

Farmland Lease Analysis: Program Overview

The farmland lease analysis program is used to aid tenants and landlords in determining the returns and risks from different farmland leases. The program offers comparisons of three types of leases: share rent, cash rent, and dry bushel leases.

A share rent lease is one in which the tenant and landlord split the revenues and costs. A cash rent lease is one in which the tenant pays the landlord a cash rent fee per acre. The farmer pays all operating expenses and receives all revenue from the land farmed. The cash rent price is not dependant upon crop price or yield and is determined by the landlord when the lease is signed. A dry bushel lease is one in which the tenant pays the landlord a fixed number of bushels of corn or soybeans. No money is exchanged, just the crop.

The information needed to run this program can come from:

1. An individual's farm records.
2. Lease agreements.

To make use of this program, you must be able to provide estimates of your costs, yields, and financial information. The program requests the following information:

A. Per Acre Revenue, Costs, and Tenant's share

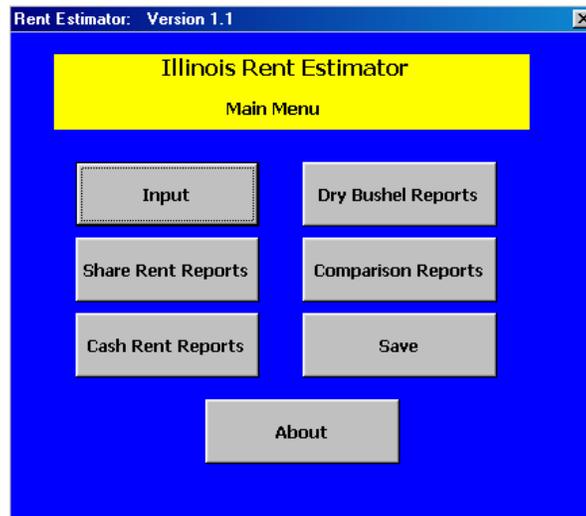
Number of acres, price and yields, FAIR payments, variable costs (soil fertility, pesticides, seed, drying, machinery repair and/or fuel), non-land costs (labor, building, storage, machinery depreciation, non-land interest, overhead), property taxes, supplemental rent.

B. Dry Bushel and Cash Rent Costs

Lease price per bushel or acre, tenant's share of FAIR payments.

Navigating the Farmland Lease Analysis program

The farmland lease analysis program has a set of buttons that help the user move between input screens and reports. This is shown below.



The main menu contains 7 buttons that help the user move between the input screens and reports. Each button represents a different spreadsheet found within the Farmland Lease Analysis program.

Input takes you to the input screen.

Share Rent Reports takes you to a summary of the tenant's and landlord's revenues and costs for the share rent option. This will be shown in the "Reports Generated" section of this documentation.

Cash Rent Reports takes you to a summary of the tenant's and landlord's revenues and costs for the cash rent option. This will be shown in the "Reports Generated" section of this documentation.

Dry Bushel Reports takes you to a summary of the tenant's and landlord's revenues and costs for the dry bushel option. This will be shown in the "Reports Generated" section of this documentation.

Comparison Reports takes you to a report of equivalent cash rents under different leases.

Save automatically saves the input information to the user's computer.

About takes you to screen that provides an overview of the program.

There are tabs at the bottom of the Excel spreadsheet screen that help navigate the user between input and output worksheets. Click on the name of the screen you wish to view. The tabs are called:

Input takes you to the input worksheet, as does the Input button described above.

Share rent takes you to the share rent output reports, as does the Share Rent Reports button described above.

Sensitivity share takes you to the sensitivity analysis report for the Share Rent output reports.

Cash rent takes you to the cash rent output reports, as does the Cash Rent Reports button described above.

Sensitivity cash takes you to the sensitivity analysis report for the Cash Rent output reports.

Dry bushel takes you to the dry bushel output reports, as does the Dry Bushel Reports button described above.

Sensitivity dry takes you to the sensitivity analysis report for the Dry Bushel output reports.

Comparison takes you to the report of equivalent cash rents under different leases, as does the Comparison Reports button described above.

The **help about**, **help input**, **help share**, **help cash**, **help dry**, and **help compare** tabs produce the help section for that screen. For example, the "help about" button is the help section for the "About" section of the program, found by clicking on the "about" button on the main menu.

How to Use the Input Sections

To explain the input required to use this program, an example was developed for Bill and Bob Grower. As you read, the example is presented such that the input sections are filled in for you.

Example: Bill and Bob Grower

Bill and Bob Grower have been farming for years. However, they are unsure if they are getting the best deal when it comes to their farming expenses. They currently have a 50/50 crop share lease, but understand that cash rent leases and dry bushel leases exist. They'd like to do an analysis of their operation on a 1-acre basis as it keeps the information simpler for them. Considering they plant equal acreage for corn and soybeans, they will divide costs equally in their analysis. At the current time, the price per bushel is \$2.40 and \$6.00 for corn and soybeans, respectively. The corn yield is 145 bushels per acre and the soybean yield is 48 bushels per acre. They receive \$15/acre FAIR payments. The per acre expenses are as follows:

| Variable Cost (per acre) | Corn | Soybeans |
|--------------------------|------|----------|
| soil fertility | \$56 | \$21 |
| pesticides | \$35 | \$36 |
| seed | \$35 | \$18 |
| drying | \$10 | \$3 |
| machinery repair/fuel | \$34 | \$29 |
| labor | \$34 | \$32 |
| building | \$11 | \$7 |
| storage | \$5 | \$3 |
| machinery depreciation | \$29 | \$25 |
| non-land interest | \$35 | \$31 |
| overhead | \$22 | \$22 |

They solely support the machinery repair/fuel, labor, and machinery depreciation expenses. The landlord provides support for 60% building, 30% non-land interest, and 10% overhead, as well as pays the \$26/acre property tax.

Required Inputs

The input section for Bill and Bob Grower's analysis is shown on the next page. Note: When entering data, type the information for each commodity (corn and soybeans) where the text is blue. As the inputs are entered, the program calculates the total expense per acre for the entire farm. This is provided under the heading called Total.

No of acres refers to the number of acres planted for each commodity.

The revenue section requires the **price per bushel**, as well as the **yield per acre**. Next to the crop revenue totals, specify the percentage of the revenues that belong to the tenant. If the tenant has a cash lease, this is probably 100%, however, if the tenant crop shares, it could be 50% or 67%. It depends on the arrangement. Finally, enter the **FAIR transition payments** for each crop, along with the tenant's share. FAIR payments include Agricultural Marketing and Transition Act (AMTA) and Market Loss Adjustment (MLA) payments. The **total revenue** is calculated for you.

The variable costs section requires "per acre" entries for each crop grown, as well as the tenant's share of the expenses. The variable costs include: **soil fertility, pesticides, seed, drying, and machinery repair/fuel**, and two blanks for additional entries. The **total variable costs** is calculated for you.

The non-land costs section requires "per acre" entries for each crop grown, as well as the tenant's share of the expenses. The non-land costs include: **labor, building, storage, machinery depreciation, non-land interest, overhead**, and two blanks for additional entries. The **total non-land costs** is calculated for you.

Property taxes are entered for each crop, as well as the tenant's share of the expense. Also required is any **supplemental rent paid by the tenant**.

The program calculates **revenue less variable costs**, as well as **revenue less variable non-land costs**. The revenue less variable non-land costs is actually revenue less *all* variable costs. It accounts for the variable costs and the non-land costs.

| PER ACRE REVENUE AND COSTS AND TENANT'S SHARE | | | | |
|---|----------------------|--------------|-------|------------------------|
| | Help | Use Defaults | Menu | Print |
| Item | Corn | Soybeans | Total | Percent tenant's share |
| No of acres | 0.5 | 0.5 | 1 | |
| Revenue | ----- per acre ----- | | | |
| Price per bushel | \$2.40 | \$6.00 | | |
| Yield per acre | 145 | 48 | | |
| Crop revenue | \$348 | \$288 | \$318 | 50% |
| FAIR transition payments | \$15 | \$15 | \$15 | 50% |
| Total Revenue | \$363 | \$303 | \$333 | |
| Variable Costs | ----- per acre ----- | | | |
| Soil fertility | \$56 | \$21 | \$39 | 50% |
| Pesticides | \$35 | \$36 | \$36 | 50% |
| Seed | \$35 | \$18 | \$27 | 50% |
| Drying | \$10 | \$3 | \$7 | 50% |
| Machinery repair, fuel | \$34 | \$29 | \$32 | 100% |
| | \$0 | \$0 | \$0 | 50% |
| | \$0 | \$0 | \$0 | 50% |
| TOTAL VARIABLE COSTS | \$170 | \$107 | \$139 | |
| Non-land costs | ----- per acre ----- | | | |
| Labor | \$34 | \$32 | \$33 | 100% |
| Building | \$11 | \$7 | \$9 | 40% |
| Storage | \$5 | \$3 | \$4 | 50% |
| Machinery depreciation | \$29 | \$25 | \$27 | 100% |
| Non-land interest | \$35 | \$31 | \$33 | 70% |
| Overhead | \$22 | \$22 | \$22 | 90% |
| | \$0 | \$0 | \$0 | 100% |
| | \$0 | \$0 | \$0 | 100% |
| Total non-land costs | \$136 | \$120 | \$128 | |
| Property taxes | \$26 | \$26 | \$26 | 0% |
| Supplemental rent paid by tenant | \$0 | \$0 | \$0 | |
| Revenue less variable costs | \$193 | \$196 | \$195 | |
| Revenue less variable non-land costs | \$57 | \$76 | \$67 | |

The input section contains 4 navigation buttons.

The **Help** button displays a screen with documentation explaining how to fill in the input section.

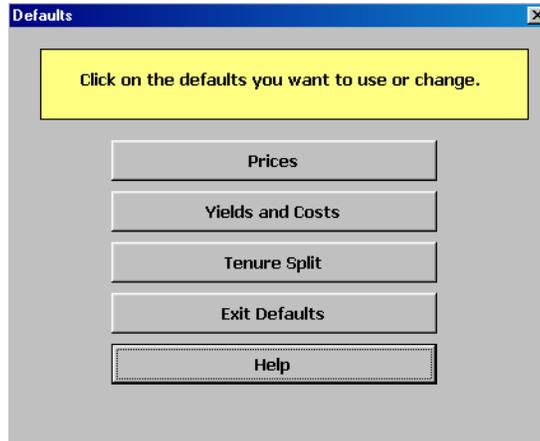
The **Use Defaults** button displays the defaults main menu. This will be explained immediately after the example's description.

The **Menu** button redisplay the Main Menu.

The **Print** button automatically prints the input screen, as well as the output reports to the printer.

Defaults Section

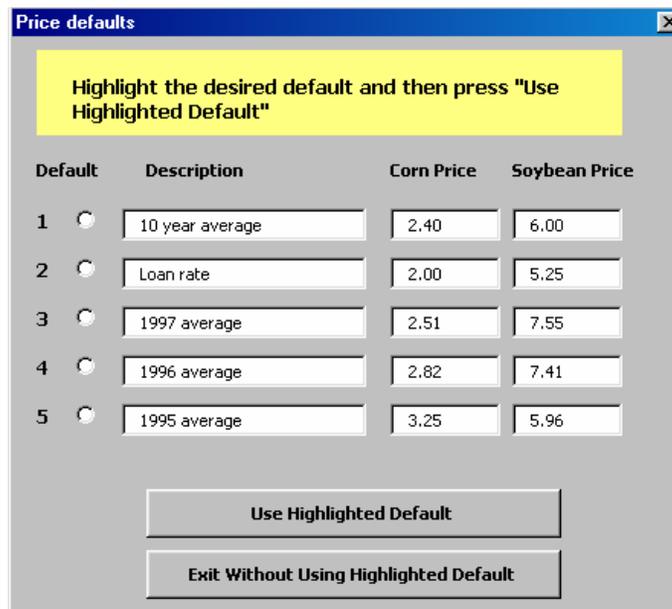
On the input menu, the program provides a “default” button. The default screen is shown below. Defaults for prices, yields and costs, and tenure split are available for Illinois farms categorized by location. In each default screen, the user may edit the information to more accurately analyze his/her situation. The defaults are commonly used when an input is unknown.



An explanation of each default category is explained below.

The **Prices** button provides five blanks/categories for the corn and soybean price. The five categories that are shown automatically are: 10-year average, loan rate, and averages for 1995, 1996, 1997. Each of these categories have defaults, however, the user may change any of the information to more realistically represent his/her operation (white boxes). To do this, simply type over the price that is currently there. This will be changed in the program as soon as you click elsewhere on the screen. You may also delete a category and enter a new one with new data in the same format as changing prices.

To use a default in the input screen simply select/highlight the line to be used in the analysis and click on the “Use Highlighted Default” button.



The screenshot shows a window titled "Price defaults" with a yellow instruction box at the top that says "Highlight the desired default and then press 'Use Highlighted Default'". Below the instruction box is a table with four columns: "Default", "Description", "Corn Price", and "Soybean Price". There are five rows of data, each with a radio button in the "Default" column. Below the table are two buttons: "Use Highlighted Default" and "Exit Without Using Highlighted Default".

| Default | Description | Corn Price | Soybean Price |
|-------------------------|-----------------|------------|---------------|
| 1 <input type="radio"/> | 10 year average | 2.40 | 6.00 |
| 2 <input type="radio"/> | Loan rate | 2.00 | 5.25 |
| 3 <input type="radio"/> | 1997 average | 2.51 | 7.55 |
| 4 <input type="radio"/> | 1996 average | 2.82 | 7.41 |
| 5 <input type="radio"/> | 1995 average | 3.25 | 5.96 |

The **Yields and Costs** button provides five categories: acres and revenue, variable costs, non-land costs, and other (property taxes/privilege rent) by location in Illinois. Each of these categories have defaults, however, the user may change any of the information to more realistically represent his/her operation (white boxes). To do this, simply type over the information that is currently there. This will be changed in the program as soon as you click elsewhere on the screen. You may also enter a new location/category with new data by simply clicking on one of the “empty” categories. Enter the data, as well as name the category. This is done in the “acres and revenue” section. **To use a default in the input screen** simply select/highlight the location to be used in the analysis and click on the “Use Highlighted Default” button.

Per Acre Yield and Cost Defaults

Highlight the desired default in the box below. Values for the highlighted default are shown to the right. Changes can be made in the box to the right. Command buttons below will change and use defaults.

Acres and Revenue | Variable Costs | Non_land costs | Other

| | corn | soybeans |
|----------------|------|----------|
| Soil fertility | 56 | 21 |
| Pesticides | 35 | 36 |
| Seed | 35 | 18 |
| Drying | 10 | 3 |
| Mach. repair | 34 | 29 |
| Other | 0 | 0 |
| Other | 0 | 0 |

Northern Illinois Grain (56-100 SPR)
 Central Illinois Grain (86-100 SPR)
 Central Illinois Grain (56-85 SPR)
 Southern Illinois Grain
 empty
 empty
 empty
 empty
 empty

Use Highlighted Default | Copy Highlighted Default
 Exit Without Using Default | Current Values in Highlighted Default
 Help | Clear Highlighted Default

At the bottom of the Yield and Cost screen, there are 6 navigation buttons.

The **Use Highlighted Default** button will insert the default data for the location chosen into the main input menu. Note: All data will change, not only the screen/category being viewed.

The **Exit Without Using Default** button simply returns the user to the input screen without transferring any data.

The **Help** button displays an explanation of the navigation buttons.

The **Copy Highlighted Default** copies the highlighted Default to another default (replacing the word “empty”). The user can name the new default, as well as change any data (before copying).

The **Current Values in Highlighted Default** button creates a default containing the values entered in the input screen. The user may select a location or “empty” for this new default.

The **Clear Highlighted Default** button clears the default information for the location highlighted. (ie. if user creates a new default and later wants to discard it, use this button.)

The **tenure split** button provides two tenure defaults: 50-50 share rent and 2/3-1/3. Each of these categories have defaults, however, the user may change any of the information to more realistically represent his/her operation (white boxes). To do this, simply type over the information that is currently there. This will be changed in the program as soon as you click elsewhere on the screen. You may also enter a new category/type of lease with new data by simply clicking on one of the “empty” categories. Enter the data, as well as name the category. This is done at the top of the screen. **To use a default in the input screen** simply select/highlight the location to be used in the analysis and click on the “Use Highlighted Default” button.

Tenure Defaults

Highlight the desired tenure default in the box below. Defaults for the highlighted split are shown to the right. Changes can be made in the box to the right. Command buttons below will change and use defaults.

Tenure Defaults

- 50-50 share rent
- 2/3-1/3
- empty

Tenant's Share of Revenue and Costs (Percent)

Name: 50-50 share rent

| Revenue | | Non-land costs | |
|------------------|-----|--------------------|-----|
| Crop revenue | 50 | Labor | 100 |
| FAIR payments | 50 | Building | 40 |
| Variable Costs | | Storage | 50 |
| Soil fertility | 50 | Mach. depreciation | 100 |
| Pesticides | 50 | Non-land interest | 70 |
| Seed | 50 | Overhead | 90 |
| Drying | 50 | Other | 100 |
| Machinery repair | 100 | Other | 100 |
| Other | 50 | Property tax | 0 |
| Other | 50 | | |

At the bottom of the Tenure Split default screen; there are 6 navigation buttons. Refer to the Yields and Costs section of the Default explanation for descriptions of these buttons.

Reports

The Farmland Lease Analysis program contains 4 sections of reporting. Each report lists the revenue, costs, and returns for both the tenant and the landlord. The reporting sections are called:

1. Share Rent Reports.
2. Cash Rent Reports.
3. Dry Bushel Reports.
4. Comparison Reports.

Report 1: Share Rent

The share rent report provides the tenant's and landlord's revenue and costs, as well as "per acre" summaries. Below is a report for a tenant having a share rent lease.

| SHARE RENT REPORTS | | | | |
|---|-------------------|-------------|---------------|-------|
| | | Help | Menu | Print |
| TENANT'S REVENUE AND COSTS (Share Rent) | | | | |
| Item | --- per acre ---- | | Total Farm | |
| | Corn | Soybeans | | |
| Revenue | | | | |
| Crop revenue | 174 | 144 | 159 | |
| FAIR transition payments | 8 | 8 | 8 | |
| Total revenue | \$182 | \$152 | \$167 | |
| | | | | |
| Variable costs | | | | |
| Non-land costs | 102 | 68 | 85 | |
| Supplemental rent and tax | 114 | 103 | 109 | |
| Total costs | \$216 | \$171 | \$194 | |
| | | | | |
| Revenue less variable costs | \$80 | \$84 | \$82 | |
| Revenue less total costs | -\$35 | -\$19 | -\$27 | |
| | | | | |
| Per acre revenue less variable costs | \$82 | Sensitivity | | |
| Per acre revenue less total costs | -\$27 | Sensitivity | | |
| EQUIVALENT PER ACRE CASH RENT | \$103 | Sensitivity | | |

The report contains columns listing revenues and costs for per acre corn, per acre soybean, and total farm production. Three summary measures also are reported:

- Per acre revenue less variable costs.** Revenue less variable costs provides a measure of cash flow. Variable costs include fertilizer, pesticide, seed, drying, and machinery repair costs. The sensitivity table is below. If yields or prices are 10% above average, the tenant's per acre revenue less variable costs would be \$97. This is \$15 more than if average prices or yields occur.

TENANT'S PER ACRE REVENUE LESS VARIABLE COSTS

share rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | 109 | 131 | 145 | 160 | 181 | |
| soybeans | 36 | 43 | 48 | 53 | 60 | |
| 25% below | | | | | | |
| Corn | \$1.80 | \$12 | \$30 | \$42 | \$54 | \$72 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$30 | \$51 | \$66 | \$80 | \$101 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$42 | \$66 | \$82 | \$97 | \$121 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$54 | \$80 | \$97 | \$115 | \$141 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$72 | \$101 | \$121 | \$141 | \$171 |
| Soybeans | \$7.50 | | | | | |

- Per acre revenue less total costs.** Revenue less total costs provides an overall indication of profitability of the lease. Total costs include variable and non-land costs (labor, machinery depreciation, interest, building and storage costs, and overhead). The sensitivity table is below. The average revenue less total costs is -\$27 per acre. This tables shows that if yields and prices are 10% above average, the tenant's returns will become profitable at \$6 per acre.

TENANT'S PER ACRE REVENUE LESS TOTAL COSTS

share rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | 109 | 131 | 145 | 160 | 181 | |
| soybeans | 36 | 43 | 48 | 53 | 60 | |
| 25% below | | | | | | |
| Corn | \$1.80 | -\$97 | -\$79 | -\$67 | -\$55 | -\$37 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | -\$79 | -\$57 | -\$43 | -\$29 | -\$7 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | -\$67 | -\$43 | -\$27 | -\$11 | \$13 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | -\$55 | -\$29 | -\$11 | \$6 | \$33 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | -\$37 | -\$7 | \$13 | \$33 | \$62 |
| Soybeans | \$7.50 | | | | | |

3. **Equivalent per acre cash rent.** The equivalent cash rent is a cash payment causing the tenant and landlord to have the same return under a cash rent lease as under a share rental lease. The equivalent cash rent in the above example is \$103. If the tenant paid the landlord \$103 per acre under a cash rent lease, the tenant and landlord have the same returns as under the share rent lease. For share-rent arrangements, equivalent cash rents will vary under differing prices and yields. Equivalent cash rents are useful for comparing alternative lease types. The sensitivity table shown on the previous page.

EQUIVALENT PER ACRE CASH RENT
share rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|------------------|--------|-------------------|-------|--------------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | 109 | 109 | 131 | 145 | 160 | 181 |
| soybeans | 36 | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | \$33 | \$51 | \$63 | \$75 | \$93 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$51 | \$72 | \$87 | \$101 | \$122 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$63 | \$87 | \$103 | \$118 | \$142 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$75 | \$101 | \$118 | \$136 | \$162 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$93 | \$122 | \$142 | \$162 | \$192 |
| Soybeans | \$7.50 | | | | | |

The landlord's share rent report is below.

LANDLORD'S REVENUE AND COSTS (Share Rent)

| Item | ---- per acre ---- | | Total Farm |
|--------------------------------------|--------------------|--------------|--------------|
| | Corn | Soybeans | |
| Revenue | | | |
| Crop revenue | 174 | 144 | 159 |
| Supplemental rent | 0 | 0 | 0 |
| FAIR transition payments | 8 | 8 | 8 |
| Total revenue | \$182 | \$152 | \$167 |
| Variable costs | | | |
| Non-land costs | 22 | 17 | 20 |
| Property tax | 26 | 26 | 26 |
| Total non-land costs | \$116 | \$82 | \$99 |
| Revenue less variable costs | \$114 | \$113 | \$113 |
| Revenue less non-land costs | \$66 | \$69 | \$68 |
| Per acre revenue less variable costs | \$113 | Sensitivity | |
| Per acre revenue less non-land costs | \$68 | Sensitivity | |

The report contains columns listing revenues and costs for per acre corn, per acre soybean, and total farm production. Two summary measures also are reported.

Per acre revenue less variable costs: Revenue less variable costs provides a measure of cash flow. Variable costs include fertilizer, pesticide, seed, drying, and machinery repair costs. The sensitivity table is below. If yields or prices are 10% above average, the landlord's per acre revenue less variable costs is \$129. This is \$16 more than if average prices or yields occur.

LANDLORD'S PER ACRE REVENUE LESS VARIABLE COSTS
(under different prices and yields) Return

| PRICES | YIELDS | below | | | above | |
|-----------|--------|-------|-------|-------|-------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | 109 | 109 | 131 | 145 | 160 | 181 |
| soybeans | 36 | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | \$43 | \$61 | \$73 | \$85 | \$103 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$61 | \$83 | \$97 | \$111 | \$133 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$73 | \$97 | \$113 | \$129 | \$153 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$85 | \$111 | \$129 | \$146 | \$173 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$103 | \$133 | \$153 | \$173 | \$202 |
| Soybeans | \$7.50 | | | | | |

Per acre revenue less total costs: Revenue less total costs provides an overall indication of profitability of the lease. Total costs include variable and non-land costs (labor, machinery depreciation, interest, building and storage costs, and overhead). The sensitivity table is below. The average revenue less total costs is \$68 per acre. This table shows that if yields and prices fall 10% above average, the landlord's returns will be \$83 per acre.

LANDLORD'S PER ACRE REVENUE LESS TOTAL COSTS
share rent (under different prices and yields) Return

| PRICES | YIELDS | below | | | above | |
|-----------|--------|-------|------|-------|-------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | 109 | 109 | 131 | 145 | 160 | 181 |
| soybeans | 36 | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | -\$2 | \$16 | \$28 | \$40 | \$58 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$16 | \$37 | \$52 | \$66 | \$87 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$28 | \$52 | \$68 | \$83 | \$107 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$40 | \$66 | \$83 | \$101 | \$127 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$58 | \$87 | \$107 | \$127 | \$157 |
| Soybeans | \$7.50 | | | | | |

Example Explanation

From the two reports shown for the share rent option, Bill and Bob Grower have an \$82 per acre revenue less variable costs and a -\$27 per acre revenue less total costs. This means that they are not able to cover their costs by farming with the arrangement they currently have. If they were to switch their arrangement to a cash rent lease, the equivalent per acre lease would cost them \$103. By checking the sensitivity analysis, we find that if prices were to increase 25% (\$3.00 corn and \$7.50 soybeans), Bill and Bob would earn a return of \$13 per acre. Their return would be positive if yields were to improve.

Report 2: Cash Rent

The cash rent report provides the tenant's and landlord's revenue and costs, as well as "per acre" summaries. Below is the report for a tenant having a cash rent lease.

| CASH RENT REPORTS | | | | |
|--|----------------------|--------------|------------|-------|
| | | Help | Menu | Print |
| Per acre cash rent | | \$130 | | |
| Tenant's share of FAIR transition payments | | 100% | | |
| Change Non-Land Cost Defaults | | | | |
| TENANT'S REVENUE AND COSTS (Cash Rent) | | | | |
| Item | ----- per acre ----- | | Total Farm | |
| | Corn | Soybeans | | |
| Revenue | | | | |
| Crop revenue | 348 | 288 | 318 | |
| FAIR transition payments | 15 | 15 | 15 | |
| Total revenue | \$363 | \$303 | 333 | |
| Variable costs | | | | |
| Cash rent | 170 | 107 | 139 | |
| Cash rent | 130 | 130 | 130 | |
| Non-land costs | 125 | 113 | 119 | |
| Total costs | \$425 | \$350 | 388 | |
| Revenue less variable costs | \$193 | \$196 | \$195 | |
| Revenue less v.c and rent | \$63 | \$66 | \$65 | |
| Revenue less total costs | -\$62 | -\$47 | -\$55 | |
| Per acre revenue less variable costs | \$195 | Sensitivity | | |
| Per acre revenue less v.c. and rent | \$65 | Sensitivity | | |
| Per acre revenue less total costs | -\$55 | Sensitivity | | |
| BREAKEVEN RENT TO COVER | | | | |
| VARIABLE COSTS | \$195 | Sensitivity | | |
| BREAKEVEN RENT TO COVER | | | | |
| TOTAL COSTS | \$76 | Sensitivity | | |

The report contains columns listing revenues and costs for per acre corn, per acre soybean, and total farm production. Five summary measures are also reported.

1. **Per acre revenue less variable costs.** Revenue less variable costs provides a measure of cash flow. Variable costs include fertilizer, pesticide, seed, drying, and machinery repair costs. The sensitivity table is below. If yields or prices are 10% above average, the tenant's per acre revenue less variable costs is \$226. This is \$31 more than if average prices or yields occur.

**TENANT'S PER ACRE REVENUE LESS VARIABLE COSTS
BREAKEVEN RENT TO COVER VARIABLE COSTS**

cash rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | | 109 | 131 | 145 | 160 | 181 |
| soybeans | | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | \$55 | \$91 | \$115 | \$139 | \$175 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$91 | \$134 | \$163 | \$191 | \$234 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$115 | \$163 | \$195 | \$226 | \$274 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$139 | \$191 | \$226 | \$261 | \$314 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$175 | \$234 | \$274 | \$314 | \$373 |
| Soybeans | \$7.50 | | | | | |

2. **Per acre revenue less variable costs and rent.** Revenue less variable costs and rent represents the tenant's return above variable and rental costs. This measure calculates total revenue minus the variable costs listed in #1, as well as the rent cost. The sensitivity table is below. If yields or prices are 10% above average, the tenant's per acre revenue less variable costs and cash rent is \$96. This is \$31 more than if average prices or yields occur.

TENANT'S PER ACRE REVENUE LESS VARIABLE COSTS AND CASH RENT

cash rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | | 109 | 131 | 145 | 160 | 181 |
| soybeans | | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | -\$75 | -\$39 | -\$15 | \$9 | \$45 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | -\$39 | \$4 | \$33 | \$61 | \$104 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | -\$15 | \$33 | \$65 | \$96 | \$144 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$9 | \$61 | \$96 | \$131 | \$184 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$45 | \$104 | \$144 | \$184 | \$243 |
| Soybeans | \$7.50 | | | | | |

- 3. Per acre revenue less total costs.** Revenue less total costs provides an overall indication of profitability of the lease. Total costs include variable and non-land costs (labor, machinery depreciation, interest, building and storage costs, and overhead). The sensitivity table is below. The average revenue less total costs is -\$55 per acre. This tables shows that if yields and prices are 10% above average, the tenant's returns will become profitable at \$12 per acre.

TENANT'S PER ACRE REVENUE LESS TOTAL COSTS

cash rent (under different prices and yields)

Return

| | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|-----------------|-------------------|--------|--------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| PRICES | corn | 109 | 131 | 145 | 160 | 181 |
| | soybeans | 36 | 43 | 48 | 53 | 60 |
| 25% below | Corn \$1.80 | -\$194 | -\$158 | -\$134 | -\$110 | -\$74 |
| | Soybeans \$4.50 | | | | | |
| 10% below | Corn \$2.16 | -\$158 | -\$115 | -\$86 | -\$58 | -\$15 |
| | Soybeans \$5.40 | | | | | |
| Avg | Corn \$2.40 | -\$134 | -\$86 | -\$55 | -\$23 | \$25 |
| | Soybeans \$6.00 | | | | | |
| 10% above | Corn \$2.64 | -\$110 | -\$58 | -\$23 | \$12 | \$65 |
| | Soybeans \$6.60 | | | | | |
| 25% above | Corn \$3.00 | -\$74 | -\$15 | \$25 | \$65 | \$124 |
| | Soybeans \$7.50 | | | | | |

- 4. Breakeven rent to cover variable costs.** Rent to cover variable costs provides the cash rent per acre necessary for covering the variable costs associated with farming. The sensitivity table for this is the same as #1 "per acre revenue less variable costs".
- 5. Breakeven rent to cover total costs.** Rent to cover total costs provides the cash rent per acre necessary for covering the total costs associated with farming. The sensitivity table is below. If yields or prices are 10% above average, the tenant's per acre revenue less variable costs is \$107. This is \$31 more than if average prices or yields occur.

BREAKEVEN CASH RENT TO COVER TOTAL COSTS

cash rent (under different prices and yields)

Return

| | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|-----------------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| PRICES | corn | 109 | 131 | 145 | 160 | 181 |
| | soybeans | 36 | 43 | 48 | 53 | 60 |
| 25% below | Corn \$1.80 | -\$64 | -\$28 | -\$4 | \$20 | \$56 |
| | Soybeans \$4.50 | | | | | |
| 10% below | Corn \$2.16 | -\$28 | \$15 | \$44 | \$72 | \$115 |
| | Soybeans \$5.40 | | | | | |
| Avg | Corn \$2.40 | -\$4 | \$44 | \$76 | \$107 | \$155 |
| | Soybeans \$6.00 | | | | | |
| 10% above | Corn \$2.64 | \$20 | \$72 | \$107 | \$142 | \$195 |
| | Soybeans \$6.60 | | | | | |
| 25% above | Corn \$3.00 | \$56 | \$115 | \$155 | \$195 | \$254 |
| | Soybeans \$7.50 | | | | | |

The Landlord's cash rent report is below:

| LANDLORD'S REVENUE AND COSTS(Cash Rent) | | |
|--|----------|------------|
| | Per acre | Total Farm |
| Revenue | | |
| Cash rent | 130 | 130 |
| FAIR transition payments | 0 | 0 |
| Total revenue | \$130 | \$130 |
| Non-land costs | | |
| Property tax | 26 | 26 |
| Total costs | \$35 | \$35 |
| Revenue less total costs | \$95 | \$95 |

This report contains columns listing revenues and costs on a "per acre" and "total farm" basis. This table shows that cash rent is \$130 per acre. The non-land costs are \$9 per acre and property tax is \$26 per acre. The landlord's revenue less total costs in this cash rent scenario is \$95 per acre.

Example Explanation

From the two reports shown for the cash rent option, Bill and Bob Grower have a \$195 per acre revenue less variable cost, a \$65 per acre revenue less variable costs and rent, and a -\$55 per acre revenue less total costs. This means that they are not able to cover their costs by farming with this arrangement. In order to breakeven, they would need a \$195 per acre cash rent to cover variable costs and a \$76 per acre cash rent to cover total costs.

By checking the sensitivity analysis (report 5), we find that if yields or prices improved by 10%, they could cover their total costs by paying a cash rent of \$107 per acre.

Report 3: Dry Bushel Rent

The dry bushel rent report provides the tenant's and landlord's revenue and costs, as well as "per acre" summaries. Below is a report for a tenant having a dry bushel lease:

| DRY BUSHEL REPORTS | | | | | |
|--|--------------------|-------------|-------|-------|--|
| Help | | Menu | | Print | |
| DRY BUSHEL INPUT | | | | | |
| Dry bushel lease | | | | | |
| bushels of corn | | 40 | | | |
| bushels of soybeans | | 15 | | | |
| Tenant's share of FAIR transition payments | | 50% | | | |
| TENANT'S REVENUE AND COSTS (Dry bushel) | | | | | |
| | ---- per acre ---- | | Total | | |
| Item | Corn | Soybeans | Farm | | |
| Revenue | | | | | |
| Crop revenue | 252 | 198 | 225 | | |
| FAIR transition payments | 8 | 8 | 8 | | |
| Total revenue | \$260 | \$206 | \$233 | | |
| Variable costs | | | | | |
| Non-land costs | 170 | 107 | 139 | | |
| Total costs | \$295 | \$220 | \$258 | | |
| Revenue less variable costs | \$90 | \$99 | \$94 | | |
| Revenue less total costs | -\$36 | -\$15 | -\$25 | | |
| Per acre revenue less variable costs | \$94 | Sensitivity | | | |
| Per acre revenue less total costs | -\$25 | Sensitivity | | | |
| EQUIVALENT PER ACRE CASH RENT | \$101 | Sensitivity | | | |

The report contains columns listing revenues and costs for per acre corn, per acre soybean, and total farm production. Three summary measures also are reported:

1. **Per acre revenue less variable costs.** Revenue less variable costs provides a measure of cash flow. Variable costs include fertilizer, pesticide, seed, drying, and machinery repair costs. The sensitivity table is below. If yields or prices are 10% above average, the tenant's per acre revenue less variable costs is \$94. This is \$22 more than if average prices or yields occur.

TENANT'S PER ACRE REVENUE LESS VARIABLE COSTS

dry bushel rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | | 109 | 131 | 145 | 160 | 181 |
| soybeans | | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | -\$22 | \$14 | \$38 | \$62 | \$97 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$0 | \$43 | \$72 | \$100 | \$143 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$15 | \$62 | \$94 | \$126 | \$174 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$29 | \$82 | \$117 | \$151 | \$204 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$51 | \$111 | \$150 | \$190 | \$250 |
| Soybeans | \$7.50 | | | | | |

2. **Per acre revenue less total costs.** Revenue less total costs provides an overall indication of profitability of the lease. Total costs include variable and non-land costs (labor, machinery depreciation, interest, building and storage costs, and overhead). The average revenue less total costs is -\$25 per acre. This tables shows that if yields are 10% above average, the tenant's returns will become profitable at \$7 per acre. Prices must be 25% above average in order for the tenant's returns to be profitable (\$31 per acre).

TENANT'S PER ACRE REVENUE LESS TOTAL COSTS

dry bushel rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|--------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | | 109 | 131 | 145 | 160 | 181 |
| soybeans | | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | -\$141 | -\$105 | -\$81 | -\$57 | -\$22 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | -\$119 | -\$76 | -\$48 | -\$19 | \$24 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | -\$105 | -\$57 | -\$25 | \$7 | \$55 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | -\$90 | -\$37 | -\$2 | \$32 | \$85 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | -\$68 | -\$8 | \$31 | \$71 | \$131 |
| Soybeans | \$7.50 | | | | | |

3. **Equivalent per acre cash rent.** The equivalent cash rent is a cash payment causing the tenant and landlord to have the same return under a cash rent lease as under a share rental lease. The equivalent cash rent in the above example is \$101. If the tenant paid the landlord \$101 per acre under a cash rent lease, the tenant and landlord have the same returns as under the dry bushel rent lease. For dry bushel rent arrangements, equivalent cash rents will vary under differing prices and yields. Equivalent cash rents are useful for comparing alternative lease types. The sensitivity table is below. In this example, yields do not affect the cash rent price. However, if prices are 10% above average, the cash rent will increase \$9 to \$110 per acre. If prices are 10% below average, the cash rent will decrease \$10 to \$91 per acre.

TENANT'S EQUIVALENT PER ACRE CASH RENT

dry bushel rent (under different prices and yields)

Return

| PRICES | YIELDS | ----- below ----- | | | ----- above ----- | |
|-----------|--------|-------------------|-------|-------|-------------------|-------|
| | | 25% | 10% | Avg | 10% | 25% |
| corn | | 109 | 131 | 145 | 160 | 181 |
| soybeans | | 36 | 43 | 48 | 53 | 60 |
| 25% below | | | | | | |
| Corn | \$1.80 | \$77 | \$77 | \$77 | \$77 | \$77 |
| Soybeans | \$4.50 | | | | | |
| 10% below | | | | | | |
| Corn | \$2.16 | \$91 | \$91 | \$91 | \$91 | \$91 |
| Soybeans | \$5.40 | | | | | |
| Avg | | | | | | |
| Corn | \$2.40 | \$101 | \$101 | \$101 | \$101 | \$101 |
| Soybeans | \$6.00 | | | | | |
| 10% above | | | | | | |
| Corn | \$2.64 | \$110 | \$110 | \$110 | \$110 | \$110 |
| Soybeans | \$6.60 | | | | | |
| 25% above | | | | | | |
| Corn | \$3.00 | \$124 | \$124 | \$124 | \$124 | \$124 |
| Soybeans | \$7.50 | | | | | |

The landlord's dry bushel rent report is below:

| LANDLORD'S REVENUE AND COSTS (Dry Bushel) | | | |
|--|--------------------|----------|-------|
| | ---- per acre ---- | | Total |
| | Corn | Soybeans | Farm |
| Revenue | | | |
| Bushel rent | 96 | 90 | 93 |
| FAIR transition payments | 8 | 8 | 8 |
| Total revenue | \$104 | \$98 | 101 |
| Non-land costs | | | |
| Property tax | 26 | 26 | 26 |
| Total costs | \$37 | \$33 | \$35 |
| Revenue less total costs | \$67 | \$65 | \$66 |

The report contains columns listing revenues and costs for per acre corn, per acre soybean, and total farm production.

Example Explanation

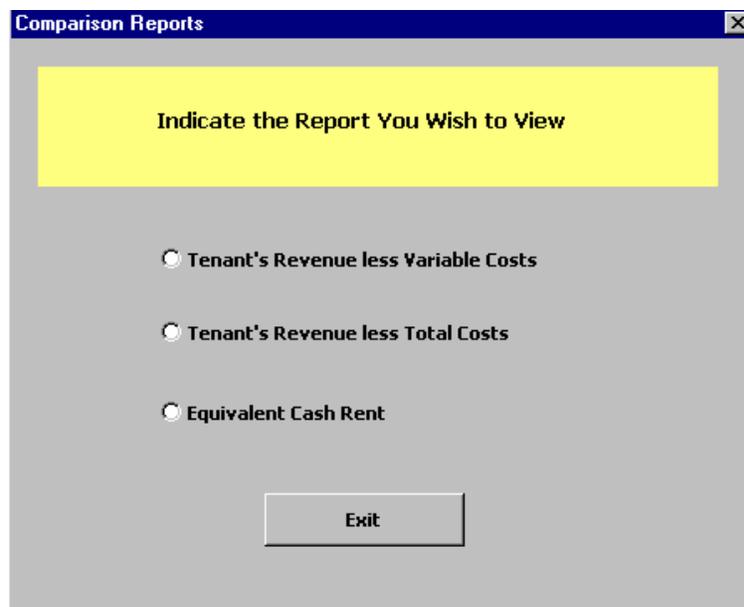
From the two reports shown for the dry bushel rent option, Bill and Bob Grower have a \$94 per acre revenue less variable cost and a -\$25 per acre revenue less total costs. This means that they are not able to cover their costs by farming with this arrangement. If they were to look at a cash rent lease, the equivalent per acre lease would be \$101. By checking the sensitivity analysis, we find that if yields improved by 10%, they would have a \$7 per acre return. Remember, this lease option is dependent upon yield.

Report 4: Comparison

The comparison report section provides price and yield combinations, along with their equivalent per acre rent cost for the other alternatives. This section provides three types of reports:

1. Tenant's Revenue less Variable Costs
2. Tenant's Revenue less Total Costs
3. Equivalent Cash Rent

To find the comparison reports, select the button on the main menu called "Comparison Reports". In order to choose which report to view, select the button called "Comparison Reports" on the report screen. This will give you the following menu:



Comparison Reports

Indicate the Report You Wish to View

Tenant's Revenue less Variable Costs

Tenant's Revenue less Total Costs

Equivalent Cash Rent

Exit

Below is the comparison report for Bill and Bob Grower's Analysis.

| EQUIVALENT CASH RENTS UNDER DIFFERENT LEASES | | | | | | |
|--|---------------|--------------------|---------------|----------------------|-----------|-------------|
| Help | | Comparison Reports | | Menu | | Print |
| --- price and yield combinations --- | | | | ----- per acre ----- | | |
| corn price | soybean price | corn yield | soybean yield | Share rent | Cash rent | Bushel rent |
| \$1.80 | \$4.50 | 145 | 48 | \$63 | \$130 | \$77 |
| \$1.80 | \$4.50 | 160 | 53 | \$75 | \$130 | \$77 |
| \$1.80 | \$4.50 | 181 | 60 | \$93 | \$130 | \$77 |
| \$2.16 | \$5.40 | 109 | 36 | \$51 | \$130 | \$91 |
| \$2.16 | \$5.40 | 131 | 43 | \$72 | \$130 | \$91 |
| \$2.16 | \$5.40 | 145 | 48 | \$87 | \$130 | \$91 |
| \$2.16 | \$5.40 | 160 | 53 | \$101 | \$130 | \$91 |
| \$2.16 | \$5.40 | 181 | 60 | \$122 | \$130 | \$91 |
| \$2.40 | \$6.00 | 109 | 36 | \$63 | \$130 | \$101 |
| \$2.40 | \$6.00 | 131 | 43 | \$87 | \$130 | \$101 |
| \$2.40 | \$6.00 | 145 | 48 | \$103 | \$130 | \$101 |
| \$2.40 | \$6.00 | 160 | 53 | \$118 | \$130 | \$101 |
| \$2.40 | \$6.00 | 181 | 60 | \$142 | \$130 | \$101 |
| \$2.64 | \$6.60 | 109 | 36 | \$75 | \$130 | \$110 |
| \$2.64 | \$6.60 | 131 | 43 | \$101 | \$130 | \$110 |
| \$2.64 | \$6.60 | 145 | 48 | \$118 | \$130 | \$110 |
| \$2.64 | \$6.60 | 160 | 53 | \$136 | \$130 | \$110 |
| \$2.64 | \$6.60 | 181 | 60 | \$162 | \$130 | \$110 |
| \$3.00 | \$7.50 | 109 | 36 | \$93 | \$130 | \$124 |
| \$3.00 | \$7.50 | 131 | 43 | \$122 | \$130 | \$124 |
| \$3.00 | \$7.50 | 145 | 48 | \$142 | \$130 | \$124 |
| \$3.00 | \$7.50 | 160 | 53 | \$162 | \$130 | \$124 |
| \$3.00 | \$7.50 | 181 | 60 | \$192 | \$130 | \$124 |

This report lists equivalent cash rents under different yield and price combinations. The first four columns list different price and yield combinations. The last three columns list equivalent cash rents per acre. As an example, look at equivalent cash rents for a \$2.40 corn price, \$6.00 soybean price, 145 bushel corn yield, and 48 bushel soybean yield (the middle row in the report). Equivalent cash rents are \$103 for the share lease, \$130 for the cash lease, and \$101 for the dry bushel lease. These equivalent cash rents allow a user to see how leases perform under differing price and yield combinations.