

# Flexible Farm Lease Agreements

Fluctuating markets and uncertain yields make it difficult to arrive at a fair cash rental rate each year. Some owners and tenants have developed flexible lease agreements, as an alternative, in which the actual rent is not determined until after the crop is harvested. The final rental rate is based on actual prices and/or yields.

Flexible leases have the following advantages:

- Risks are shared between the owner and the tenant, as are profit opportunities.
- The actual rent paid adjusts automatically as yields, prices, or government programs change.
- Owners are paid in cash—they do not have to be involved in decisions about crop inputs or grain marketing.

There are several types of flexible cash leases from which to choose, depending on whether you wish to share yield risk, price risk, or both.

## 1. Share of Gross Income

The owner receives cash rent equal to a specified share of the gross value of the crop. The value of the crop is determined by multiplying the actual harvested yield by the market price available, usually at harvest time. Government

payments and crop insurance proceeds received often are included in gross income, as well. Both price and yield risks are shared between tenant and owner, in the same proportion as the gross income.

### Example

- Cash rent is equal to 35 percent of the gross crop value.
- The actual yield of corn is 140 bushels per acre, and the actual price is \$2.40 per bushel.
- In addition, a U.S.D.A. transition payment of \$18 per acre is received.
- The gross income is equal to  $(140 \times \$2.40) + \$18 = \$354$ .
- The cash rent is equal to  $(35\% \times \$354)$ , or \$123.90 per acre.

Most of the flexible leases in Iowa specify that the rent will be equal to anywhere from 30 to 40 percent of the gross income, with one-third being the most commonly used value. The share received for very productive land should be higher than for less productive land. Table 1 shows the average cash rent paid in Iowa during the past 10 years as a percent of gross income each year, including government payments.

Year	Rent as % of gross income		Rent paid per bushel		Bushel equivalent paid	
	Corn	Soybeans	Corn	Soybeans	Corn	Soybeans
1989	33%	38%	\$ .81	\$ 2.46	44 bu.	17 bu.
1990	33%	38%	\$ .79	\$ 2.40	47 bu.	18 bu.
1991	35%	42%	\$ .86	\$ 2.49	45 bu.	19 bu.
1992	33%	38%	\$ .71	\$ 2.38	55 bu.	19 bu.
1993	48%	49%	\$1.35	\$ 3.48	41 bu.	16 bu.
1994	32%	36%	\$ .70	\$ 2.12	52 bu.	20 bu.
1995	29%	36%	\$ .85	\$ 2.39	35 bu.	16 bu.
1996	31%	35%	\$ .80	\$ 2.50	44 bu.	16 bu.
1997	33%	36%	\$ .86	\$ 2.56	49 bu.	18 bu.
1998	42%	44%	\$ .86	\$ 2.59	63 bu.	22 bu.
Average	35%	39%	\$ .87	\$ 2.54	47 bu.	18 bu.

## 2. Adjustment for Yield Only

The rent varies according to the actual harvested yield. The most common types of agreement specifies a fixed payment per bushel harvested, or a base rent plus a fixed rate for each bushel over a minimum yield. Table 1 shows the average cash rent paid per bushel harvested for Iowa during the past 10 years. Yield risk is shared, but all the price risk is borne by the tenant.

### Example

- Cash rent is equal to \$100 plus \$1.50 for each bushel of soybeans over 30 bushels per acre.
- Actual yield is 45 bushels of soybeans per acre, 15 bushels over the base yield.
- Rent is equal to \$100 plus  $(\$1.50 \times 15)$ , or \$122.50 per acre

## 3. Adjustment for Price Only

The cash rent varies according to the actual commodity price. Several formulas can be used to calculate the rent. The most common is to multiply the actual price by a fixed number of bushels. Table 1 shows the bushel equivalent to the average cash rent paid in Iowa the past 10 years, based on December prices. Price risk is shared, but the tenant bears all the yield risk.

### Example

- Cash rent is equal to the price of corn at the local elevator on November 1st, times 50 bushels.
- Actual price of corn is \$2.18 per bushel.
- The rent is equal to  $(\$2.18 \times 50)$ , or \$109 per acre.

## 4. Base Rent plus Bonus

A minimum base rent is specified, plus the owner receives a share of the gross income in excess of a certain base value. This base value may be the tenant's costs of production. The bonus share may vary from one-third to one-half of the amount over the base income. Both parties must agree on how to calculate gross income,

whether other payments are included in the profit calculation, and whether a loss will cause the actual rent to be less than the base rent value.

### Example

- Base rent is \$50. Bonus is one-half the gross income in excess of the cost of seed, fertilizer, pesticides, labor and machinery.
- Actual yield is 50 bushels of soybeans per acre and actual price is \$6.00 per bushel.
- Seed, fertilizer and chemical costs are \$85 per acre. Labor and machinery costs are estimated at \$75 per acre, using custom rates as a guide. Total costs are \$160.
- Profit is equal to  $(50 \text{ bu.} \times \$6.00) = \$300$ , minus costs of \$160 = \$140
- Rent is equal to \$50 plus one-half of \$140, or \$120 total.

## Sharing Risk

Owners and tenants should carefully consider the type and degree of risk they want to assume. Taking on risk means greater losses when prices or yields are low, but can result in larger profits in other years. Some tenants are more willing to assume yield risk than price risk, so they can reap more benefits from superior management. However, if climate or soil type are such that a significant chance of a poor yield exists, some other means of reducing risk, such as purchasing crop insurance, should be considered if the lease does not adjust for yield variability.

Leases that base the rent on price only or yield only may actually increase the tenant's risk in some years. This is because prices may be high when yields are low, or prices may be low when yields are high. Thus, adjusting the rent based on only one factor, as in examples 2 and 3, does not always reflect the actual profits received in that year. Adjusting the rent for changes in both price and yield ensures that the actual rent will be closely tied to the tenant's net income.

## Determining Yield

It is important to agree ahead of time on the procedure for determining the factors that will be used to calculate the final rent. These factors should be based on information that is available to both parties. Actual yields can be determined by:

- weight tickets, if all the crop is sold or put into commercial storage
- combine yield monitors, or weigh wagons in the field
- storage bin capacity

When crops stored on the farm are ultimately sold, any variation from the estimated yield can be used to adjust the rent for the following year. Estimated yields should be corrected to a standard moisture level, such as 15 percent moisture for corn.

## Determining Price

The price used to calculate the final rent payment can be the cash price at a local elevator on a specified date, or an average of prices on several dates. Prices on dates near the time the final rent is paid should be used even though the crop may actually be sold at a different time. An alternative to using a local price is to use a futures contract price, minus a normal basis value.

### Example

- The closing corn price at the Fredricksburg cooperative is \$2.17 on October 1, \$2.30 on November 1, and \$2.43 on December 1.
- The actual price used for calculating the rental rate is the average of these three prices, or \$2.31 per bushel.

## Minimum and Maximum Rents

Some tenants and landlords may want to avoid the possibility of a very high or very low rent in some years by setting a maximum and/or minimum rent. This keeps the actual rent paid each year within a desirable range. Many leases ask for a portion of the rent to be paid in advance. Under a flexible lease, the advance

payment may be for a fixed amount while the final payment is variable.

## Government Payments

Because the purpose of a flexible lease is to adjust the amount of rent to reflect the income received from crops each year, payments received from participation in government programs should also be considered. If rent is to be calculated as a percentage of gross income, as in the first example, then gross income can include both crop sales and government program payments received or expected. For leases that include selling price in the rent calculation, income received from a Loan Deficiency Payment or through an F.S.A. marketing loan can simply be included by using the loan rate as the actual market price.

The flexible lease formula should be tested by using several different price and yield possibilities, to estimate the range of potential cash rents. Regardless of what type of agreement is adopted, it should be described in writing (with an example) and made a part of the written lease contract.

Prepared by William Edwards, extension economist

File: Economics 1-5

## IOWA STATE UNIVERSITY

University Extension

**Helping Iowans become their best.**



... 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.

# Flexible Lease Agreement Worksheet

**Basic information:**

	<u>Corn</u>	<u>Soybeans</u>
Expected yield—bushels per acre	_____ bu.	_____ bu
Expected price—\$ per bushel	\$ _____	\$ _____
Base rental rate—\$ per acre	\$ _____	\$ _____
Expected U.S.D.A. payments—\$ per acre	\$ _____	\$ _____

**Type of agreement (check one):**

	<u>Corn</u>	<u>Soybeans</u>
1. _____ <b>Share of Gross Income</b>		
Percent of gross income to equal rent	_____ %	_____ %
(base rent divided by price x yield plus govt. payment)		
2. _____ <b>Yield Adjustment Only</b>		
Fixed price per bushel of actual yield	\$ _____	\$ _____
Or, minimum yield,	_____ bu.	_____ bu.
And fixed price for each bushel over minimum	\$ _____	\$ _____
3. _____ <b>Price Adjustment Only</b>		
Fixed bushels to pay on	_____ bu.	_____ bu
4. _____ <b>Base Rent plus Bonus</b>		
Base rent	\$ _____	\$ _____
Minimum gross income or tenant's costs	\$ _____	\$ _____
Percent of gross income over the minimum added to rent	_____ %	_____ %

**Explanations:**

How will the price be determined (types 1, 3, and 4)? \_\_\_\_\_  
 \_\_\_\_\_

How will the yield be determined (types 1, 2, and 4)? \_\_\_\_\_  
 \_\_\_\_\_

How will the tenant's costs be determined (type 4)? \_\_\_\_\_  
 \_\_\_\_\_

What U.S.D.A. farm payments will be included (types 1 and 4)? \_\_\_\_\_  
 \_\_\_\_\_

Will crop insurance payments be included (types 1 and 4)? \_\_\_\_\_  
 \_\_\_\_\_