FARM ENTERPRISE PRODUCTIVITY ANALYSIS

Producers will learn how to create and analyze their own farm enterprise and perform production and financial feasibility analysis. They should bring some farm production records to test the financial feasibility of an enterprise. This is a training program that can help manage farm records to determine the financial feasibility of livestock, fruit, vegetable, & row crop production.

Course objectives:

Managing Enterprise Budgets in Excel
• Understand and know the major components of an enterprise budget.
• Understand important production estimate techniques and practices.
• Keeping and analyzing production records in Microsoft Excel.
• Understand the difference between variable and fixed cost estimates.
• Understand the use of Microsoft Excel templates to identify profitability of an enterprise.

Creating a Farm Enterprise Budget
Explain and justify estimates for production and expenses.
• Learn how to change variable inputs in Microsoft Excel.
• Learn how to insert, copy and delete spreadsheet data.
• Measure the profitability impact when input costs are changed.
• Learn how to create new farm production input data in Excel related to chemicals, seed, fertilizers, machinery and other inputs.
• Create a new enterprise budget by learning how to save/rename the current Excel file.

Farm Production Performance Analysis
• Build farm production scenarios for improving profitability of an enterprise.
• Learn how to control production costs and analyze risks of price and yield volatility.
• Analyze impact of changes in price, capacity and yield on financial performance.

Course agenda:
• 8:00am – Confirm Registration and Make Payment
• 8:30am – Managing Enterprise Budgets in Excel
• 11:00am – Create Your Own Farm Enterprise
• 12:00pm – Work-in Lunch
• 1:00pm – Create Your Own Farm Enterprise
• 2:30pm – Analyze Farm Production Performance
• 4:00pm – End
Managing Enterprise Budgets in Excel

1. Agricultural enterprises have different yield levels depending on technology use and crop conditions.

2. The prices used in the enterprise budgets must be changed to accurately measure the profitability a particular enterprise throughout the year.

3. The returns obtained in the budgets are directly related to the selected resources allocated for that particular enterprise. Allocation of resources will vary among location, size of operation, adoption of technology, financial condition, and enterprises.
   - **Income Above Variable Costs (IAVC):** the total variable costs are subtracted from the gross receipts. This figure indicates the income above operating cost and is normally used to determine the number of acres of each crop to plant.
   - **Net Returns to Risk and Management:** this is the normal stopping point in the construction of these budgets. Purchased inputs and owned resources have paid their share. This figure is sometimes referred to as net profit; however, it is more correct to call it a return above all resource costs except management. If the figure is positive, the producer is rewarded for his management efforts and risk taken.
   - **Cost Per Unit of Production:** breakeven prices and breakeven yields are shown on all budgets where they are possible. This table will help analyze the responsiveness of yields and prices using IAVC (Total Variable Costs) and Net Returns (Total Costs) as comparative units. Breakeven price is cost/yield. Breakeven yield is cost/unit price.
   - **Net Returns Above Variable Costs at Different Yields and Prices:** this table at the second page allows the producer to gain a better understanding about potential returns when prices and yields are adjusted higher and lower than the assumed figures. This information will help the producer to evaluate the risk involved in producing each crop.

4. Production records are kept in the Excel files. **Mach Costs:** contains total machinery variable and fixed costs. It is also seen in all crop budgets as **Machinery.** The spreadsheet tab **Mach Info** aggregates all the machinery specifications used for calculating the total variable and fixed costs in the Mach Costs worksheet. **Seed:** contains all the seed, fertilizer and lime average costs, cost units, and budget units. It converts cost units into budget units. **Chemicals:** has prices of farm chemicals along with price units, budget units, product and common names. **Rates:** relates to all the rates and costs that are used for calculating some of the costs that are incorporated into the budgets.

5. The enterprise budgets are developed for producers who are searching for alternative enterprises for their farm operation. Second, costs and returns are prepared and calculated based on reliable market and research information along with long-standing machinery cost techniques. Third, they are prepared by leading agricultural specialists whose only interests are to introduce consistent production practices and reliable operating costs to the farmers who seek profitable operation.

6. The variable (operating) costs are incurred only if production takes place for that analyzed enterprise. Most of the costs involved in this section are dependent on yield level and the size of the farm operation. Some of the costs are: seed, fertilizer, pasture, chemicals, machine operation and maintenance, labor, interest on operating capital, and irrigation.
Creating a Farm Enterprise Budget
1. Herbicides, insecticides, fungicides, fumigants, nematicides, sucker controllers, growth regulators, defoliants, and surfactants are based on recommendations of extension specialists. However, estimates will have to be adjusted based on the grower’s production practices.
2. Equipment variable costs consist of repair, fuel, and lubricant costs. These costs refer to the use of the equipment for planting and harvesting seasons, and also the maintenance. Each farmer has different tillage practices. So, these costs will also vary.
• Explain and justify estimates for production and expenses.
• Learn how to change variable inputs in Microsoft Excel.
• Learn how to insert, copy and delete spreadsheet data.
• Measure the profitability impact when input costs are changed.
• Learn how to create new farm production input data in Excel related to chemicals, seed, fertilizers, machinery and other inputs.
• Create a new enterprise budget by learning how to save/rename the current Excel file.

Farm Production Performance Analysis
1. Agricultural enterprises have different yield levels depending on technology use and crop conditions.
2. The prices used in the enterprise budgets must be changed to accurately measure the profitability a particular enterprise throughout the year.
• Analyze production performance of agricultural enterprises.
• Build farm production scenarios for improving profitability of an enterprise.
• Learn how to control production costs and analyze risks of price and yield volatility.
• Analyze impact of changes in price, capacity and yield on financial performance.