Ethiopia - Land and Soil Experimental Research 2013

Central Statistical Agency of Ethiopia

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Overview

Identification

ID NUMBER
ETH_2013_LSER_v01_EN_M_v01_A_OCS

Overview

ABSTRACT
The Land and Soil Experimental Research 2013, was conducted as a joint collaboration with The World Bank (LSMS Team), the Central Statistical Agency of Ethiopia (CSA) and the World Agroforestry Center (ICRAF) in an effort to improve the quality of agricultural data, particularly with respect to land area and soil fertility measurements in Ethiopia. The aim of the LASER study was to assess the data quality associated with a number of possible measurement methodologies associated with land area, soil quality, and crop production while piloting the use of each method and assessing the feasibility of implementation in national household surveys. Accurate and timely crop production statistics are critical to adequate government policy responses and the availability of accurate measures are pivotal to establishing credible performance evaluation systems. However, agricultural statistics are often marred by controversy over methods and overall quality, leading to inertia at best, or entirely incorrect policy actions. Major advances in recent years in technologies and practices offer an opportunity to improve on some of the indicators commonly used to measure agricultural performance.

Considerable efforts were made in the 1960s and 1970s, primarily by the Food and Agriculture Organization (FAO), to build a body of knowledge on agricultural statistics based on sound research which, over the years, has proven invaluable to researchers and practitioners in the field of agriculture. However, little new knowledge has been generated over the past few decades and much of the available methodological outputs are now obsolete in view of the changing structure of the sector, driven by global and local trends in both the agronomics of farming and the environment. Measuring land area and soil quality was essential in properly estimating the factors that both promoted and hindered agricultural productivity. It is also critical to assess the accuracy of the key output variable, crop production, in order to validate the methodologies used to collect harvest data as well as analyse the impact of various input measurements on yield estimates. By measuring these components using a variety of methods it was possible to identify the implications of using each and move forward with the superior methods in future household surveys. LASER was implemented across three administrative zones of the Oromia region, namely: East Wellega, West Arsi, and Borena. In total, 1018 households were interviewed, with nearly 1800 agricultural fields selected for objective land area and soil fertility measurement.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Households

Scope

NOTES
The study covered the following topics:

- Household identification

- Interview details

- Crop-cutting

- Household member roster

- Field roster

- Parcel roster

- Field details

- Harvest

- Crop disposition

- Crop details

- Harvest labour

- Assets

- Livestock

- Pre-harvest labour

- Parcel roster

- Crop damage

- In-field measurement

TOPICS

Topic	Vocabulary	URI
Agriculture & Rural Development	FAO	
Food (production, crisis)	FAO	
Land (policy, resource management)	FAO	
Impact evaluation	FAO	

Coverage

GEOGRAPHIC COVERAGE
Regional

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Central Statistical Agency of Ethiopia	Government of Ethiopia

OTHER PRODUCER(S)

Name	Affiliation	Role
World Agroforestry Centre		Soil analysis
The World Bank		Training and technical support

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Adoption of metadata for FAM

Development Data Group	DECDG	The world Bank	Documentation of the study

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Sampling

Sampling Procedure

The objectives of the sample design for the Land and Soil Experimental Research study were multifaceted and included indicators related to soil properties, crop type, and socio-economic characteristics, among others. Because there were multiple indicators, calculating the sample size based on the variance of a single indicator was not the preferred approach. Instead, practical sampling allocation with implicit stratification was used. Three administrative zones of the Oromia region were selected based primarily on agroecology and geographic diversity. Secondary consideration was made for the availability of local soil research centers that were used for soil processing. The three selected zones were East Wellega, West Arsi and Borena. Using the Central Statistical Agency of Ethiopia (CSA) and the Agricultural Sample Survey (AgSS) as the sampling frame, a total of 85 Enumeration Areas (EAs) were selected.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2013-09-12	2013-09-12	N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

Data Processing

Data Editing

Data collection for the study was completed via Computer-Assisted Personal-Interview (CAPI). Each enumerator and supervisor had a personal laptop computer equipped with the Census and Survey Processing System (CSPro), based CAPI application for the Post-Planting, Crop-Cutting, and Post-Harvest questionnaires. Each team was provided with a flash drive, to share data from enumerator to supervisor, and a wireless router, to share consolidated team data with the World Bank project manager. Supervisors were instructed to share data at the close of EA, and only after reviewing all completed questionnaires. Data review and cleaning took place via supervisor review, periodic error reports generated by the World Bank project manager, unplanned CSA supervisor household visits to cross-check responses, and ultimately data review and standard checks (possible value ranges, outliers, etc.).

Data Appraisal

No content available