowa growers indicate that they unambiguously perceive it as “less comfortable” now. Relatedly, they mention that their work-load increased substantially as a result of the introduction of the cooperative contract.<sup>14</sup>

The transition between these two contractual relationships has been rough for some growers. However, our inquiry does not show that the cooperative has had major problems with enforcement of the contract. Rather, whenever a member is struggling to honor his delivery duties, the cooperative always attempts to solve the problem on a one-by-one basis. For instance, and to the best of our knowledge, no expulsion of a WLF member has ever occurred. Given the lack of a formal written delivery contract, it appears that the WLF cooperative relies on a substantial up-front equity requirement to align growers’ interests with those of the cooperative. This fact demonstrates how a strong financial contract—and in particular the large financial penalty a grower faces in the event the firm fails—complements and allows for the smooth functioning of the procurement contract.

Next, we show how members’ financial interest in the cooperative is also responsible for other important features of WLF.

### **Decision-making and communication in the WLF cooperative**

With all its members having a large financial interest in cooperative success, it is natural, and our interviews confirm, that there is demand by growers to participate in the decision-making processes of the cooperative. This demand can be detrimental to the organization if it does not manage information flows effectively. On the one hand, members have a right to be informed and to participate in strategic decisions. On the other hand, it can be difficult to fully respond to every demand for communication and involvement made by individual growers. Our analysis reveals that the cooperative board of directors is an essential instrument used to achieve this balance. We first describe how the board evolved toward a better management of information.

*The role of the board and learning to communicate.* In any traditional corporation, the board represents the interest of the owners of the firm, whereas in a cooperative, the board represents the interests of both the owners of the firm and of grower-members who deliver a key production input.

The board of WLF makes several types of decisions. Our interviews revealed at least two major potential sources of conflict among members in these decisions. First, there is tension between newer members and senior (or initial) members. As argued in the previous section, the early stages of the cooperative were difficult because there were successive recapitalizations that were required in response to market crises. Newer members, on the other hand, have never been exposed to this kind of financial stress. The pricing of the turkeys explicitly accounts for this difference with newer members effectively receiving a lower net price (they earn the same price for their turkeys but get much smaller unit shares on patronage refunds). This unequal price is cause for conflict when turkey prices are low, and newer members have difficulty earning positive margins.

Another source of conflict is the distribution of profit within the cooperative. This tension usually arises between growers of differing cost efficiency. Profits are distributed through two distinct channels. The first one consists of increasing the price offered to

members for their turkeys. The second one consists of increasing the level of patronage refunds obtained by members. Producers who are production efficient will tend to prefer output-based pricing, while producers who are production inefficient will prefer dividend-based pricing (which is divorced from output).

The composition of the board at WLF has evolved over time and reflects the evolution and the growth of the organization. When the cooperative was created, the board was entirely composed of grower-members. As is the case with NGCs, the important decisions are usually made by the members, and the number of votes a member can carry depends on the quantity of delivery rights. For instance, in 2005, Stock A provided 1 vote for each 100,000 birds. Recently, the cooperative has created another type of stock (stock B) to allow outside sources of equity. Stock B does not carry delivery rights but allows persons such as members' family or institutions (e.g., local banks) to invest in WLF. Members who do not want to expand their operations but who do want to invest more in the cooperative can also hold B stock. This stock carries voting rights. The board is currently composed of thirteen persons. The CEO is not on the board, though he does attend board meetings. Usually, decisions are made by the executive committee, which has full board power and is composed of four persons, with 1 stock B representative.

At the beginning of the cooperative operations, a crucial design task was to allow for necessary communication between grower-members and management of the processing operations. Our inquiry suggests that this task was largely accomplished by the first CEO. In his interview, he told us that a major part of his time was devoted to communication with growers, especially at the beginning of the operations. This can be explained partly by his personality but also by the fact that, at that time, the growers sitting on the board did not have expertise in processing operations. Over time, however, it seems that the board has played a more important role in communication with growers, especially after the first CEO left in 2004.

A major challenge for the board was to be able to explain concretely to the grower



base the consequences of the board's decision for farming operations. As the chairman puts it, "you have to be able to read a financial statement, and put it in total farmer language." The chairman commented to us that to accomplish this objective he needed to be surrounded by expert people on the board, and, as a result, growers who possess useful expertise are usually suggested as candidates for a board slot. For instance, one of the growers of the executive committee is a certified public accountant. This aspect underlines one of the main differences between a private and a cooperative undertaking. A private processor cares primarily about firm profits; growers matter only to the extent that they contribute to firm profits. In the cooperative setting, growers are the owners of the processing plant and as such any decision concerning the processing operations will reflect the interest of growers as investors *and* as farmers. This additional constraint, which any cooperative faces, is at the core of arguments by Hansmann (1996), who documents the importance of heterogeneity in collective decision-making as an additional cost of cooperative activity. These observations on the WLF cooperative are consistent with this argument.

Another challenge that the board faced was to restrict communication channels between individual growers and the management of operations. Initial experience showed that such direct communications were a nuisance for the whole organization. To solve this particular problem, the cooperative has now implemented a strict chain of command that *every* member has to follow when when he has major complaints about the processing operations. The major complaints between the members and the operations are now handled exclusively by the board which then tries to solve the problem with the management. Thus, there is a definite effort from the board to "isolate" the operations from the growers' complaints, although the chairman conceded to us that members are still permitted to call the management for "minor" problems.

Finally, the board needed also to put an end to information leakages. Here again, the board decided to restrict the communication of marketing information because, as

emphasized by the chairman, “too much was going out.” As a result, the amount of strategic information members have access to is now substantially reduced relative to earlier years.

It is clear that these successive adaptations have caused regular members to feel less in control of their cooperative. To mitigate this effect, part of the board meetings are open to the growers so they can come and ask questions about board decisions. Our general feeling is that there seems to be some board supervision on the part of the growers. One grower member revealed to us that he was not going to these meeting as much as he would like because he did not want to give the board the impression that he was constantly looking over their shoulders. Such an attitude suggests both a legitimate desire to “know” and a trust in the board’s integrity and expertise. This trust is only possible if directors, who are also growers, have well-aligned interests with the grower base, a condition that, we think, is largely met in the WLF case.<sup>15</sup>

*Group decision-making and innovation.* We highlight here two aspects related to operations that the board worked on recently: *yield optimization* and *food safety*.

The optimization of animal yields in the plant has become a major issue. The board estimated that saving a thimble-full of breast meat in the cutting operations easily represents \$250,000 in additional profit at the end of the year. As noted by one member of the board, “yields are a combination,” and such savings can only be implemented if each operation is well coordinated. In the most recent growing contract, growers are given incentives for providing bigger animals, because every turkey involves the same amount of work, whatever its size. As a result, stronger incentives for bird size have been introduced in growers’ bonus schemes. Interestingly, those incentives have been passed on by grower-members to their own employees, who now obtain bonuses when average bird sizes are larger.

However, having big, homogeneous birds was a necessary condition only for increasing yields. To be fully effective, these production incentives had to be coordinated

with efforts in plant operations. Indeed, to capture results from the work of employees and to achieve a higher efficiency, management has started to match employees to the right job. For instance, as reported by one member of the board, individuals described as “knife happy” were systematically removed from tasks involving cutting.

The board was also active on marketing issues. Analysis of trends in turkey meat demand revealed to the board that the only severe problem that could possibly break the cooperative would be a *recall*. Recalls of product are typically triggered by food safety issues such as lysteria or other germs found in the end product. The board hired sanitation specialists and designed new slicing rooms. The aim of this task force was to design entirely independent slicing rooms with meat traceability so that if any recall happened, it would only affect a tiny portion of the production operation.

The design of these 20 (sanitary) independent slicing rooms turned out to add value to production. Indeed, WLF can now claim to offer cutting-edge food safety control, and this is a valuable attribute to customers. Several brands, including Subway and McDonalds, have already expressed strong interest in such a product. The second example shows to what extent the board is actively involved in shaping the strategy of the cooperative. We believe that the strong financial interest the board members have in WLF’s fate again explains such an involvement.

### **Conclusion and further discussion**

The case study of WLF possesses several intriguing features. First, our inquiry contrasts two different organizations of turkey production, one in which a privately owned processor contracts with growers and one in which turkey production is performed in a cooperative setting. Second, our description of the contractual relationships between the growers and the processor reveals that, in the cooperative setting, the monitoring structure is significantly reduced. More specifically, the farmer retains the ownership of the birds and organizes the supply of the necessary inputs. This situation is not typical in the

poultry industry (Leegomonchai and Vukina, 2005).

WLF appears to have been successful in transforming an apparently low-return enterprise (a private processor chose to exit) into a sustainable cooperative organization. Although part of this success may be the result of luck and skilled management, it also seems that grower ownership of the processing facility fundamentally transformed production incentives at the farm level. Arguably, this transformation is the result of the large cost each grower would have to bear if the firm failed. However, this risk is costly to bear, and as growers we interviewed clearly indicated, life in the cooperative is “less comfortable.” Growers are working harder and face substantially more risk than when they were producing for a private processor. In other words, although growers may be receiving higher net monetary returns (because they are now receiving a share of processing profits, in addition to a payment for turkey production) it seems that “agency rents” or true net returns have likely fallen. This observation is consistent with the work of Hueth and Marcoul (2005) who argue that these changes can be understood in the context of a financial contracting model where asset pledging and the assumption of risk generate higher work effort by growers and a reduction in agency rents. Of course, if this were the only implication of organizing production cooperatively, we would expect never to see a private firm. Thus, there are likely costs from cooperative organization that balance these benefits. Our study is consistent with the view of Hansmann (1996) and others that the “cost of democracy”—i.e., decision making with heterogeneous preferences—is one likely source of such cost.

Several questions are left unanswered by our study. For instance, it is difficult to gauge the level of efficiency of this organization of production compared to what is achieved by “integrators” in a similar segment of production. If such an organization achieves a higher surplus then it might replace, in the long run, more traditional organization of production. However, the feasibility of this type of organization seems questionable since, as we showed, it involves a significant level of risk taking on the part

of growers. Finally, we are silent about the importance of the membership size on the functioning of such an organization. Intangible assets, such as social capital, have been shown to be an important determinant of the success of cooperatives. However, high levels of peer monitoring, which are a part of social capital, are likely feasible only when the size of the membership is relatively small. These sorts of questions might be addressed in future work with cross-sectional or panel observation of firm entry and exit decisions, or possibly by systematic observation of variation in the internal structure of different organizational structures.

## Endnotes

1. This evidence, which we document more carefully below, is based on interviews with key individuals of the cooperative including the current and former CEO, the chairman and another member of the current board of directors (both growers), and four additional grower-members. All interviews lasted between 45 minutes and 2 hours and were tape recorded and later typed. Each subject was paid \$50 for participating in our study.
2. The scope of this “credit rationing” problem is relatively general and does not only apply to cooperatives. See Eswaran and Kotwal (1989) or Gintis (1989) for an application in the context of labor-managed firms.
3. We are not aware of examples of an open cooperative transforming into a close NGC form.
4. The use of collateral was rare, since most of the borrowers were poor and were denied credit from traditional credit banks.
5. As demonstrated in their paper, the farmer’s incentives to adulterate the milk (e.g., by adding water) were quite important largely because there was large variance in the quality of the milk supplied. The authors argued that after the introduction of a new (and cheap) testing technology, the payments for the milk became tied to quality and eventually disappeared.
6. This type of contract seems standard in the poultry industry. For instance, see Martinez (2002) and Leegomonchai and Vukina (2005).
7. There is no evidence that Louis Rich threatened a retreat intending to negotiate a better contract with growers (e.g., by bargaining for lower turkey prices).
8. Besides the West Liberty plant, the growers also purchased a feed mill in Ellsworth, Iowa and the Louis Rich Company farms located in Iowa.
9. Our interviews with senior members reveal that these dropping prices and the gloomy prospect of the cooperative at that time discouraged potential new members and increased the burden on existing members who had already made large initial commitments.
10. The chairman of the board revealed to us that, in the last round, some members decided to

borrow against their life insurance as it was their only remaining uncollateralized asset. Some declined to do so and chose instead to exit, thus losing their delivery right. Later on, these former members were given the opportunity to buy back their membership under preferential conditions.

11. We will not attempt to develop and measure the second aspect, partly because it is hard to come up with an objective measure of good, and partly because we did not interview members who chose to exit. Differences in risk aversion is another plausible attribute of growers that might influence the exit decision.
12. In our interview of the chairman of the board, he recognizes this aspect by saying that “the cooperative *is* the growers’ money” and he concludes, “That makes the difference. Your butt is on the line 24-7.”
13. The chairman of the board insisted on saying that “there is no contract” or that growers are “independent.” We concur, in the sense that there is no written contract periodically signed by both parties. However, growers have delivery duties that are understood by all. We choose to label this relationship as a contract.
14. The increase in the work-load, compared to the Louis Rich period, is also due to the increased involvement of growers in the processing and marketing operations. We will come back to this issue later.
15. Although these sentences appear to be self-serving, the chairman reminded us that he would not be chairman anymore if “he did not have the support of the grower base.”

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