Mexico - National Agricultural Survey 2014

National Institute of Statistic and Geography

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Overview

Identification

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MEX_2014_ENA_v01_EN_M_v01_A_OCS

Overview

ABSTRACT
The National Institute of Statistics and Geography (INEGI) conducted the National Agricultural Survey 2014, to provide current statistics on crop production and the most important livestock species in the country. In Mexico, since 1930 the Agricultural, Livestock and Forestry Census has been carried out and to date, eight censuses have been carried out, the most recent in 2007, which has provided information on the structure of the agricultural sector. However, although an agricultural census depicts the agricultural, livestock and forestry situation in the country, it is necessary to have statistics that show more specific development indicators.

Therefore, in 2012, INEGI identified the need to establish an agricultural information system that would integrate information from agricultural censuses and data from continuous agricultural and business surveys, as well as geographic information. In this context, the 2012 National Agricultural Survey was conducted, the results of which were announced in 2013.

With the idea of continuing to obtain updated statistics on agricultural and forestry activities, the 2014 National Agricultural Survey was carried out. The ENA 2012 was taken as a base for extracting production units, sample selection and questionnaire design. The methodology (attached as an external resource), describes the measures adopted to efficiently carry out the survey, explaining the conceptual aspects, statistical operation, processing, validation and data analysis, which were defined from the experience of previous events.

The main objective of the survey was to obtain basic statistical information on agricultural production; most importantly, crop, livestock and forestry species in the country. This is done in order to generate updated economic and development indicators that allow the national agricultural information system to be strengthened with timely information. The survey had the following specific objectives:

1. Capture information on the economic structure of the production units that contain the main crop, livestock and forestry products in the country.

2. To position the National Agricultural Survey as an instrument designed to periodically capture information on agricultural and forestry activities and their productive structure, through a sample of economic units throughout the national territory.

3. Update and consolidate basic information on agricultural producers in the country.

4. Verify and validate with the support of digital cartography; the land area, declared by the producer.

5. Strengthen the work of updating the inventory of land associated with the national directory of producers, so that it becomes an instrument of support for agricultural surveys.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Agricultural holdings

Scope

NOTES
The scope for the survey includes:

1. General characteristics of the land

2. Land use and water availability

3. Farming activity

4. Animal breeding and exploitation

5. Tractors, machinery and vehicles

6. Credit and Insurance

7. Problems and challenges

8. Government support

9. Information and communication technologies

10. Labour and remunerations

11. Sociodemographic characteristics

12. Identification data

TOPICS

Topic	Vocabulary	URI
Agricultural production		
Livestock production		
Forestry		

KEYWORDS

Production unit, Surface area, Irrigation, Protected agriculture, Nurseries, Greenhouses, Cattle, Pigs, Poultry, Other animal species, Forestry, Tractors, Credit, Insurance, Labor, Producer

Coverage

GEOGRAPHIC COVERAGE

National Coverage

UNIVERSE

The universe for ENA 2014 was made up of 75,221 production units, from the 3.77 million units captured by the 2007 Agricultural Census that reported information in relation to any of the products of national interest or by federal entity. The universe was defined from the 34 products of national interest selected for the survey, 29 of which are annual and perennial crops and the rest corresponds to livestock species and products of economic importance for the country. Likewise, in this universe, 9 products were considered that are representative in some federal entities, but not nationally. Below are the products that form the universe of the ENA 2014.

The crops that were the object of the survey were: white grain corn, yellow grain corn, fodder corn, sugar cane, wheat grain, avocado, sorghum grain, beans, chili, alfalfa, tomato, potato, melon, watermelon, coffee, orange, grape, banana, lemon, mango, onion, pumpkin, green tomato, cotton, apple, cocoa, rice, barley and soy. While the species and livestock products were made up of: cattle, pigs, poultry, milk and eggs.

The 8 products with representativeness in some states were: Pine, Guava, Coconut, Nopal vegetable, Agave, Strawberry, Sorghum Forage and Oats Forage.

It should be noted that of the annual and perennial crops that formed the universe for the survey; yellow corn, green tomato, pine, coconut and prickly pear vegetable crops were not published due to their low prevalence, resulting in lack of representativity at national or state level.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Institute of Statistic and Geography	Government of Mexico

OTHER PRODUCER(S)

Name	Affiliation	Role
General Directorate of Economic Statistics	Government of Mexico	
Deputy General Directorate of Economic and Agricultural Censuses	Government of Mexico	

FUNDING

Name	Abbreviation	Role
National Institute of Statistic and Geography	INEGI	
Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food	SAGARPA	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Metadata adapted for FAM
National Institute of Statistic and Geography	INEGI		Metadata development
General Directorate of Economic Statistics	DGEE		Metadata development
Deputy General Directorate of Economic and Agricultural Censuses	DGACEA		Metadata development
Directorate of Census and Agricultural Surveys	DCEA		Metadata development
Coordination of Conceptual Design and Results	CDCR		Metadata development
Subdirectorate of Conceptual Design	SDC		Metadata development

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Sampling

Sampling Procedure

A probabilistic sampling design was used for the ENA 2014, using the ENA 2012 as a base from which the production units were extracted, according to the sampling selection. A total of 75,221 production units were sampled in the ENA 2014, from the 3.77 million units captured by the 2007 Agricultural Census that reported information in relation to any of the products of national interest or by federative entity.

The primary sampling units comprised of the 34 agricultural products that form the domains of the study at the federal level, comprising of 29 crops and 5 livestock products. The survey made use of a stratified sampling method in selecting the samples to survey. The selected crops were classified into stratas according to the land area cultivated in hectares (more than 20; 11-20; 6-10; 3-5; 0-2), while livestock products were classified based on stocks. Crops that fall in the first strata (more than 20 hectares), were further classified into 2 sub-stratas (21-50 hectares; more than 50 hectares). This crops include: Corn, Coffee, Rice, Pumpkin, Grasses, Orange, Wheat, Grape, Soy, Avocado, Banana, Forage oats, Beans, Mango. For livestock, only large producers were considered in the sample.

For the 34 agricultural products with probabilistic design, the sample size was calculated independently for each domain, using an expression to estimate the total. It is considered a 95% confidence level, a relative error per domain between 2% and 5% and an expected non-response rate of 30%. The expression of the sample size calculation is mentioned in the reference materials of the survey methodological document. The total sample size for the survey is 75,221 production units. 996 production units identified as large, with a bivariate analysis for production and planted area, were considered with certainty in the sample. Likewise, the 702 units with the highest egg and bird production were included in the sample.

Sample selection was performed independently for each domain-stratum, the selection procedure was random without replacement; thus, a production unit could be selected more than once for containing more than one product.

Deviations from Sample Design

The sample had a bias of 12%, caused mainly by the following three reasons:
1. The production units selected for some crops, at the time of the interview, were no longer engaged in any agricultural activity, mainly due to urban sprawl.
2. At the time of the interview, the production units no longer had the crop for which they were selected.
3. The informant of the production unit, could not be located.

Response Rate

Since the agricultural products were selected with a probabilistic design, the sample size is calculated independently for each domain. At a 95% confidence level, a relative error per domain between 2% and 5% and an expected non-response rate of 30% are considered.

Weighting

The expansion factors, both at the national level and at the entity level for each domain-stratum, were calculated as the inverse of the probability of selection.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2014-10-02	2014-11-30	N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

Data Processing

Data Editing

Processing and treatment of the data consisted of the following stages:
1. Capture
2. Coding
3. Normalization
4. Validation
5. Group information analysis
6. Comparison with internal and external sources

Data Appraisal

Estimates of Sampling Error

To know precise estimates in greater detail, please refer to section 5.10.1 of the 2014 ENA methodological document, which is located in the External Reference Materials of this documentation.

Other forms of Data Appraisal

In ENA2014 codes were assigned, both for questionnaires that were properly completed, and for special cases that impacted on data collection. The codes used in the ENA 2014 field operation are described below:

01 Raised
It was used when a complete questionnaire was applied to a producer for the selected production unit (s).

02 Absence of producer or informant
A producer was assigned, when visiting his home (inhabited) there were no residents; or, when a resident of the house confirmed that the producer lived there but at that time he or he was not an adequate informant.

03 Negative
It was applied when the appropriate producer or informant did not agree to provide the requested information. This code remained pending and the interviewer would only visit the producer again, when he will be notified that the producer had been sensitized by the head of interviewers or another operational position and that he had agreed to provide the interview.

04 Incomplete interview
A producer was assigned when during the course of the interview, the producer was suspended due to an unforeseen event. This code also applied when the producer handled more than one production unit and some of these were not completed with a complete questionnaire. This code was considered final until the third visit to the producer's home.

05 Producer under investigation
It was used in the following situations:
- When the address visited by the interviewer was an uninhabited dwelling.
- When arriving at the house, the inhabitants informed the interviewer that the producer registered in the directory did not live there, and did not know his new address.
This code was considered as pending until a result of the investigation was available.

06 Producer or informant not located
It was used for producers who, due to change of address, were subject to investigation and as a result of this, their new residence is unknown. It was also used when it was detected that the production unit was no longer managed by the person registered in the directory and in turn the name and address of the new land producer was unknown. The application of this code constituted a definitive situation

07 Not surveyed
It was assigned when all the lands that were recognized by the person registered in the board of directors had a main activity typified as “not surveyed”. It was also used when the producer stated that he had not had an agricultural or livestock activity in the reference period of the survey.

08 Not raised for being in a risk zone
This code was assigned by the interviewer when detecting that the producer resided in a high risk zone. The authorization of the head of interviewers was required for their assignment.

09 Other situations
It was used when situations not contemplated in the other codes were presented and the interviewer had to specify the situation found. For his assignment, the authorization of the interviewer chief was required.