



# **Introduction to Field Crop Enterprise Budgets – 2006**

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# 2006 OHIO CROP ENTERPRISE BUDGETS

## Field Crops

Enterprise budgets are developed to aid producers in evaluating alternative plans. The following are some points to keep in mind as you use the Ohio Crop Enterprise Budgets. They represent common, workable combinations of inputs that can achieve a given output. Amounts of seed, types and quantities of fertilizer, chemicals, and other items reflect University recommendations and the experience of many Ohio farmers. The specific combinations of inputs and prices presented will not likely precisely reflect any given farm. In practice, actual costs will be higher or lower than shown. Thus the most important column is "Your Budget".

Our enterprise budgets are compiled on downloadable Excel Spreadsheets that contain macros for ease of use. Users can input their own production and price levels to calculate their own numbers. These Enterprise Budgets have a *new look* with color coded cells that will enable users to plug in numbers to easily calculate bottoms lines for different scenarios. Detailed footnotes are included to help explain methodologies used to obtain the budget numbers.

An enterprise budget has the following characteristics:

- it estimates costs and returns expected for a single enterprise.
- It represents one combination (from among hundreds available) of inputs such as seed, chemicals, and fertilizer to produce some level of output.
- It is a written plan for a future course of action including estimated costs and returns for that particular enterprise.
- It provides a format and a basis for developing enterprise budgets appropriate for a given farm situation.

At the same time, some things must be recognized that are not implied by an enterprise budget:

- It is not the only combination of inputs that can be used to produce this crop. For example, soil type and extent of prior fertility buildup can cause fertilizer requirements to vary widely.
- It does not imply that anyone whose costs are different from this must have incorrect data or poor records. Volume discounts, local prices, and tillage methods are just a few of the causes of cost variation.
- It does not imply that all producers can achieve these costs and yields. Different soil types, different ways in which the soil has been utilized and cared for in the past, and different weather in a given season all can cause the actual results to vary greatly from what is presented.

## **Yield Levels**

There are three yield levels in each budget. The middle yield level is generally near the recent 5-year average for Ohio. The low and high yields typically represent 25% above and below that yield level. These yield levels reflect land with differing yield potential. They are not intended to represent different levels of management on the same soil, nor variations in production due to weather on the same land. In developing your own budget, we recommend using a five-year average yield as the most likely. After developing a budget reflecting the most likely outcome for your soil and management ability, you should evaluate the impact of yield levels 10 to 20% higher and lower (perhaps more, depending on the crop and soil under consideration).

## **Pricing Methods**

Prices for crops and inputs reflect estimates for 2005. Crop prices are estimates of harvest prices. No costs are included for grain storage. If an improved price is reflected in your farm due to storage or marketing strategies, then any increased costs to achieve that price should either be netted out of returns or added to costs.

## **Variable Costs**

Seed, fertilizer, and chemical requirements are based on agronomists' recommendations. Fertilizer amounts vary by yield level to reflect crop removal, based on typical soil test values for  $P_2O_5$  and  $K_2O$ . These specific quantities are noted in the budgets. These quantities and prices can easily be modified to reflect your soil tests and local prices to provide a more accurate estimate of your costs of production.

## **Fixed Costs**

Four items are included as fixed costs, some of which may or may not be fixed for a particular operation. For example, labor hours are priced at what farmers can expect to pay for hired labor, including workers compensation and social security. Labor hours represent direct field labor, planning, record keeping, purchasing supplies, equipment maintenance, and other overhead labor. The budgets assume labor is a fixed cost, either operator or full-time hired labor. If some of your labor is hired, especially if it is part-time labor, you may want to show some labor as a variable cost.

Machinery costs represent a charge for depreciation, interest, insurance and housing on all machinery and equipment used in the crop enterprise. These costs vary with tillage method and farm size.

The land charge represents typical cash rents for Ohio. Rents vary greatly within counties and townships. Use a cash rent for similar land in your area to reflect the land charge. If the land is share rented, the land charge should reflect the landlord's share of receipts and expenses.

The management charge of 5% of receipts represents a charge (or return) for making the decisions and taking the risks of the business. Typically, farmers provide both labor and management. If they are going to stay in business and make a living from farming, they have to earn something for both.

### **Costing Methods**

The enterprise budgets report all costs including cash, depreciation, and opportunity costs. Cash costs likely include many variable cost categories such as seed, fertilizer, and chemical costs. Depreciation on machinery is included in the "Machinery and Equipment Charge". Opportunity costs reflect returns to a producer's labor, capital, and managerial resources. Specific items within the budgets that may contain opportunity costs are:

- Interest on operating capital
- Labor charge
- Machinery and equipment charge
- Land charge
- Management charge

The distribution of cash and opportunity costs will differ between operations. For example, all budgets include a charge for "Interest on Operating Capital". This interest is a cash cost when a producer uses debt capital to finance variable costs. In this case, the producer must pay for the use of operating capital. On the other hand, this interest is an opportunity cost when a producer uses equity capital to finance variable costs. In this case, the interest reflects a return to a producer's equity capital. Interest on operating capital could be a mix of cash and opportunity costs if a producer uses both debt and equity capital to finance variable items.

Although opportunity costs are not cash outlays, they should be included in budgeting because they account for the use of a producer's resources. An enterprise needs to provide returns to a producer's labor, capital, and managerial resources for the enterprise to be sustainable in the long-run.

### **Interpretation of Returns**

All budgets report "return above variable costs" and "return above total costs". Return above variable costs is useful in examining decisions that must be made within a year. For example, a producer may consider planting corn or soybeans in a field. Return above variable costs, along with any government program implications, would be used to compare the corn versus soybeans options.

Return above total costs would be used to examine "long-run" decisions. This return is useful in determining whether planting the specific crop will be profitable year after year, given the current prices reflected in the budgets. When revenue above total costs is zero or above, long-run production of the crop provides all resources an adequate return. In these cases, planting the crop is profitable.