Agricultural
Cost of Production Statistics

Uses and Benefits

Outline

1. Introduction
2. Uses and benefits for farmers and agricultural markets
3. Uses and benefits for policy-makers and governments
4. Uses and benefits for the SNA
5. Uses and benefits for research

Uses and benefits
For farmers and agricultural markets

Cost of production statistics generally only benefit the data suppliers indirectly through improved policy-making, better administrative decisions and more efficient markets.

However, there is also potential for the data supplier, namely the farmers themselves, to reap direct benefits.

Uses and benefits
For farmers and agricultural markets

At the farm level, CoP data contributes to improve the economic assessment of farm operation.

They allow the producer to question his own operation and to benchmark it against the best practices of farms in the same region with similar characteristics.

This, in turn, can lead to better informed decisions at the farm-level and improved
market efficiency and performance.

Some specific examples of how CoP programme can be used at the farm level are as follows:

• **Enterprise mix decisions**

• **Purchasing and marketing decisions**

• **Investment decisions**

Enterprise mix decisions:

Analysis can illustrate which farm enterprise (commodity) is positively contributing
to the whole farm financial picture and lead to reallocation between enterprises, as appropriate.

Purchasing and marketing decisions:
Pricing targets for inputs and outputs can be set at different cost break-even levels. Knowing the break-even points allows farmers and policy-makers to take advantage of growing, buying or selling opportunities when they arise.

The following formulas can assist in determining break-even points.
• Break-even price to cover variable costs (or gross margin): Total variable costs ÷ expected yield =USD/
unit produced. This is the minimum price needed to cover variable costs
• Break-even price to cover total costs (or net margin): Total costs ÷ expected yield = USD/unit produced.
This is the minimum yield needed to cover all costs.
• Break-even yield: Total costs/expected price = unit produced (minimum yield required to cover all costs).

Investment decisions:
Making the right investments in capital assets, such as land, machinery and buildings, is critical to long-term success.

CoP information shows the amount the farm can afford to pay for those assets.

It is useful when conducting reviews of investments in enterprises that fail to meet total costs in the long run and determining where to redirect resources to more profitable enterprises.

Uses and benefits
For farmers and agricultural markets

Farm-level CoP data enable farm analysts to assess the effect of farm management decisions on farm efficiency, income and profitability, and advise farmers accordingly.

For example, farm analysts can assess the impact of choices regarding the amount and type of variable inputs used, such as fertilizers or pesticides; the type of irrigation method implemented and the amount and type of capital and technology purchased.

This, in turn, allows farmers to understand better how to improve the efficiency and profitability of their operations.

Uses and benefits
For farmers and agricultural markets

A more complete and accurate statistics on CoP benefit sectors that provide services to farmers and to the agricultural sector in general, such as banking, insurance and agricultural machine lessors.

Improved data on costs and returns facilitate more accurate assessments of financial risks associated with agricultural production, reducing some of the asymmetric information that causes banks and insurers to set high service prices and/or tight supply conditions in sectors, such as agriculture, which are characterized by high risks and adverse selection.

Uses and benefits
For policy-makers and governments

More complete data are needed to appropriately understand:
- The underlying processes that influence the output and productivity of this sector,
- How these processes are affected by new policies and regulations.

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Uses and benefits
For policy-makers and governments

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> As agriculture is intertwined with households in much of the developing world, this data can help in determining income measures and support **anti-poverty and food security policies**.

Uses and benefits
For System of National Accounts

A properly designed national CoP data programme is a required source of information to improve the measurement of **intermediate consumption** by different agricultural activities and, therefore, their **economic value-added.**

This, in turn, **benefits the entire System of National Accounts (SNA)** through a more accurate description of the economy and a better measure of its total value-added.

Uses and benefits
For System of National Accounts

The cost estimation of each of the main agricultural activities requires detailed data on input uses and costs by activity.

These technical coefficients can be used to construct **input-output matrices**, which constitute a powerful tool of analysis to better understand the linkages between different agricultural activities and between agricultural activities and the rest of the economy.

Uses and benefits
For research

Some example:

The most common presentations of research from the United States CoP data are reports describing the characteristics and production costs of specific commodity producers (Foreman, 2012). These reports examine **how production costs vary among producers of different commodities**. They include details on production practices and input use levels, such as the technology set, as well as farm operator and structural characteristics that underlie the
cost of production estimates. The reports also illustrate the degree to which **costs vary for producers of different commodities and indicate possible reasons for the variation.** Characteristics and production costs are presented for low- and high-cost producers of each commodity, and producers of varying size, region, and typology classification.

Uses and benefits
For research

Some example:

United States CoP data have also been used to study changes over time in the productivity of commodity production. McBride & Key (2013) monitored changes in structure, technology, and productivity in the United States hog industry from 1992 to 2009. In this research CoP data, along with other farm and commodity production data, were used to describe **how structural change contributed to substantial productivity gains for hog farms, which benefited United States consumers by resulting in lower pork prices and enhancing the competitive position of the producers in international markets.** These gains, however, have come with increased environmental risks from concentrating hog production and manure on a smaller land area.

Thank you