

# Adapting Crop Share Agreements for Sustainable and Organic Agriculture

***When the farming system deviates from a conventional corn-soybean rotation, the usual division of costs and returns in a 50-50 crop share lease may no longer fairly reflect the inputs of each party.***

Approximately a quarter of the cropland leases in Iowa are crop share arrangements. This type of lease allows the landowner and tenant to share the risks and some of the management of the farming operation.

In the majority of crop share leases in Iowa, the landowner supplies the land; the tenant supplies the machinery, fuel, and labor; and landowner and tenant split 50-50 the purchased input costs such as seed, fertilizer and pesticides. Generally, the yield also is split 50-50, and each party stores and/or markets his or her portion separately and receives half of any government payments (which are usually allocated in the same proportion as the yield).

In conventional corn-soybean rotations, this arrangement provides a reasonably equitable division of costs, inputs, and returns, which is why it is so widespread. Table 1 shows typical inputs and costs for both the landowner and tenant in a conventional crop-share corn-soybean rotation.

However, when the farming system deviates from the conventional corn-soybean rotation, the usual division of costs and returns in a 50-50 crop share lease may no longer fairly reflect the inputs of each party. Consider the example of an organic farm with various rotations of soybeans, corn, oats, and alfalfa.

As Table 2 shows, in organic systems the tenant typically bears a higher proportion of the costs than the landowner. The landowner provides the land and pays half the seed costs, but since organic farms typically do not buy pesticides or fertilizer, the landowner does not contribute to these costs. On the other hand, the tenant has additional machinery costs for equipment such as a flame weeder and rotary hoe. The tenant also puts in more labor in order to manage weeds without the use of herbicides and to haul and spread manure or compost for fertility.

Costs for comparable tasks, such as combining, are usually higher in organic agriculture because the farm

machinery needs to be completely cleaned before it is used on organic fields. Management costs are figured as 10 percent of other costs (rather than the 5 percent figured for conventional production) because organic production requires a high level of management both for crop production and for certification paperwork and recordkeeping. Also, purchased input costs are lower.

Please note that the tables in this publication are just examples. The actual tasks and time required for certification can vary considerably, depending on the rotation used, the organic experience and approach of the operator, and the size of the fields and farm.

The market price for organic beans and corn is higher than that for conventional grains. There is also a premium for organic hay, but marketing may prove difficult. Thus, despite the higher labor and management costs, organic production can be profitable for both the landowner and the tenant, if the returns are distributed fairly.

TABLE 1

## Division of Costs in a Conventional Corn-Soybean Rotation (one acre)

	Corn		Soybeans	
	Tenant	Owner	Tenant	Owner
<b>Machinery and Labor (custom rates)</b>				
Apply nitrogen	\$6.70			
Chisel plow			\$10.55	
Tandem disk	7.95		7.95	
Field cultivate	7.85		7.85	
Plant	11.35		11.35	
Cultivate	6.65		6.65	
Spray	4.60		4.60	
Combine	24.50		23.65	
Haul and store	13.50		4.05	
Dry	6.75	6.75		
Haul to market	15.00		4.50	
<b>Nonfield Labor</b>				
1.0 hour @ \$10	\$10.00		\$10.00	
<b>Crop Inputs</b>				
Seed	\$13.78	\$13.78	\$11.16	\$11.16
Fertilizer and lime	24.58	24.58	11.58	11.58
Herbicide	15.00	15.00	12.50	12.50
Crop insurance	2.90	2.90	1.57	1.57
Miscellaneous and interest	6.30	6.30	5.42	5.42
<b>Land and Buildings</b>				
Land charge		\$125.00		\$125.00
Storage	9.00	9.00	2.70	2.70
<b>Management (5% of other costs)</b>	\$12.34		\$8.78	
<b>Total \$ per acre</b>	<b>\$198.75</b>	<b>\$203.31</b>	<b>\$144.86</b>	<b>\$169.93</b>
<b>Share</b>	<b>49%</b>	<b>51%</b>	<b>46%</b>	<b>54%</b>
<b>Total Rotation</b>	<b>Tenant</b>	<b>Owner</b>		
\$ per acre	\$171.80	\$186.62		
Share	48%	52%		



USDA, Natural Resources Conservation Service



USDA, Natural Resources Conservation Service

TABLE 2

## Division of Costs in Organic Production (one acre)

	Soybeans		Corn		Oats/Small Grains		Alfalfa (3 cut)	
	Tenant	Owner	Tenant	Owner	Tenant	Owner	Tenant	Owner
<b>Machinery and Labor (custom rates)</b>								
Haul and spread manure/compost			\$30.00		\$10.00			
Chisel plow								
Tandem disk	7.95		7.95		7.85			
Seed rye (cover crop)	9.50							
Field cultivate	7.85		7.85					
Plant or drill	11.35		11.35		9.50			
Cultipack					8.00			
Harrow	4.60		4.60					
Disk rye 2×	15.90							
Cultivate 3×	19.95		19.95					
Rotary hoe	5.00		5.00					
Flame weeds			6.00					
Mow and condition							27.60	
Rake					4.40		13.20	
Bale					18.20		59.60	
Combine	27.00		30.00		25.00			
Haul and store	4.05		13.50		8.10		24.00	
Dry			6.75	6.75				
Haul to market	4.50		15.00		9.00			
<b>Nonfield Labor</b>								
1 hour @ \$10	\$10.00		\$10.00		\$10.00		\$10.00	
<b>Crop Inputs</b>								
Seed	\$23.00*	\$23.00*	\$15.50	\$15.50	\$7.00	\$7.00	\$26.50	\$26.50
Lime (annual cost)	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
Crop insurance	1.57	1.57	2.90	2.90				
Organic certification**	2.25	2.25	2.00	2.00	0.75	0.75	0.50	0.50
Miscellaneous and interest	7.00	7.00	8.00	8.00	3.00	3.00	3.00	3.00
<b>Land and Buildings</b>								
Land charge		\$125.00		\$125.00		\$125.00		\$125.00
Storage	2.70	2.70	9.00	9.00			7.50	7.50
<b>Management (10% of other costs)</b>	\$20.23		\$23.85		\$13.86		\$20.14	
<b>Total \$ per acre</b>	<b>\$187.30</b>	<b>\$164.52</b>	<b>\$232.10</b>	<b>\$172.15</b>	<b>\$137.56</b>	<b>\$138.75</b>	<b>\$194.94</b>	<b>\$165.50</b>
<b>Share</b>	<b>53%</b>	<b>47%</b>	<b>57%</b>	<b>43%</b>	<b>50%</b>	<b>50%</b>	<b>54%</b>	<b>46%</b>



USDA, Agricultural Research Service

\*Crop and cover crop.

\*\*Per acre fees. In addition, there is an annual flat fee per farm for certification and for inspection. Certification fees are approximately \$100 and inspection fees \$250 but will vary with different certifying organizations.

### Average Costs for a Corn-Soybean-Corn-Oats-Hay Rotation

\$ per acre  
Share

**Tenant**  
\$196.80  
55%

**Owner**  
\$162.61  
45%

### Average Costs for a Soybean-Corn-Soybean-Oats-Hay Rotation

\$ per acre  
Share

**Tenant**  
\$187.84  
54%

**Owner**  
\$161.09  
46%

### Average Costs for a Corn-Soybean-Oats-Hay Rotation

\$ per acre  
Share

**Tenant**  
\$187.97  
54%

**Owner**  
\$160.23  
46%

### Average Costs for a Corn-Soybean-Small Grains Rotation

\$ per acre  
Share

**Tenant**  
\$185.65  
54%

**Owner**  
\$158.47  
46%



Jerry DeWitt, ISU Extension

So how should a crop share agreement be structured to provide equitable returns to the landowner and tenant in such a situation? There are a number of ways the agreement can be adapted, depending on the preferences and situation of the parties involved. For example:

- The landowner may contribute a greater share of the costs, perhaps by paying the full seed costs and all certification fees or by paying for custom combining (even if the tenant does the combining).
- The tenant may keep a greater proportion of the crop—perhaps 55 or 60 percent, depending on the proportion of inputs he or she provides.
- The landowner and tenant may choose to store and market the crop together to minimize hauling and storage costs for organic crops.
- The landowner may help with management by handling the paperwork for organic certification and marketing.

Once the tenant and landowner agree on which adjustments best serve their needs, they can use a spreadsheet program to enter the costs and returns for their situation and determine how large the adjustments should be. You can download a spreadsheet from the leasing section of the Ag Decision Maker Web site at <http://www.extension.iastate.edu/agdm/>. Extension publications FM 1712 *Estimated Costs of Crop Production in Iowa\** and FM 1698 *Iowa Farm Custom Rate Survey\** provide average costs for a wide variety of farm operations, but some costs likely will need to be estimated by the operator, and other costs vary depending on prevailing prices. FM 1811 *Survey of Iowa Farm Leasing Practices\** shows how expenses typically are split in crop share leases. In addition, your local extension farm management specialist can help with providing cost information and using a spreadsheet program.



USDA, Natural Resources Conservation Service

## Conclusion

In many cases a crop share lease best suits the needs of both the landowner and the tenant. However, for some cropping systems and practices the usual division of costs and crop may not result in a fair allocation of

returns. Laying out all the costs on a spreadsheet can help both parties arrive at an agreement that reflects each particular situation.

Sometimes factors that are not strictly cost-based may need to be addressed in the agreement as well. For example, if a landowner wants to make a transition to organic production and the tenant is uncertain or reluctant, it may make sense to adjust the crop share agreement in favor of the tenant during the transition period. This adjustment would compensate for the risk of yield declines during transition, when the crop is not eligible for organic premiums (a process that normally takes three years). Conversely, if a tenant wants to make a transition to organic production but the landowner is unsure, it may make sense to switch temporarily to a multi-year cash rent agreement. The tenant then assumes the yield risk during the transition in exchange for the security of a longer term lease. Extension publication PM 1947 *Considering Sustainable Agriculture on Your Rented Land\** describes a variety of adjustments to rental arrangements landowners have made to accommodate sustainable agriculture.

Each rental situation is slightly different. Communication is the key to establishing a fair agreement that will leave both parties satisfied over the long term.

Prepared by Diane Mayerfeld, Center for Integrated Agricultural Systems, University of Wisconsin–Madison; William Edwards, ISU Extension economist; Rick Exner, Practical Farmers of Iowa; and Margaret Smith, ISU Extension, with help from Doug Alert, Clark BreDahl, Tom Frantzen, and Paul Mugge, organic farmers and members of Practical Farmers of Iowa.

Funded in part by a grant from the North Central Region Sustainable Agriculture Research and Education Program.

... and justice for all

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

File: Agriculture 1 and Economics 1-4

\*These publications are available on-line at <http://www.extension.iastate.edu/pubs/fm3.htm>.