FARM BUSINESS MANAGEMENT

FARM ECONOMICS Facts & Opinions

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NEW CROP BUDGETING SPREADSHEET RELEASED

A new *Crop Budgeting* Tool has been released on *farmdoc*. *Crop Budgeting* compares the costs and returns from alternative crops and determines the funds available to pay for cash rent. This tool is part of *FAST*, a series of Microsoft Excel spreadsheets that aid farmers in economic decision-making. The spreadsheet is available in the "FAST Tools" section of *farmdoc* (www.farmdoc.uiuc.edu).

Layout of Spreadsheet

A screenshot of the spreadsheet is shown in the figure below. The spreadsheet includes five columns. The first four columns are crop budgets in which a user enters acres in the crop; expected price per bushel; and per acre estimates of yield, government payments and expenses. The tool then calculates revenue less expenses for each crop. Comparing revenue less expenses across the crops allows a user to assess the relative profitability of differing crops.

Users can begin budgeting for crops by using defaults within *Crop Budgeting*. Defaults are controlled by the crop type designation at the top of each budget column. In the screenshot, crop types are "Corn after beans" for the first column, "Soybeans" for the second column, "Wheat" for the third column, and "Corn after corn" for the fourth column. These types can be changed by the user from the following list: corn after soybeans, corn after corn, soybeans, wheat, double crop soybeans, oats, and other. By clicking on the "Use Defaults" button in the top right-hand corner of the spreadsheet, defaults values for yield per acre, price per bushel, government payments, and all expense categories are brought into the worksheet. Defaults can be selected for northern Illinois, central Illinois with high-productivity farmland, central Illinois with low productivity farmland, and southern Illinois. Defaults are based on Illinois Farm Business Farm Management (FBFM) records, supplemented with information from *University of Illinois Crop Budgets*. The screenshot shows central Illinois with high productivity farmland defaults.

The final column is a summary column which a user can select to show either totals for the farm or averages for an acre weighted by the acres in each crop. The screenshot show averages per acre.

Crop Budgeting Tool (version 1.0)

Type:	Corn after beans	Soybeans	Wheat	Corn after corn	Per Acre
Acres	100.00	100.00	0.00	0.00	200.00
Yield per acre	163	50	75	155	
Price per bu	$2.10	$5.00	$3.00	$2.10	
Revenue	-------- $ per acre --------				$/acre
Crop revenue	$342	$250	$225	$326	$296
Government payments	23	23	23	23	$23
Total revenue	$365	$273	$248	$349	$319
Expenses	-------- $ per acre --------				$/acre
Fertilizer	$54	$19	$25	$59	$37
Pesticides	33	30	10	36	32
Seed	34	21	17	34	28
Drying	10	0	0	10	5
Storage	7	3	5	7	5
Crop insurance	8	5	3	8	7
_____	0	0	0	0	0
Total direct expense	$146	$78	$60	$154	$112
Machine hire/lease	$7	$4	$3	$7	$6
Utilities	4	4	4	4	4
Machine repair	14	13	7	14	14
Fuel and oil	9	8	5	9	9
Light vehicle	1	1	1	1	1
Mach. depreciation	30	25	14	30	28
_____	0	0	0	0	0
Total power expense	$65	$55	$34	$65	$60
Hired labor	$8	$8	$7	$8	$8
Building repair and rent	3	3	3	3	3
Building depreciation	5	5	3	5	5
Insurance	5	5	5	5	5
Misc.	4	4	4	4	4
Interest	5	5	3	5	5
_____	0	0	0	0	0
Total overhead	$30	$30	$25	$30	$30
Total expenses	$241	$163	$119	$249	$202
Revenue less expenses	$124	$110	$129	$100	$117
Operator's return	30	30	30	30	30
Total expenses + return	$271	$193	$149	$279	$232
Rev. less expenses [1]	$94	$80	$99	$70	$87

[1] Revenue available to cover cash rent

Uses of the spreadsheet

Crop Budgeting is designed for two uses:

1. To examine the relative profitability of crops. The first four columns of the spreadsheet allow a user to assess crop profitability by comparing revenue less expenses for different crops. In the above example, which uses defaults for central Illinois with high productivity farmland, the most profitable crop is wheat having revenue less expenses of $99 per acre, followed by corn after soybean ($94 per acre), soybeans ($80 per acre), and corn after corn ($70). This example illustrates that wheat is a competitive crop with corn and soybeans given current prices for these crops.

2. To determine the amount that can be paid for cash rent. *Crop Budgeting* includes categories for all costs except land costs. It also includes return to the operator for his labor, management, and equity capital (i.e., operator's return). Revenue less expenses is the amount available to pay cash rent. In the above example, $87 is available for cash rent. Paying more than this number will cut into operator's return. Paying more than revenue less expenses plus operator's return ($117 in the above example) means that some of the remaining cost categories will not be covered.

Summary

Crop Budgeting aids users in budgeting. Recent commodity prices, along with changes brought about with implementation of the 2002 Farm Bill, have increased the relative profitability of corn and wheat relative to soybeans. Hence, cropping decisions could be more important in this and upcoming years than in the 1990s.

Crop Budgeting uses defaults. Costs and yields vary from farm to farm. Using a farm's own costs and yields are advisable.

Defaults in *Crop Budgeting* come from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 6,000 plus farmers and 62 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provides on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at www.fbfm.org.

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