UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE Cooperative Extension Service	*Agriculture and Natural Resources*

Utilizing Enterprise Budgets

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Agricultural producers must consider many factors when making business decisions and/or developing marketing plans for their businesses. Producers answer many questions which include the following: the crop or specific variety to plant; selection of a production system (i.e. precision, organic, irrigated, etc.); equipment and supply needs; and considerations about the marketing approach (direct, processing, value-added).

Throughout the complex process of developing a business plan, the ultimate goal of the producers should be to achieve a clearly defined goal. Defining objectives begins the business planning process. It was Yogi Bera who stated, "If you don't know where you're going, you'll end up someplace else." Understanding what you hope to accomplish and your limitations allows one to more clearly identify and define business objectives.

Spend some time thinking about your business objectives because the mental process that is required allows producers to access their business' strengths and weaknesses. Often it is assumed that producers want to maximize profits, but sometimes other objectives are equally as important. Some agribusinesses want to maintain a certain production level, to produce a specific enterprise, or simply to "farm the land" being involved in production agriculture. The overall objectives of your business should drive your planning process.

Producers can use budgets to help determine to what extent a certain enterprise is contributing financially to their goals. The purpose of this article is to present an overview to enterprise (commodity) budget analysis. Budget analysis provides a framework for analyzing alternative production options on a per acre basis.

Enterprise Budgets

Enterprise budgets contain cost estimates for two specific areas: receipts, costs, and returns. The cost estimates represent production information for a single enterprise. The cost information is difficult to estimate because these costs are very specific to your individual operation. Therefore, maintaining good business records is a key to developing and maintaining budgets that accurately reflect the costs and returns associated with operating ***your*** business. Enterprise budgets contain the information needed to evaluate various production alternatives. The budgets not only contain the specific data about resource needs but also the timing and sequencing of decisions.

Revenue Projections. Some budgets also include revenue or receipt information. Receipt information reflects the income potential for a specific enterprise and is a function of the yield and price. It is calculated by multiplying the yield (bushels, tons, head, lbs.) by the price received for the product. Producers can increase their total receipts by increasing either the yield or price variable, so a great deal of time, effort and money ends up being devoted to increasing either or both of these variables. The yield information should be reflective of ***your*** business' production capacity.

The prices used for your budgets should accurately reflect current or anticipated market values. Although it can be treated as a separate and distinct enterprise, by-products should also be considered because sometimes the production of a specific crop or livestock product creates a by-product that has a market value of its own.

It is important to consider the potential income from sales of by-products in your budget analysis. One option is to list all the products and by-products that your operation receives from the single enterprise on the same budget. If you include products and by-products on the same budget, any additional costs associated with developing and/or marketing the by-product should also be included in the budget analysis.

Variable Cost. The cost information is usually broken out into two components, variable and fixed costs. Variable costs are those expenses that vary with the production level. They usually are reflected for a certain output level and are calculated on a per unit basis (i.e. lbs. of fertilizer, hours of labor, gallons of fuel, etc.). Examples of variable production costs include expenses for seed, fertilizer, chemicals, fuel, repairs and labor. These costs are also referred to as direct costs, cash costs, or out-of-pocket costs.

Fixed Cost. Fixed costs are costs that do not vary with the production level. They include costs such as insurance, salaried labor, depreciation, taxes, and interest charges. These costs are also called indirect costs, non-cash costs, and overhead costs. Summing up the variable and fixed costs results in the total cost estimate. This calculation provides you with an estimate of the total costs (usually on a per acre basis) associated with producing the enterprise.

If both receipt and cost information are used, producers can examine the potential returns for a specific enterprises. The returns estimate derived from a budget does not guarantee a certain "profit" level. These estimates are based on certain assumptions about price, yield and cost. The budgets are a useful planning tool to manage your enterprise. Also, producers should pay close attention to what costs are specified throughout the budget. If expenses for a specific item are not detailed on the budget, a portion of the estimated returns must cover those "unspecified" expenses. Usually, enterprise budgets do not include costs incurred for land and management. The returns estimate is only for those returns above the costs specified on the budget.

Break-Even Analysis

Once you have gone through the process of developing an enterprise budget for your operation. The production cost information contained therein can be an important analytical tool. Two types of analysis can easily be accomplished with a production budget: break-even analysis and sensitivity analysis.

Break-even analysis allows producers to see the minimum price or yield level required to cover specified costs either variable, fixed or total. Breakeven price (yield) is calculated by dividing the specified total costs by the anticipated price (yield):

Break-even price =	***Estimated total costs / anticipated yield***	***Break-even yield =***	***Estimated total costs / anticipated price***

The analysis can also examine at what price or yield will the specific enterprise cover the specified variable or fixed costs by substituting total variable or fixed costs into the above equations. Break-even analysis is important in examining alternative production and marketing strategies. The analysis also enables the producer to clearly see the shutdown point. The shut-down rule in economic theory is when the enterprise's production can not cover variable costs. Shut-down meaning it is better economically for you to not produce.

Sensitivity Analysis

Sensitivity analysis allows for detailed examination of how changes to a budget's main components (price, yield, and cost) impact a producer's expected returns. The analysis allows a producer to see how changes in prices, yields, or costs will affect their potential returns for an enterprise by making adjustments to one of the variables while holding the other two constant.

Using an existing budget, a producer can make incremental changes to either the price, yield or cost information to see how "sensitive" the potential returns are to those changes. The incremental changes can be derived from your business' historical production records, research and extension recommendations, market information, a constant amount (5 bushels or $0.25), or a constant percentage (10%).

Conclusions

Taking time to develop and analyze an enterprise budget can be a time consuming process, but the benefits of the resulting analytical tool are definitely worth the effort. Some benefits of developing the budget include:

- an organized form which can be utilized to assist in the credit application process,
- provide a detailed estimate of costs of production for a specific enterprise for your business allowing you to examine your production efficiency,
- an analytical tool to conduct break-even and sensitivity analysis,

- allows producers to compare competing enterprises for profit potential, resource needs, and production efficiency,
- a resource to aid advisors in evaluating and recommending production options for your business.

University faculty have already developed some “typical” production budgets for many different enterprises. These budgets provide a framework that details resource needs, operation sequencing, and cost estimates. These budgets are useful tools to assist with farm planning and production management. Contact your local county extension office to see if resources are available to assist you with estimating your production costs. Some material is listed on the University of Arknasas Cooperative Extension Service website (http://www.aragriculture.org/farmplanning/default.asp).

References:

Smith, Jackie, Dean McCorkle and Joe Outlaw. Making Decisions with Enterprise Budgets. Texas Agricultural Extension Service, The Texas A&M University System. L-5380.

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