

## 1. HISTORICAL OUTLINE

The first National Agricultural Census (AC) in Nicaragua was conducted in 1963. A second census was conducted in 1971.<sup>1</sup> Almost 30 years later, Nicaragua carried out its third agricultural census, in 2001. The fourth AC, to which these metadata review and data refer, was conducted in 2011.

## 2. LEGAL BASIS AND ORGANIZATION

### *Legal framework*

The census legislation includes:

- Decree<sup>2</sup> No. 102, approved on 4 October 1979, for the creation and organization of the National Institute of Statistics and Census (INEC), later renamed as the National Institute of Development Information (INIDE), responsible for conducting national surveys, including CAs; and
- Presidential Decree No. 66-2010, approved on 4 October 2010, Article 1 of which affirms “the national interest for preparation, planning, organization, collection, processing and dissemination of the Fourth National Agricultural Census (IV CENAGRO)”.

### *Institutional framework and international collaboration*

INIDE was in charge of the planning, technical organization and carrying out of the fourth AC, in close coordination with the Ministry of Agriculture and Forestry (MAGFOR).

A National Census Commission was established for the implementation and coordination of census activities. The Commission comprised the President of the Republic (head of the AC) and officials from the following ministries and institutions: the Ministry of the Interior, the Ministry of Foreign Affairs, the Ministry of Finance and Public Credit, the President of the Central Bank, the Ministry of Development, Industry and Trade, the Army of Nicaragua and the National Police.

The fourth AC was funded by the Government of Canada, the IADB, the Swiss Confederation, the Government of Norway, the Government of Brazil, the International Fund for Agricultural Development (IFAD) and the US Agency for International Development (USAID). In addition, FAO provided technical assistance for the AC.

### *Census staff*

For fieldwork operations there were recruited 4 244 employees, out of which 3 197 were enumerators and 1 047 supervisors.

## 3. REFERENCE DATE AND PERIOD

**Reference day:** the day of the interview, for inventory items such as livestock, machinery and equipment, agricultural infrastructure.

### *Reference periods:*

- the agricultural year (from 1 May 2010 to 30 April 2011), for cultivated area and main purpose of production, forestry, aquaculture, labour force, water sources and irrigated area, agricultural loans, etc.;
- the last 12 months (1 May 2010 to 31 May 2011) for average milk production.

## 4. ENUMERATION PERIOD

Data collection was conducted from 15 May to 16 June 2011.

## 5. SCOPE OF THE CENSUS AND DEFINITION OF THE STATISTICAL UNIT

The **census scope** covered agricultural activities (crop and livestock production). Some information on forestry and aquaculture was also collected. A community survey was carried out together with the census.

The **statistical unit** was the agricultural holding, defined as land used wholly or partly for agricultural production, livestock or a combination of both, which are operated as an economic unit within a municipality, regardless of size, type of tenure, or legal status. Agricultural holdings can be an individual (natural person), a cooperative, family collective, an enterprise, an indigenous community and the public administration.

## 6. GEOGRAPHIC COVERAGE

The census covered the entire country.

## 7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

Not applicable.

## 8. METHODOLOGY

### *Methodological modality for conducting the census*

The classical approach was used in the AC 2011.

<sup>1</sup> However, all of information collected during the census was lost in the earthquake of 1972.

<sup>2</sup> Decree of the Board of Government of National Reconstruction of the Republic of Nicaragua.

**Frame**

Agriculture Record Segments (SEAs) from the AC 2001 were used, as well as the urban segments from the Population and Housing Census 2005 (CPV'05), which were households declaring to have a household member who performed some agricultural activity (as employer/employee or self-employed). For the Caribbean Coast, where MAGFOR sectors were not delimited, mapping provided by the CPV'05 was used.

**Complete and/or sample enumeration methods**

The fourth AC in Nicaragua was carried out using complete enumeration.

**Sample design (if sampling was used)**

No sampling was used.

**Data collection method(s)**

The information was collected by means of face-to-face interviews using paper questionnaires (the PAPI method).

**Questionnaire(s)**

Two questionnaires were used in the AC: one for holding-level data collection and the other for the community survey. The AC 2011 questionnaire covered all 16 items recommended for the WCA 2010 round.

**9. USE OF TECHNOLOGY**

Census results were disseminated through the INIDE website. Safe access to AC microdata is provided to users.

**10. DATA PROCESSING AND ARCHIVING**

Coding and editing were done after fieldwork to check for inconsistencies. Double data entry was performed to minimize errors at the data entry stage. This stage was followed by an automated data editing.

**11. CENSUS DATA QUALITY**

A PES was conducted 15 days after completion of field data collection (July 2011), to assess the coverage and content errors of census data.<sup>3</sup>

**12. DATA DISSEMINATION**

The final results were disseminated through a final printed report, Atlas and 17 agricultural profiles. Five special studies were conducted by specialists in different subject areas.<sup>4</sup> The census results, including the microdata are available on the INIDE website.

**13. DATA SOURCES**

**INIDE.** 2012. *Informe Final, IV Censo Nacional Agropecuario*. Managua, Nicaragua. (also available at <http://www.inide.gob.ni/Cenagro/INFIVCENAGRO/IVCENAGROINFORME/assets/basic-html/index.html#1>).

**14. CONTACT**

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<sup>3</sup> The PES covered 8 875 farms. The purpose of the PES was to assess the coverage errors and response errors for certain variables.

<sup>4</sup> These were: (i) Small and Median Producers; (ii) Agricultural Sector in the Caribbean Coast in Nicaragua; (iii) Employment in the Agricultural Sector; (iv) Rural Agricultural Services; and (v) Water.

# NICARAGUA – AGRICULTURAL CENSUS 2011 – MAIN RESULTS

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
<b>Total</b>	<b>262 546</b>	<b>6 054 869</b>
Individual	261 321	5 777 035
Family group	470	31 502
Cooperative	262	44 191
Public administration	60	6 110
Others	433	196 031

LAND TENURE		
	Number of parcels	Area (ha)
<b>Total</b>	<b>394 068</b>	<b>6 054 869</b>
Legal ownership	350 132	5 804 971
Rented from others	15 023	78 884
Non-legal owner-like possession	20 788	147 889
Other form of tenure	8 125	23 125

DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES		
	Holdings	Area (ha)
<b>Total</b>	<b>262 546</b>	<b>6 054 869</b>
Less than 0.35 ha	31 804	5 139
0.35–0.70 ha	16 676	10 374
0.70–1.76 ha	38 215	47 763
1.76–3.52 ha	35 672	94 725
3.52–7.04 ha	33 686	178 479
7.04–14.08 ha	29 881	314 171
14.08–35.22 ha	37 440	892 343
35.22–70.44 ha	21 238	1 086 834
70.44–140.88 ha	10 911	1 092 752
140.88–352.2 ha	5 469	1 171 892
352.2 ha and over	1 554	1 160 398

LAND USE		
	Holdings	Area (ha)
<b>Total</b>	<b>262 546</b>	<b>6 054 869</b>
Agricultural land	n.a.	n.a.
Arable land	n.a.	3 756 966
Land under temporary crops	n.a.	737 218
Land under temporary meadows	n.a.	2 317 868
Land temporarily fallow	n.a.	701 880
Land under permanent crops	n.a.	359 641
Permanent meadows and pastures	n.a.	953 832
Forest and other wooded land	n.a.	803 504
Other land	n.a.	180 927

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX		
	Number	Area operated (ha)
<b>Total</b>	<b>261 321</b>	<b>5 777 035</b>
Male	200 428	5 008 662
Female	60 893	768 373

EMPLOYEES WORKING ON THE HOLDING, BY SEX	
	Number
<b>Total</b>	<b>950 040</b>
Male	789 832
Female	160 208
Permanent employees	132 445
Male	113 779
Female	18 666
Temporary employees	817 595
Male	676 053
Female	141 542

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX AND AGE	
	Number
<b>Total</b>	<b>261 321</b>
Male	200 428
Female	60 893
16–24 years	8 873
Male	6 796
Female	2 077
25–34 years	40 090
Male	31 977
Female	8 113
35–44 years	56 375
Male	44 126
Female	12 249
45–54 years	53 776
Male	40 484
Female	13 292
55–64 years	42 640
Male	31 661
Female	10 979
65 years and over	40 496
Male	30 221
Female	10 275
Age unknown	19 071
Male	15 163
Female	3 908

LIVESTOCK		
	Holdings	Head
<b>Total holdings with livestock</b>	<b>n.a.</b>	
Cattle	136 687	4 136 422
Pigs/swine	116 392	418 485
Poultry (1 000 head)	216 755	12 863
Other	126 067	

METHODS OF IRRIGATION		
	Holdings	Area irrigated (ha)
<b>Holdings with irrigated land</b>	<b>11 598</b>	<b>100 097</b>
Surface	4 929	57 068
Sprinkler	2 773	29 010
Drip	1 586	5 675
Manually (watering can, hose)	2 699	2 673
Others	233	5 672

PERMANENT CROPS		
	Holdings	Area (ha)
<b>Total</b>	<b>104 334</b>	<b>293 231</b>
Tropical and subtropical fruits	n.a.	n.a.
Papayas	n.a.	722
Avocados	n.a.	1 930
Pineapples	n.a.	2 394
Mangoes	n.a.	2 683
Bananas	n.a.	54 462
Citrus fruits	n.a.	10 063
Oilseed crops	n.a.	n.a.
Oil palms	n.a.	13 261
Coconuts	n.a.	3 669
Sugar crops	n.a.	n.a.
Sugar cane	n.a.	63 544
Beverage crops and spice crops	n.a.	n.a.
Cocoa	n.a.	11 106
Coffee	n.a.	127 055
Other	n.a.	2 342