



**FAO-OEA/CIE-IICA WORKING GROUP ON AGRICULTURAL AND
LIVESTOCK STATISTICS FOR LATIN AMERICA AND THE CARIBBEAN**

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**New guidelines on the collection of cost of production data: work
progress and next steps in the framework of the Global Strategy**

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Production of economic performance indicators for the agricultural sector is a key instrument for economic analysis and a fundamental requirement for effective policy-making. Among these indicators, calculating the cost of production has historically been one of the most useful.

Providing users with access to complete and comprehensive production costs allows all stakeholders with information that will contribute to making markets more efficient.

Producing scientifically sound cost of production estimates can also form a valuable component in countries' statistical systems. The range of applications, the analytical uses, the value for money and its contribution to improving the functioning of markets is well acknowledged.

In some respects, the value of cost of production estimation differs from the compilation of other statistics in that they have the potential to provide direct benefits to both users and suppliers of the data. This differs from most other statistics which provide benefits to data suppliers only indirectly through improved policy making, better administrative decisions and more efficient markets.

1. Scope

The focus of this work is to provide developing countries with relevant and readily implementable guidelines for the collection and compilation of internationally comparable statistics on agricultural Costs of Production (CoP). This project has been added as one of the research activities of the Global Strategy to Improve Agricultural and Rural Statistics.

This work builds on the several activities undertaken on CoP statistics since 2010, thanks to the support of the International Food Policy Research Institute (IFPRI) and with the endorsement of the African Commission on Agricultural Statistics (AFCAS 21 and 22) and the Asia-Pacific Agricultural Commission on Agricultural Statistics (APCAS 24).

The work produced so far includes several country case-studies on data collection and compilation practices, a global survey on country practices and a first outline of a Handbook on best practices. This work is the result of the combined effort of the Statistics Division of FAO, of a restricted group of experts ("Friends of the Chair") and of national and international consultants.

2013 is a key year for this project, with the necessary consolidation of the work carried out so far, the production of the first draft of a Handbook on best practices in the collection and compilation of CoP data and the first phase of the in-country field tests.

2. Main methodological challenges

The methodological challenges that countries have to face in collecting, compiling and estimating data are numerous. One of the objectives of the Handbook is to give countries the

adequate tools and procedures to overcome most of these challenges. Some of them are presented and shortly described below.

The ability to adequately collect primary data from a sufficient and representative number of farmers, using appropriate sample frames, sampling and survey methodology, interview process and data editing and imputation routines is the first methodological challenge to which countries will be confronted to. In this respect, one of the main choices that national authorities will have to make is whether they intend to collect data using integrated surveys, in which questions on CoP would constitute one of the sections of more general farm surveys, or using stand-alone surveys, which could be best tailored to CoP data requirements. In addition to budgetary concerns, this choice has implications on the level of detail and quality of the primary data collected, its representativeness with regards to farm practices and the possibility to carry-out cross-survey and country comparisons.

The collection of primary data is the first step in producing estimates of agricultural CoP. Additional data and indicators need to be fetched from different sources, assumptions made and estimation carried out in order to fully estimate CoP. An example is the estimation of opportunity costs for unpaid family work: regional agricultural wages, wages in the “next best job” in the non-agricultural sector or hedonic wage equations could be used to estimate unpaid family work. The choice of the method essentially depends on the availability of data to carry out estimations as well as on the technical expertise and know-how of the country officers undertaking the estimations. Another example is the estimation of depreciation costs for capital inputs (machinery, buildings, etc.): how to determine the life-expectancy of the capital good, its salvage value and the time-profile of its depreciation.

Other methodological challenges relate to the use of time-discounting to compile the estimates according to a common time period, the allocation of non-specific costs such as general overhead costs, the treatment of multi-year enterprise (growing of trees, cattle, etc.), etc.

3. Progress and achievements

Country studies Case studies were carried out in Mali, Zambia and Ethiopia to review the practices and identify the specificities related to the collection of CoP data.

Scoping survey on country practices As part of the process of gathering country evidence on CoP statistics, the first Expert Group Meeting on CoP held in Addis Ababa in November 2011 mandated FAO to administer a global survey on country practices in this field and to compile a list of best practices, with the aim to produce a handbook and training material targeted at developing countries. The survey was useful in gathering information on: the share of countries producing CoP statistics; the main methodological choices and orientations in producing CoP statistics, including the identification of potential methodological and data gaps and; the reasons explaining the absence or lack of CoP statistics in countries.

Expert group meetings and Friends of the Chair Group Expert Group Meetings on Cost of Production (CoP) were held in Addis Ababa, Ethiopia, in November 2011 and in Dalat, Viet Nam, in October 2012, as pre-events to the African and Asia-Pacific Regional Conferences on Agricultural Statistics, respectively. Participants from Africa and Asia, as well as from other invited countries such as the USA (represented by the USDA) and Uruguay, shared their experiences on CoP statistics and participated in the definition of an appropriate work program. A “Friends of the Chair Group” was formed to support and oversee the methodological work carried out in this field by FAO and its partners.

4. Next steps

Field tests After the completion of the first draft of the Handbook, field tests will be carried out in order to assess the feasibility in a developing country context of the recommendations and best practices advocated. The lessons learned during the field tests will help to improve the applicability and relevance of the Handbook and will allow to better frame the data collection efforts by countries and increase the quality of the data and derived statistics.

Field tests will take place over one year and will start in the second half of 2013. In order to test more efficiently the recommendations of the Handbook and ensure an adequate representation of the different geographical, agronomic and economic contexts, countries will be selected and tests designed on the basis of a set of appropriate criteria.

Depending on the country, field tests might range from an own assessment of the country’s capacity to collect the adequate cost items, compile statistics in the appropriate way (e.g. using average wages in the region to impute non-paid family labour) and disseminate them appropriately (e.g. availability of farm-level data) to the full testing of the entire process of CoP data compilation (sample and questionnaire design, data collection, validation and estimation, compilation of derived statistics and indicators, dissemination).

Finalisation of the Handbook The 22nd session of the AFCAS, held in November 2011, first stressed the necessity to produce a Handbook on the best practices in the collection and compilation of CoP data. This Handbook will present concrete best practices applicable in developing countries and directly drawn from country experiences. Several country case-studies will be undertaken and drafted by members of the FoC to better illustrate the best practices and show how these may differ according to specific situations.

A first draft of this Handbook will be produced by mid-2013, before the start of the field tests of the recommendations and of the peer-review process. The peer-review process involving the FoC and other recognised experts will start after the submission of the first draft of the Handbook and will run in parallel with the field tests, to allow a two-way feedback between these tasks. The final draft of the Handbook will be delivered by the end of 2014.

Literature review The collection and compilation of CoP data has to be based on sound theoretical concepts, benefiting from the consensus of academics, experts and practitioners.

There is a wide body of literature on CoP, of theoretical as well as of a more applied nature, which will need to be explored, such as the work led by the USDA/ERS on Agricultural Cost and Revenues.

The literature review proposed here will cover the main theoretical and applied references on agricultural CoP statistics, with particular relevance for developing countries. The findings of the literature review, which will be finished by mid-2013, will feed into the Handbook.

Expert group meeting An expert group meeting will be held as a side-event to the next AFCAS in Morocco (November 2013) to discuss and review the literature review, the Handbook and the planning of the field tests.