Farm Rent Evaluator

With this program, the user can compare the risks and returns for 7 different types of farm leases, using actual farm data or a default budget provided for farming operations that grow corn and soybeans in Illinois.

The information needed to use this program can be found in:

- Past and current financial records
- Leasing agreements

Following is the main input screen that shows when the program is begun.

Navigating the Program

Inputs are entered in three worksheets: BUDGET, LEASE and SPLITS. The worksheets may be accessed using the labeled buttons located at the top of the screen. Also available are descriptions for inputs and output reports, as well as default data.

To access these, look for the following buttons, Description , Defaults and
Help . Finally, all worksheets may be accessed using the tabs located at the bottom of the Excel screen.

Budget

In the BUDGET worksheet, shown below, the user enters revenue and expenses on a per-acre basis for both corn and soybeans.

BUDGET INFORMATION   << Intro   Lease >>

County choice: Defaults
Edgar   Help

Revenue input: Help

	Corn	Soybeans
Percent of acres	50%	50%
Average Yield (per acre)	150	47
Futures price (per bu.)	$2.40	$5.00
Basis (per bu.)	-$0.20	-$0.20
Cash price (pe bu.)	$2.20	$4.80

Government program input: Help

	Corn	Soybeans
Percent base acres	50%	50%
DP yield (per bu.)	123	37
CC yield (per bu.)	140	44
DP rate (per bu.)	$0.28	$0.44
CC rate (per bu.)	$0.34	$0.36
Loan rate (per bu.)	$2.05	$5.25

Revenue per acre: Help

	Corn	Soybeans	Total
	---------- per acre ---------		
Crop revenue	$330	$226	$278
LDP revenue	0	21	11
Direct payments			22
CC payments			27
Other revenue	0	0	0
Total revenue	$330	$247	$338

Cost input: Help

	Corn	Soybeans	Total
	------------- per acre ---------		
Revenue	$330	$247	$338
Expenses			
Fertilizer	57	21	39
Pesticides	33	30	32
Seed	33	21	27
Drying	6	2	4
Storage	7	3	5
Crop insurance	8	5	7
Other	0	0	0
Direct expense	$144	$82	$113
Machine hire/lease	7	4	6
Utilities	4	4	4
Machine repair	14	13	14
Fuel and oil	9	8	9
Light vehicle	1	1	1
Mach. Depreciation	30	25	28
Other	0	0	0
Power expense	$65	$55	$60
Hired labor	8	8	8
Building repair and rent	3	3	3
Building depreciation	5	5	5
Insurance	5	5	5
Misc.	4	4	4
Interest	5	5	5
Other	0	0	0
Overhead expenses	$30	$30	$30
Tenant labor	0	0	0
Property tax	30	30	30
Management fee	0	0	0
Other	0	0	0
Other expenses	$30	$30	$30
Total expense	$269	$197	$233
Revenue less expenses	$61	$50	$105

The right-hand side of the budget displays per-acre totals for expenses and also shows a revenue-less-expenses figure. This figure shows revenue less total costs for the entire acre. The landlord and tenant will split this amount between themselves under different lease arrangements.
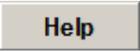
Defaults for all input in the budget are available for counties in Illinois. These defaults can be used by first choosing the county in the "county choice" box. Then, clicking on the [Defaults] button allows changes to all revenue and cost items.

Lease
In the LEASE worksheet, shown below, the user may choose to analyze up to 7 different lease options: Share Rent (2 options: Split 1 and Split 2), Fixed Cash Rent, Share Rent with Supplemental Rent, Yield-Based Cash Rent, Variable Cash Rent, Dry Bushel Lease and Custom Farming.

As shown below, each lease type asks for different information. The "Share Rent" section, discussed further on the next page, allows for two different types of rental agreements, while the variable cash rent section allows the user to select, using a check mark, which prices and yields to use in the analysis.

A more detailed description of each lease type can be obtained by clicking on the [Help] button next to each lease type. Each lease type also has a check mark option with each lease titled show lease arrangement. If this is unchecked, output will not be shown for this lease arrangement.

		<< Budget	Results >>
LEASE INPUTS	**EXPLANATION:**		

1. Share Rent (Split 1)

View Splits	Help

Tenant and landlord share in revenue and costs.
☑ Show leasing arrangement

2. Share Rent (Split 2)

View Splits	Help

Tenant and landlord share in revenue and costs.
☑ Show leasing arrangement

3. Fixed Cash Rent

Per acre cash rent: $140

View Splits	Help

Tenant pays landlord a fixed cash rent. The cash rent does not vary with yields
☑ Show leasing arrangement

4. Share Rent with Supplemental Rent

Per acre supplemental rent: $15

View Splits	Help

Tenant and landlord share in revenue and costs. Tenant pays landlord a supplemental rent.
☑ Show leasing arrangement

5. Yield-Based Cash Rent

Base corn yield (bu./acre):	0
$ per corn bu:	$0.95
Base soybean yield (bu./acre):	0
$ per soybean bu:	$0.00
Minimum rent (per acre):	$100
Maximum rent (per acre):	$200

View Splits	Help

Tenant pays the landlord a cash rent. The cash rent varies based on bushels produced on farm.
☑ Show leasing arrangement

6. Variable Cash Rent

Base rent (per acre):	135
☑ Base corn yield:	150
☑ Base corn price:	$2.10
☐ Base soybean yield:	40
☐ Base soybean price:	$5.40
Minimum rent (per acre):	$100
Maximum rent (per acre):	$250

(Checkmark prices and yield to vary rent by)

View Splits	Help

Tenant pays the landlord a cash rent. The cash rent varies based on yeilds and prices.
☑ Show leasing arrangement

7. Dry Bushel Lease

Bu. of corn to landlord:	40
Bu. of soybeans to landlord:	10

View Splits	Help

Tenant pays landlord a specified number of dry bushels
☑ Show leasing arrangement

8. Custom Farming

Base rate (per acre):	$75
Base corn yield (bu./acre):	0
% of corn yield above base:	0%
Base soybean yield (bu./acre):	0
% of soybean yield above base:	0%

View Splits	Help

Tenant performs all tillage and harvesting operations and receives a payment. Landlord receives all revenue and pays all direct costs.
☑ Show leasing arrangement

Share Rent: Splits

The SPLITS worksheet allows the user to define the percentage of the user's revenues and costs for each type of lease. Since the costs and revenues were entered in the budget section, the user only needs to define the percentage of each revenue and/or cost associated with a particular lease.

For example, the screen below shows that Split 1 is a 50-50 share agreement for revenue and direct expenses. However, the power expenses and overhead expenses are solely paid by the tenants. In contrast, Split 2 is a different type of share agreement, with the tenant receiving 67% of the revenue while paying 100% of all costs, except direct costs. In this agreement, the tenant pays 67% of all direct costs, except for the seed expense, which is solely paid by the tenant. There is no supplemental rent in either of these agreements.

REVENUE AND COST SPLITS		SPLIT 1			SPLIT 2		
Go to lease sheet	Percent Tenant's Share	Tenant's Share	Landlord's Share	Percent Tenant's Share	Tenant's Share	Landlord's Share	
	Defaults			**Defaults**			
Crop revenue	50%	$139	$139	67%	$185	$93	
Government revenue	50%	30	30	67%	40	20	
Other revenue	50%	0	0	67%	0	0	
Cash rent			0			0	
Total revenue		$169	$169		$225	$113	
Expenses							
Fertilizer	50%	$20	$20	67%	$26	$13	
Pesticides	50%	16	16	67%	21	10	
Seed	50%	14	14	100%	27	0	
Drying	50%	2	2	67%	3	1	
Storages	50%	3	3	67%	3	2	
Crop insurance	50%	3	3	67%	4	2	
Other	50%	0	0	67%	0	0	
Direct expense		$57	$57		$84	$29	
Machine hire/lease	100%	$6	$0	100%	$6	$0	
Utilities	100%	4	0	100%	4	0	
Machine repair	100%	14	0	100%	14	0	
Fuel and oil	100%	9	0	100%	9	0	
Light vehicle	100%	1	0	100%	1	0	
Mach. Depreciation	100%	28	0	100%	28	0	
Other	100%	0	0	100%	0	0	
Power expense		$60	$0		$60	$0	
Hired labor	100%	$8	$0	100%	$8	$0	
Building repair and rent	100%	3	0	100%	3	0	
Building depreciation	100%	5	0	100%	5	0	
Insurance	100%	5	0	100%	5	0	
Misc.	100%	4	0	100%	4	0	
Interest	100%	5	0	100%	5	0	
Other	100%	0	0	100%	0	0	
Overhead expenses		$30	$0		$30	$0	
Tenant labor	100%	$0	$0	100%	$0	$0	
Property tax	0%	0	30	0%	0	30	
Management fee	0%	0	0	0%	0	0	
Other	100%	0	0	100%	0	0	
Other expenses		$0	$30		$0	$30	
Cash rent/Custom farming		$0			$0		
Total expenses		$147	$87		$174	$59	
Revenue less expenses		$23	$83		$51	$54	

Results

Leasing Results: Tenant's Revenue Less Total Costs

At the top of the RESULTS worksheet, the tenant's revenue less total costs, or estimated profit per acre, is provided.

The first line of the report provides the budgeted revenue less total costs per acre for each leasing agreement. This value is the amount of money available to pay rent per acre for the given type of lease.

The second section of the report provides a variability analysis assuming that yields and prices fluctuate similarly to data collected for the past 30 years. Using this data, an average, low, and high are reported for the tenant's revenue less total costs.

Finally, the third section shows the chance that revenue would fall below a specific dollar amount. In the example shown on the next page, the user entered -$50, -$25, and $0. For a fixed cash-rent lease, a 55% chance exists that revenue would be below $0.

Leasing Results: Landlord's Return

The second part of the RESULTS worksheet refers to the landlord's returns per acre.

The first line of the report provides the budgeted return before taxes for each leasing agreement. This value is the amount of money available for paying taxes and making improvements to the property. The remainder is profit.

The second section of the report provides a variability analysis assuming that yields and prices fluctuate similarly to data collected for the past 30 years. Using this data, an average, low, and high are reported for the landlord's return before taxes.

Finally, the third section shows the chance that the landlord's returns would be below a specific dollar amount. In the example shown on the next page, the user entered $100, $130, and $150 per acre. For a fixed cash-rent lease, a 100% chance exists that returns will fall below $130 per acre, but a 0% chance exists that they will be below $100 per acre. Thus, this landlord knows that returns will be between $100 and $130 per acre.

<< Lease

Help

LEASE RESULTS

	Share Rent 50-50	Share Rent 67-33	Fixed Cash Rent	Share with Suppl. Rent	Yield-Based Cash Rent	Variable Cash Rent	Dry Bu. Lease	Custom Farming
TENANT'S REVENUE LESS TOTAL COSTS (per acre)								
Budgeted average[1]	$23	$51	-$5	$8	-$8	-$6	-$1	-$3
Variability analysis[2]								
Average [3]	$23	$52	-$3	$8	-$30	-$1	$2	-$3
Low (1 in 31 years)[4]	-$7	$12	-$64	-$22	-$124	-$43	-$77	-$3
High (1 in 31 years)[4]	$82	$131	$114	$67	$54	$46	$70	-$3
Chance of revenue below:[4]								
-$50	0%	0%	13%	0%	23%	0%	10%	0%
-$25	0%	0%	29%	0%	45%	29%	32%	0%
$0	13%	0%	55%	32%	90%	48%	42%	100%
LANDLORD'S RETURN (per acre)								
Budgeted average[1]	$83	$54	$110	$98	$113	$111	$106	$108
Variability analysis[2]								
Average [3]	$83	$54	$110	$98	$137	$108	$104	$110
Low (1 in 31 years)[4]	$53	$34	$110	$68	$83	$70	$55	$49
High (1 in 31 years)[4]	$142	$94	$110	$157	$170	$205	$168	$227
Chance of revenue below:[4]								
$100	81%	100%	0%	55%	13%	48%	48%	39%
$130	97%	100%	100%	97%	45%	74%	81%	77%
$150	100%	100%	100%	97%	58%	94%	90%	90%

[1] Shows results given input in "budget" and "split" sheets.

[2] Show results given that yield and price changes occur like those from 1972 though 2002.

    ☑ Click here to see corn yields used in analysis

    ☐ Click here to see soybean yields used in analysis

[3] May differ from the budgeted results because of inclusion of counter-cyclical payments and correlation between price and yield causes higher revenue than results from multiplying an average price times an average yield.

[4] Based on historical data. Results in the future may vary from previous results.