

PARTIAL BUDGETING



- Uses of Partial Budgets
- Partial Budgeting Procedure
- Partial Budget Format
- Factors to Consider

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Uses of Partial Budgets



- A partial budget can be used to analyze a possible change in the operation involving several enterprise budgets.
- Can also be used to fine-tune a whole-farm plan.

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Uses of Partial Budgets



- A partial budget provides a formal and consistent method for calculating the expected change in profit from a proposed change in the farm business.
- The emphasis is on "changes" in revenues and costs.

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Uses of Partial Budgets

- Can analyze changes in the following production relationships:
 - possible movements along a production function
 - possible movements along an isoquant
 - possible movements along a production possibilities curve

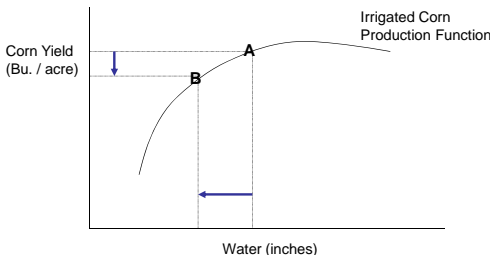
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Uses of Partial Budgets

- Examples:
 - Impact of decrease in irrigation water
 - production function
 - Increase wheat enterprise by renting more land.
 - production function
 - Change from conservation tillage system to no-till system
 - Isoquant
 - Produce more corn and less wheat
 - production possibilities curve

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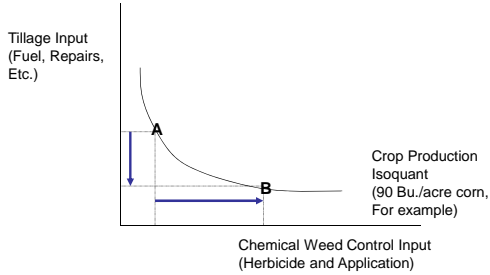
Decrease Irrigation Water



The graph shows the relationship between Water (inches) on the x-axis and Corn Yield (Bu. / acre) on the y-axis. A downward-sloping curve represents the 'Irrigated Corn Production Function'. Point A is on the curve at a higher water level and higher yield. Point B is on the curve at a lower water level and lower yield. A blue arrow points from A to B along the curve, and another blue arrow points from A to B horizontally, indicating the decrease in water. A vertical dashed line connects point B to the x-axis, and a horizontal dashed line connects point B to the y-axis. A vertical dashed line connects point A to the x-axis, and a horizontal dashed line connects point A to the y-axis.

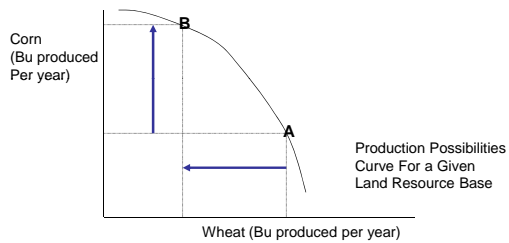
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Conservation versus No-Till System



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More Corn in Rotation, Less Wheat



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Partial Budgeting Procedure



- The changes in costs and revenues needed for a partial budget can be identified by considering the four questions below.
 - What new or additional costs will be incurred?
 - What current costs will be reduced or eliminated?
 - What new or additional revenue will be received?
 - What current revenue will be lost or reduced?

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Partial Budgeting Procedure



- Questions should be answered on the basis of what would happen if the proposed alternative was implemented.
- For many problems, it will be easier to first identify all physical changes that would result from the alternative being analyzed and then put an economic value on each.

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Partial Budget Format



- **Additional Costs**
 - Costs that do not exist at the current time with the current plan.
- **Reduced Revenue**
 - Revenue currently received but which will be lost or reduced should the alternative be adopted.


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Partial Budgeting Format



- **Additional Revenue**
 - Revenue to be received only if the alternative is adopted.
- **Reduced Costs**
 - Costs now being incurred that would no longer exist under the alternative being considered.

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Partial Budgeting Format

Description of Problem _____

Additional Costs: _____	Additional Revenue: _____
Reduced Revenue: _____	Reduced Costs: _____
A. Total _____	B. Total _____

Net Profit Change (B. - A.) _____


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Partial Budgeting

- Example:
 - Wheat Response to Nitrogen
 - Increase N from 25 to 50 lbs
 - Assumptions:
 - Increase in bushels per acre = 5.50
 - Wheat Price = \$5.00
 - Nitrogen Price = \$0.50

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Partial Budgeting Example

Description of Problem: Increase N from 25 to 50 lbs

Additional Costs: \$12.50	Additional Revenue: \$27.50
Reduced Revenue: \$0	Reduced Costs: \$0
A. Total \$12.50	B. Total \$27.50

Net Profit Change (B. - A.) \$15.00

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Partial Budgeting Format

Substitute one herbicide application
 Description of Problem For two tillage operations, (cont. wheat production)

Additional Costs: <u>\$18.00 per acre</u>	Additional Revenue: <u>\$0.00</u>
Reduced Revenue: <u>\$0.00</u>	Reduced Costs: <u>\$20.00 per acre</u>
A. Total <u>\$18.00</u>	B. Total <u>\$20.00</u>
Net Profit Change (B. - A.) <u>\$2.00 per acre</u>	


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Factors to Consider

- Nonproportional changes in costs and revenues
 - Need to consider economies and diseconomies of scale when estimating cost and revenue changes.
- Opportunity costs
 - Unpaid operator and family labor
 - Net Worth

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Factors to Consider

- Availability of capital
 - If capital is borrowed, how will this affect the financial structure of the business, risk, cash flow requirements, and repayment capacity?
 - Will additional investment cause a shortage in some other part of the business?
- Additional risk
 - Increase in variability
 - Increase in probability of low outcomes

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Summary



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