

1. HISTORICAL OUTLINE

The first nationwide agricultural census (AC) in Panama was conducted in 1950 through complete enumeration; the second one was carried out in 1961, on a sample basis. Other five decennial censuses were conducted, through complete enumeration, in 1971, 1981, 1991 and 2001. The most recent one, to which the metadata review and data presented here refer, was carried out in 2011.

2. LEGAL BASIS AND ORGANIZATION

Legal framework

The legal basis included:

- Law No. 10 of 22 January 2009, that created the National Institute of Statistics and Censuses (INEC) as a National Direction ascribed to the General Comptroller of the Republic and substituting the former National Direction of Statistics and Censuses. Article 10 of the Law entrusts the INEC with undertaking of national censuses, including the ACs, and its Article 37 establishes that an AC should be undertaken at least once every ten years.
- Executive Decree N° 878 of 8 September 2010, which regulates the Seventh Agricultural Census 2011.

Institutional framework and international collaboration

The INEC was in charge of the planning, technical organization and execution of the AC 2011. A National Census Committee was established, integrating representatives from the Ministry of Agricultural Development (MIDA); the Agricultural Development Bank (BDA); the National Revenue Service; and the INEC (including the heads of all divisions involved in the census).

Census staff

The data collection staff consisted of approximately 40 000 persons, including enumerators, field supervisors, area supervisors, inspectors, secretaries and drivers.

3. REFERENCE DATE AND PERIOD

Reference day: the day of the interview, for stock items such as number of trees and livestock, stock of machinery and equipment owned, number of household members, etc.

Reference periods:

- the agricultural year (from 1 May 2010 to 30 April 2011), for crops, purpose of production, use of machinery and equipment, income source, etc.;
- the calendar year 2010, for land tenure, temporary and permanent crops, irrigation, agricultural practices, and aquaculture;
- the week before the enumeration day, for milk, cheese and eggs production, and the quantity and value sold;
- the previous month, for employment on the holding; and
- the period from 1 January 2011 to the day of the interview, for slaughtering of cattle.

4. ENUMERATION PERIOD

The field data collection was conducted from 24 April to 1 May 2011.

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

The **census scope** covered agricultural activities (crop and livestock production). The census questionnaire also included some information on aquaculture.

The **statistical unit** was the agricultural holding, defined as “any extension of land used totally or partially for agricultural, livestock or forestry activities, regardless of title, size, or location, by a producer and the members of the producer’s household”.¹

6. GEOGRAPHIC COVERAGE

The census covered the entire country. In the cases of Colon City, San Miguelito District, and urban sectors of Ancon, Cristobal and Panama City, only holders detected in the Population and Housing Census (PHC) 2010 were interviewed.

7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

The AC 2011 covered the holdings with more than 0.01 ha of land.

8. METHODOLOGY

Methodological modality for conducting the census

The classical approach was used in the AC 2011.

¹ However, if a member of a producer’s household works on a separate land, this will be treated as an independent agricultural holding unit; it may consist of one or several farms. Several farms or land parcels together constitute an agricultural holding unit, provided that they are located in the same district.

Frame

The PHC 2010 was undertaken less than one year before the AC 2011. A question in the PHC questionnaire allowed for the identification of households with agricultural activity. The PHC 2010 included a question to identify the households conducting agricultural holdings.

Complete and/or sample enumeration methods

The AC 2011 was carried out by complete enumeration.

Sample design (if sampling was used)

No sampling was used.

Data collection method(s)

Data collection was done by direct interview and the information was collected in paper forms (PAPI method).

Questionnaire(s)

For the AC 2011 data collection, one questionnaire was used, which covered 13 of the 16 core items² recommended for the WCA 2010 round.

9. USE OF TECHNOLOGY

The INEC prepared a spatial database of the entire country, which enabled preparation of maps to satisfy the needs of the censuses and surveys, as well as their planning and execution. Census results are available online.

10. DATA PROCESSING AND ARCHIVING

To obtain the census results in a timely manner, IINEC decentralized the data entry process to its regional offices in nine data capture centres. Microcomputer networks were established in each of the capture centres, consisting of a server with the Windows 2008 Server operating system, laptop computers for supervisors and data entry devices. The system for the processing of census questionnaires was developed using Microsoft Visual Studio.Net 2005, SQL Server 2008 database, CsPro 4.0.002 and Microsoft Office 2003.

11. CENSUS DATA QUALITY

The quality of final census data was assessed by means of control checks against sampling survey data of selected crops (coffee, sugar cane, rice, maize, etc.) and livestock.

12. DATA DISSEMINATION

The census results were published in seven volumes, including a methodological report of the AC 2011, from January 2012 to October 2013.³ The census data are available online.

13. DATA SOURCE

Instituto Nacional de Estadística y Censo. 2011a. *Informe Metodológico del VII Censo Nacional Agropecuario, Contraloría General de la República de Panamá.* Panama. (also available at <http://www.contraloria.gob.pa/INEC/archivos/P6611Informe%20Metodologico%20del%20Censo%20Agropecuario%202011.pdf>).

Instituto Nacional de Estadística y Censo. 2011b. *Volumen I. Resultados Finales Básicos, VII Censo Nacional Agropecuario, Contraloría General de la República de Panamá.* Panama. (also available at http://www.inec.gob.pa/Publicaciones/Default3.aspx?ID_PUBLICACION=364&ID_CATEGORIA=15&ID_SUBCATEGORIA=60).

14. CONTACT

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² The following items were not covered: (i) "Presence of aquaculture on the holding"; (ii) "Presence of forest and other wood land on the holding"; and (iii) "Other economic production activities of the holding's enterprise".

³ The seven volumes with census results are: (i) Volume I – Basic Final Results, VII National Agricultural Census 2011, January 2012; (ii) Volume II – Characteristics of the Producers and Farms, July 2012; (iii) Volume III – Tenure and Land Use, September 2012; (iv) Volume IV – Annual or Temporary Crops, November 2012; (v) Volume V – Permanent Crops, November 2012; (vi) Volume VI – Characteristics of Livestock Activities, November 2012; (vii) Gender Focus, October 2013, (viii) Methodological Report of the Agricultural Census 2011.

PANAMA – AGRICULTURAL CENSUS 2011– MAIN RESULTS

| NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS | | |
|--|----------------|------------------|
| | Holdings | Area (ha) |
| Total | 248 560 | 2 698 841 |
| Civil persons | 246 820 | 2 385 107 |
| Company or legal partnership | 663 | 244 951 |
| Others | 1 077 | 68 783 |

| LAND TENURE | | |
|--|----------------|------------------|
| | Holdings | Area (ha) |
| Total | 248 560 | 2 698 841 |
| Holdings operated under one tenure | 236 081 | 2 195 353 |
| Legal ownership and owner-like possession | 144 207 | 1 310 948 |
| Non-legal ownership or owner-like possession | 64 030 | 656 026 |
| Rented from others | 2 218 | 35 120 |
| Land under collective ownership | 25 626 | 193 260 |
| Holdings operated under two or more tenure forms | 12 479 | 503 489 |

| LAND FRAGMENTATION | | Holdings |
|---------------------|--|----------------|
| Total | | 248 560 |
| 1 parcel | | 208 650 |
| 2 parcels | | 24 226 |
| 3 parcels | | 8 752 |
| 4–5 parcels | | 4 580 |
| 6–9 parcels | | 1 740 |
| 10 parcels and over | | 612 |

| DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES | | |
|---|----------------|------------------|
| | Holdings | Area (ha) |
| Total | 248 560 | 2 698 841 |
| Less than 0.1 ha | 88 675 | 2 762 |
| 0.10–0.19 ha | 9 378 | 1 150 |
| 0.20–0.49 ha | 8 090 | 2 203 |
| 0.50–0.99 | 14 232 | 8 205 |
| 1.00–1.99 ha | 27 484 | 31 312 |
| 2.00–2.99 ha | 17 031 | 35 690 |
| 3.00–3.99 ha | 10 646 | 32 823 |
| 4.00–4.99 ha | 6 868 | 28 030 |
| 5.00–9.99 ha | 20 095 | 130 762 |
| 10.00–19.99 ha | 17 757 | 232 960 |
| 20.00–49.99 ha | 16 289 | 485 640 |
| 50.00–99.99 ha | 7 184 | 474 737 |
| 100.00–199.99 ha | 3 051 | 396 350 |
| 200.00–499.99 ha | 1 369 | 377 283 |
| 500.00–999.99 ha | 294 | 189 564 |
| 1 000.00–2 499.99 ha | 94 | 130 744 |
| 2 500.00 ha and over | 23 | 138 629 |

| LAND USE | | |
|--------------------------------|----------------|------------------|
| | Holdings | Area (ha) |
| Total | 248 560 | 2 698 841 |
| Agricultural land | 407 731 | 2 266 062 |
| Land under temporary crops | 141 066 | 254 302 |
| Land temporarily fallow | 46 839 | 285 913 |
| Land under permanent crops | 219 826 | 188 519 |
| Permanent meadows and pastures | 86 740 | 1 537 328 |
| Forest and other wooded land | 30 440 | 367 780 |
| Other land | 56 300 | 64 999 |

| MEMBERS OF HOLDER'S HOUSEHOLD, BY SEX | | Number |
|---|--|----------------|
| Total | | 856 839 |
| Male | | 450 186 |
| Female | | 406 653 |
| Engaged in agricultural activities on the holding | | 241 582 |
| Male | | 166 727 |
| Female | | 74 855 |

| HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX AND AGE | | Number |
|---|--|----------------|
| Total | | 245 105 |
| Male | | 165 974 |
| Female | | 79 131 |
| Under 21 years | | 1 859 |
| 21–24 years | | 5 028 |
| 25–34 years | | 31 237 |
| 35–44 years | | 52 849 |
| 45–54 years | | 54 354 |
| 55–64 years | | 45 884 |
| 65 years and over | | 53 894 |

| EMPLOYEES WORKING ON THE HOLDING | | Number |
|----------------------------------|--|----------------|
| Total | | 298 296 |

| LIVESTOCK | | |
|--------------------------------------|---------------|-----------|
| | Holdings | Head |
| Total holdings with livestock | 70 217 | |
| Cattle | 43 858 | 1 728 748 |
| Buffaloes | 90 | 2 401 |
| Sheep | 1 333 | 18 713 |
| Goats | 1 027 | 8 354 |
| Pigs/swine | 23 909 | 322 121 |
| Equines | 42 328 | 116 791 |
| Horses | 40 965 | 114 395 |
| Asses (donkeys) and mules | 1 363 | 2 396 |
| Poultry (1 000 head) | n.a. | n.a. |
| Chickens | 158 587 | 18 719 |
| Ducks and geese | 15 830 | 103 |
| Turkeys | 5 207 | 18 |

| METHODS OF IRRIGATION | | Holdings |
|-----------------------|--|--------------|
| Total | | 9 044 |
| Surface | | 3 641 |
| Sprinkler | | 4 168 |
| Drip | | 4 842 |
| Other methods | | 7 248 |

| SOURCES OF IRRIGATION WATER | | Holdings |
|-----------------------------|--|--------------|
| Total | | 9 044 |
| River or stream | | 5 121 |
| Well or groundwater | | 2 688 |
| Waterhole | | 1 965 |
| Aqueduct | | 7 460 |
| Other | | 620 |