

## **Organizing a Machinery Cooperative**

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A cooperative is a unique business form in which the users of the business supply the capital, control the business and receive benefits in proportion to their usage. The cooperative corporation has been a successful business structure for producer-owned farm supply, marketing or processing operations. In recent years, interest in machinery cooperatives has been increasing.

A machinery sharing cooperative can allow participants to decrease their machinery investment and expenses while gaining access to larger scale, more efficient and technologically advanced equipment. The access to larger equipment may also increase operator labor efficiency. A machinery sharing cooperative may also be able to economically manage a more rapid replacement cycle relative to an individual producer. More frequent replacement may reduce unanticipated repairs and equipment downtime. Many machinery sharing ventures also expand into other areas such as labor sharing, joint purchasing of inputs and pooled marketing. Some machinery sharing arrangements have evolved into a joint farming operation under which the participants collectively manage the entire crop land similar to if it was a single farming operation.

Machinery sharing can be accomplished under a variety of arrangements ranging from informal agreements, to formal

contracts to the formation of a separate legal entity. The limited liability company (LLC) and the cooperative corporation are the most popular organizational forms for machinery sharing entities. Organizing a machinery venture as a separate legal entity has liability advantages and provides a better structure for asset replacement and the long-term viability of the venture. The LLC structure is a flexible legal form that can be structured for a machinery sharing venture.

The cooperative corporation is also a very logical choice for a machinery sharing venture. Most agricultural producers are familiar with the governance and equity retirement systems used by agricultural cooperatives. The basic structure of a cooperative in which investment and benefits are proportional to usage is appropriate for machinery sharing. The formal structure of a cooperative with well understood governance, dispute resolution and equity systems is also very helpful if the venture expands into additional equipment lines, or into labor sharing or joint purchase activities. In practice, many machinery sharing LLCs adopts operating structures which are similar to cooperatives. Understanding the formation process for a machinery cooperative is therefore helpful for designing any type of machinery sharing venture.

### **The Cooperative Corporation**

The cooperative corporation is a common business structure for producer-owned farm supply, marketing or processing operations. Cooperatives are controlled by their member-owners, typically on a one member-one vote basis. The membership elects the board of directors who establish policies and may hire a manager. Other governance issues are defined in the articles of incorporation and bylaws. Under the cooperative structure, the net surplus after fixed and operating expenses is allocated to the members in proportion to business volume. The cooperative board of directors may elect to return the surplus to the members as a cash distribution or retain a portion to meet future capital needs.

### **Machinery Cooperative Structure**

Cooperatives can be formed as open cooperatives in which members can join at any time or as closed cooperatives where the membership is defined at formation and after periodic opportunities for membership expansion. Most machinery sharing cooperatives are organized as closed cooperatives. In a closed machinery cooperative the membership is established at the time of establishment. Members typically sign a usage commitment and purchase equity in proportion to their contracted use. The initial equity drive establishes the cooperative permanent capital. After the initial equity drive, new members may not be allowed to join unless they purchase shares from an existing member. If the closed machinery cooperative desires to grow, it may periodically offer opportunities for new members to join.

### **Equipment Pooling**

Another structural decision is whether to design a machinery cooperative around a single compliment of equipment or with

separate equipment pools. Under a single pool system all of the members provide capital toward and acquire access to all of the equipment owned by the cooperative. The single pool system is effective when the members have similar farming operations and can agree upon the size and type of equipment purchased. If the single pool encompasses an entire compliment of equipment, it may require a high level of commitment for the participants to divest of their individually owned equipment and make a large investment in the cooperative.

An alternative structure is to establish separate pools for sets of equipment. For example, the cooperative may have a hay equipment pool, a tillage pool and a grain harvesting pool. Individual participants can elect to invest in and sign usage commitments for one or more pools. The equipment pool system is effective when the cooperative serves a larger number of members and/or when the membership is more diverse. It also allows members to join and utilize the cooperative on a more limited basis. For example, a participant might join a planting equipment pool while retaining the remainder of their individual equipment. If the producer was satisfied with the experience they could expand their use of the cooperative by entering additional equipment pools.

### **Labor Sharing**

Many machinery cooperatives are also structured to share labor. Labor sharing can allow for labor specialization. For example, one member may specialize in operating the sprayer, or in performing repairs and maintenance. Specializing labor for machinery labor may simplify scheduling. For example, if one member specializes in operating the hay mower they can establish a fair and logical mowing rotation. Labor sharing can also allow members to work

more or less depending on their situation. In these structures the cooperative typically develops a compensation rate for labor transfer among the members. When organized properly these labor sharing arrangements can even serve as a risk management tool. If a member of a machinery cooperative becomes injured there is a structure in place for the other members to fill in operation labor at a predetermined rate.

### **Capital Structure**

Like other businesses, machinery cooperatives raise equity funds which may be supplemented with debt financing. In order to join a single pool machinery cooperative or enter an equipment pool in a multi-pool cooperative, members are required to purchase stock to provide their portion of the cooperative equity. The equity level is based on the desired capital structure for the cooperative, for example, 50 percent equity and 50 percent debt. Typically, each producer's equity contribution is set in proportion to their anticipated share of the total equipment usage. Allocating equity in proportion to acreage is the simplest system. Machinery cooperative members typically sign usage commitment for a specified period of time, usually 3 to 5 years. The time period typically roughly matches the financing period for the equipment.

A machinery cooperative can also build equity capital through the retention of operating surplus. When a cooperative decides to retain a portion of its annual surplus, instead of returning it all as a cash distribution, the retained portion increases equity. The cash generated from retained surplus can be accumulated to allow the cooperative to replace machinery without the members making additional equity investments.

A machinery cooperative's retained equity can be held in a general fund not allocated particular members or the cooperative can issue the members additional shares of stock to reflect their claim on the retained funds. When a cooperative allocates surplus it may elect to pass the tax obligation on to the members. If the cooperative retains equity in a general unallocated fund it is taxable at the cooperative level. Issuing additional shares of stock (allocated patronage) may be helpful in the cooperative needs to value a member's equity after extended membership involving multiple equipment replacement cycles. Allocating retained patronage is also useful for cooperatives operating multiple pools of equipment since different pools of equipment may be generating different levels of surplus.

### **Entry and Exit**

The cooperative's by-laws specify the procedures for existing members to exit the cooperative and for new members to join. Most machinery cooperatives provide provisions for exit when a member's usage commitment expires, a time period typically linked with the financing and/or replacement cycle. Machinery cooperatives using equipment pools may have the pool participants vote whether to continue the particular pool. Exit and entry from equipment pools at other times may be at the discretion of the board of directors and be dependent upon the interest of other participants in joining the pool.

The cooperative's bylaws specify the procedures for an exiting producer to receive their equity. Members may be required to provide advance notice of their desire to withdraw. The bylaws would also specify the procedures for valuing the member's equity and the provision for repayment. The board is often given discretion in equity redemption and may pay it out over a period

of time to prevent a financial drain on the cooperative.

The valuation of a member's equity may be based on their original investment less the accumulated depreciation on the equipment they were sharing. Cooperatives issuing allocated retained patronage may also include the additional stock (or book credits) into the valuation equation. While the practice of allocating equity is very useful in tracking a member's share of the cooperative's entire value the board will need to consider whether the total book value matches the actual value of the machinery assets. In some cases it may be necessary to redeem stock at a percentage of face value.

### **Dissolution**

Specific procedures for dissolution of a machinery cooperative are specified in the articles of incorporation and bylaws. As with any business, the basic structure is to repay any debt funds and distribute the remaining funds to the owner/members. In the early years determining each member's share of the equity is usually quite straightforward. If the cooperative has operated for several years and retained significant funds and/or operated multiple equipment pools the determination may be more difficult. In this case it is generally useful to base the dissolution distribution on the member's stock value, including the additional stock issued through stock patronage refunds. The distribution per share can be higher or lower than face value depending upon the final dissolution value of the cooperative.

### **Fees and Cost Allocation**

Most machinery cooperatives establish an hourly or per/acre rate. As they use the equipment the members pay fees into the cooperative. The fees provide operating

capital for the cooperative to make loan or lease payments and to pay for insurance, fuel, repairs and maintenance. Some cooperatives require each member to refuel the machines from their own stocks at the end of operation. This allows them to avoid accounting for fuel expense. At the end of the season the cooperative's net income in excess of expenses is distributed to members in proportion to usage. As discussed previously, the cooperative may retain a portion of the surplus to generate funds for equipment replacement. Cash and certain types of stock refunds from a machinery cooperative are taxable to the members. This is simply an adjusting offset of the tax deductible fees that the member paid for equipment usage. If the machinery cooperative returns its entire surplus as a cash or qualified (taxable) stock refund it has no taxable income. Otherwise there may be a tax obligation at the cooperative level.

### **Governance**

Most machinery cooperatives operate on a one member-one vote system. Most cooperative statutes require that the cooperative form a board of directors which are elected by the membership. However in a small machinery cooperative with no more than five members, all of members may be involved in decision making. The cooperative members or board develop a set of operational policies. The cooperative may also establish committees to establish usage fees and policies for individual equipment pools. The cooperative may hire a manager to oversee the day-to-day operations and/or maintenance. A large cooperative may have employees overseeing the individual equipment pools. Alternatively, a member in the pool may be selected to oversee scheduling and maintenance.

Most machinery cooperatives handle decisions through discussion and consensus

as opposed to formal votes. In multi-pool cooperatives, issues relating to particular equipment are resolved by the equipment pool committee. Disputes that cannot be resolved at the committee level are referred to the board or overall membership. The development of a clear set of operating policies including clear policies for clear liabilities for careless operation can help avoid many disputes.

### **Scheduling**

Potential conflicts for scheduling equipment usage is perceived as the biggest obstacle in forming a machinery cooperative. However, most operating machinery cooperatives report that they have developed systems which allow them to schedule equipment with limited conflict. The first step in managing scheduling conflicts is to match the machinery capacity with the available field days. Many universities have decision aids which can help operators determine equipment field capacity and determine historical field days for various operations.

If a machinery cooperative's members are geographically dispersed the transportation time and the difference in seasonal timing must also be considered. In cases where the machinery cooperative allows the purchase of significantly larger equipment, members may discover that, even after accounting for scheduling conflicts, their ability to complete work within available field days is significantly enhanced.

Machinery cooperative that share operation labor may place the participant that is operating each piece of equipment in charge of scheduling workflow. Another system is to individual members in charge of scheduling with the responsibility rotating among the cooperative participants. Some cooperatives establish a geographical schedule with the starting point rotating each

season. A larger cooperative may simply schedule equipment on a first come-first serve basis. A wide variety of scheduling systems can be used effectively provided that the members understand that some degree of compromise is necessary to achieve the economic benefits of machinery sharing.

### **Repairs and Careless Operation**

Equipment downtime and repair, particular those perceived as to relate to careless operation are another key point of contention in a machinery sharing cooperative. Scheduled maintenance and repairs are considered a normal operating expense for the cooperative and are paid for operating capital. Depending upon the cooperative's policies it may be performed by third parties, a cooperative employee or by the participants with associated labor credits. If the cost of a major repair exceeds the cooperative's reserves it may be necessary to bill the members for additional fees or an accelerated draw on their annual fees.

Breakdowns caused by operator error such as overload, lack of maintenance or poor driving have more potential for conflict. Most machinery cooperatives have policies which specify that a member must assume the cost of repairs if they were at fault. These policies and the procedures for determining the cause of breakdown should be clearly specified in the operating policies. Conflict can also occur when an at-fault member elects to perform the repairs resulting in what is perceived as excessive downtime. Labor sharing arrangements in which each participant specializes in operating a particular machine decreases unnecessary breakdown and conflict. Larger cooperatives may also conduct educational meetings on maintenance and operational issues.

## **Steps to Formation**

The first step in forming machinery cooperative is to identify a group of potential participants and hold a simple informal meeting to explore interest. As in any collective venture the compatibility of the participants is important for success. While it is not realistic to expect participants to agree on every issue, they should have a willingness to listen to each other's viewpoints and compromise. Typically, the most compatible machinery sharing participants are producers with similar philosophies on care of equipment operation, maintenance and have a similar farming style and work ethic.

The participant's financial condition and future farming plans should also be considered. A partner with a weak financial condition or someone who is scaling down their operation may have different attitudes toward replacing or upgrading equipment. The geographic location of the participants is also an issue. Transportation cost are minimized and communication improves when the member are located close to each other. Timing conflicts are obviously minimized when members are located over a wider area, farm different types of ground or even are located in another region.

Information on the potential participant's acreage, production practices and existing equipment compliments can be gathered at the exploratory meeting. If there is significant interest a formal study can be conducted to project the cost saving of machinery sharing and to project the fee and cost structure of a cooperative.

A feasibility template for analyzing machinery sharing has been developed by Oklahoma State University with funding provided by the Southern Region Risk

Management Education Center. The template can be obtained free of charge by contacting [phil.kenkel@okstate.edu](mailto:phil.kenkel@okstate.edu).

The results of the feasibility study will summarize the potential cost saving from sharing machinery and project the equity investment and fee structure required for a machinery cooperative. These results can be presented to the group at a second meeting which determines if the group is interesting in forming a cooperative. If the group decides to proceed, it may be useful to discuss the basic structure of the cooperative. It may also be useful to inventory the equipment owned by the potential participants.

It may be feasible for one or more members to provide equipment in exchange for an equity position. If so, the cooperative should formally purchase the equipment at an appraised price. It should be noted that the sale may result in depreciation recapture and tax implication for the individual member. The member must also be able to eliminate any liens on the equipment which may require the restructuring of loan collateral.

The next step for formation is to develop a formal membership and the Articles of Incorporation with the Secretary of State. It will be necessary to decide on the name of the cooperative, its official home office location and the name of the interim board of directors who are listed on the incorporating documents. The articles of incorporation which are filed with the Secretary of State provide the overall purpose and broad structure of the cooperative. State statutes may require a minimum number of members (typically 5 members) and specify that some structural issues (such as the procedures for amending the bylaws) must be stated in the articles of

incorporation. The membership agreement should address the individual equity investment, usage commitment and agreement to accept the cooperative's fee structure and operating policies.

The bylaws provide more specific operating guidelines including the number of the board of directors, voting procedures, distribution of net surplus, member exit and entry provisions and how the cooperative can be dissolved. Both the articles of incorporation and bylaws are typically approved by a two thirds majority vote of the membership. The cooperative membership, the board of directors or appointed chairpersons of equipment pools may also develop operating policies. These policies would typically include topics such as:

- Fee Structure
- Scheduling
- Repair and Maintenance
- Labor sharing
- Equipment storage
- Insurance
- Rules of use
- Operating procedures
- Breakdowns resulting from careless operation

The articles of incorporation can be thought of as the cooperative's contract with the Secretary of State. Because changes to the articles must be approved by the Secretary of State, it is usually preferable to limit the articles to the mandated issues and address other issues in the bylaws and policies. The bylaws are the cooperative's contract with the membership. The bylaws can be amended by a specified majority vote of the membership. The cooperative board of directors or other specified individuals such as equipment pool chairpersons may have authority to change policies. Structural issues are generally addressed in the bylaws. It may be more effective to address many

operating issues through policies which are the easiest to change and update. The distinction may not be important for small cooperatives where most decisions involve the entire membership.

After the legal documents are filed the member can submit membership and usage agreements and provide their equity contributions. This can be done at the first annual meeting during which the membership adopts the bylaws and operating policies. At that point the cooperative can establish a bank account, seek additional debt financing, purchase equipment and begin operations.

The machinery cooperative structure is well suited for situations where not all of the participants need access to the same equipment, and when a larger number of participants are envisioned to be involved. The formal structure of a cooperative with well understood governance, dispute resolution and equity systems is also very helpful if the venture expands into additional equipment lines, or into labor sharing or joint purchase activities.

### **Summary**

Machinery sharing can provide substantial economic and operational advantages. A machinery cooperative provides a well defined structure that allows for continuity and expansion. The keys to a successful machinery cooperative are clearly identified in the economic benefits and to design a structure which can achieve those savings while meeting the participants need. As in any collective venture, the compatibility of the participants is the most essential ingredient for success. Careful and open discussion of all of the operating issues is also essential. This should be followed by the development of written agreements and policies. Once the cooperative begins

operations accurate recordkeeping and open communication between members become the major success factors.

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