

1. HISTORICAL OUTLINE

The National Agricultural Census (NAC) 2014 of the Republic of Costa Rica is the sixth agricultural census to be conducted. The previous agricultural censuses were conducted in 1950, 1955, 1963, 1973 and 1984.

2. LEGAL BASIS AND ORGANIZATION

Legal framework

The legal basis for the NAC was provided by the following:

- Law No. 7839 of 1998, as amended by Law No. 7963 of 1999 (Article 4), is the governing law of the National Statistical System (SEN).¹ Law No. 7839 stipulates that NACs should be conducted with a five-year periodicity.
- Law No. 9071 of 2012 (Article 2) indicates that the state has to provide the needed funds to carry out agricultural censuses.

Institutional framework and international collaboration

The National Institute of Statistics and Censuses (INEC)² is the main agency responsible for conducting NACs. The main supporting bodies for conducting the 2014 AC were the Executive Secretariat for Agricultural Sector Planning, the Ministry of Agriculture and Livestock and the Central Bank.

INEC received financial and technical assistance from FAO (for census preparation and implementation), as well as from the Inter-American Institute for Cooperation on Agriculture (IICA, for designing and implementation of a training strategy, called the “waterfall method”).

Census staff

The census staff comprised over 2 200 persons (regional coordinators, cantonal coordinators, section supervisors, controllers and enumerators).

3. REFERENCE DATE AND PERIOD

Reference day: day of the interview, for inventory items such as location of the farm, livestock numbers and characteristics of the households.

Reference period: agricultural year 2014 (from 1 May 2013 to 30 April 2014), for items such as land use, agricultural practices, labour inputs, use of machinery and equipment.

4. ENUMERATION PERIOD

Data collection was conducted from 2 to 30 June 2014.

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

The **census scope** covered agricultural (crops and livestock production) activities. The NAC 2014 also collected items related to non-agricultural activities associated with the holding, such as aquaculture and forestry activities.

The **statistical unit** for the NAC 2014 was the agricultural farm, defined as “any land area, dedicated totally or partially to agricultural production for sale or self-consumption, managed by a household, society, company, public institution or other, whose tasks may be coordinated or directly accomplished by a person or with the help of others, and whose activities are carried out under the same management, by using the same means of production, such as labour, machinery, equipment and work animals”. The definition of agricultural holdings includes aquaculture and forestry activities. Therefore, if the holding has only one of those activities, it is considered as an agriculture holding. The farm can be constituted by one or more plots, under property or under other type of tenure, and may be located together or separately from one another, in the same canton or in different cantons. It includes family gardens, hydroponics and organoponics agricultural systems.

The agricultural producer is the individual or legal entity that assumes full economic responsibility in the management of the farm and that may or may not have technical functions; it may manage the farm personally or exercise this function through another person who administers it.

6. GEOGRAPHIC COVERAGE

The NAC 2014 covered the entire country, both urban and rural area.

7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

When publishing data, cases where a given farm had less than 1 000 m² (0.1 ha) were reflected as 0.0.³

¹ Sistema Estadístico Nacional.

² Instituto Nacional de Estadística y Censos.

³ During census data collection, small holdings were included. During the phase of dissemination, these holdings were included as holdings without land. Holdings without land are those that comply with any of the following criteria: (i) the total extension of the farm is very small, such that when it is expressed in ha, it is considered equivalent to 0.0; and (ii) the total extension of the farm is equivalent to “other class of land”, so that the land is not considered as an indispensable production input – an example is a warehouse of 5 000 m² that at the same time constitutes the total extension of the farm (in other words, the structure covers the entire area of the farm). For confidentiality reasons, it was decided that at least three holdings should be reflected in census reports for each geographical region of a country, used for administrative or other purposes (i.e. district, province).

8. METHODOLOGY

Methodological modality for conducting the census

The NAC 2014 used the classical approach.

Frame

Data from the Ministry of Agriculture and Livestock were a source for the agricultural census frame. The cartography of the National Population and Housing Census 2011 was used for the NAC 2014.

Complete and/or sample enumeration methods

The complete enumeration method was used for the NAC 2014.

Sample design (if sampling was used)

No sampling method was used.

Data collection method(s)

The face-to-face interviewing method was used to collect information from holdings, using the PAPI method.

Questionnaire(s)

A single questionnaire was applied to collect all census information. Compared to the previous NAC, the NAC 2014 collected new items, such as data on irrigation and drainage practices, agricultural practices, agricultural equipment and infrastructure, agricultural support services, and variables related to food security and the environment.

The sixth NAC covered 15 of the 16 core items recommended in the WCA 2010.⁴

9. USE OF TECHNOLOGY

GPS and Geographic Information Systems (GIS) were used to georeference the farms.⁵ The census results were disseminated online.

10. DATA PROCESSING AND ARCHIVING

Data entry was done by scanning the questionnaires. The data processing programme was developed by INEC using C# and C#Pro. A designing, processing and analysis team supported this process. Microsoft SQL Server was used as a database management system. Census data were exported using SPSS.

11. CENSUS DATA QUALITY

To ensure quality in the design and preparation of the census, several field tests in different parts of the country were carried out, including the 2013 pilot agricultural census, in which the following were evaluated: the functionality of the census questionnaire, the productivity of the enumerator during the interview, the communication strategy, etc.

12. DATA DISSEMINATION

The census results and final tables were disseminated largely through printed publications, CD-ROMs and websites. Based on the results of the sixth NAC, an agricultural statistical atlas was elaborated. Census information was disseminated at the country, province and canton level, according to the territorial administrative divisions of the Republic of Costa Rica in effect during the census.

The results of the NAC 2014 are available to the public through the INEC website.⁶

13. DATA SOURCES

Instituto Nacional de Estadística y Censos. 2015. *VI Censo Nacional Agropecuario 2014, Resultados Generales*. San Jose, Costa Rica. (also available at <http://inec.cr/sites/default/files/documentos/agropecuario/publicaciones/reagropeccenagro2014-002.pdf>).

14. CONTACT

Instituto Nacional de Estadística y Censos (INEC)

Address: De la Rotonda de La Bandera 450 metros oeste, sobre Calle Los Negritos, Edificio Ana Lorena, Mercedes de Montes de Oca, Costa Rica

Telephone: (+506) 22809280

E-mail: informacion@inec.go.cr

Website: www.inec.go.cr

⁴ The item "Other economic production activities of the holding's enterprise" was not covered.

⁵ The devices were equipped with the following applications: Ourux Maps and Advancement of Mobile Interview System (Sistema de Avance de Entrevista Móvil (SAEM)). Enumerators used cartography to visit the area assigned to them; the maps also contained information such as the delimitation of the EA, the names of localities, identifiable structures such as health centres, education centres, churches or commercial places. In addition, other conventional symbols were highlighted (roads, motorways, roads, railways, rivers, creeks, bridges, etc.).

⁶ See <http://www.inec.go.cr/censos/censo-agropecuario-2014>

COSTA RICA – VI NATIONAL AGRICULTURAL CENSUS 2014 – MAIN RESULTS

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
Total	93 017	2 406 418
Civil persons	80 987	1 316 807
Juridical persons	7 940	945 216
Partnership	2 995	76 816
Other	1 095	67 579

LAND TENURE		
	Holdings	Area (ha)
Total	93 017	2 406 418
Legal ownership	n.a.	2 194 208
Rented from others	n.a.	179 905
Other form of tenure	n.a.	32 305

LAND FRAGMENTATION		
	Holdings	Area (ha)
Total	93 017	2 406 418
1 parcel	71 000	1 609 085
2 parcels	13 947	368 203
3 parcels	4 620	182 644
4 parcels and over	3 450	246 487

DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES		
	Holdings	Area (ha)
Total	93 017	2 406 418
Holdings without agricultural land ¹	3 115	2 164
Holdings with land	89 902	2 404 255
Less than 1 ha	13 683	6 489
1–2 ha	11 356	14 503
2–3 ha	8 673	19 701
3–4 ha	6 089	19 782
4–5 ha	5 556	23 611
5–10 ha	14 453	98 631
10–20 ha	10 755	145 027
20–50 ha	10 034	306 568
50–100 ha	4 774	324 889
100–200 ha	2 383	316 388
200 ha and over	2 146	1 128 666

LAND USE		
	Holdings	Area (ha)
Total	93 017	2 406 418
Agricultural land	n.a.	n.a.
Arable land	34 901	167 133
Land under permanent crops	52 132	377 214
Land under permanent meadows and pastures	44 285	1 044 910
Forest and other wooded land	33 128	736 505
Other land	32 300	80 656

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX		
	Number	Area operated (ha)
Total	80 987	1 316 807
Male	68 389	1 210 244
Female	12 598	106 564

HOLDINGS, BY HOUSEHOLD SIZE	
	Number
Total	80 987
1 person	13 185
2–3 persons	32 537
4–5 persons	26 951
6–9 persons	7 918
10 persons and over	396

MEMBERS OF HOLDER'S HOUSEHOLD, BY SEX	
	Number
Total	269 602
Male	146 124
Female	123 478
Engaged in agricultural activities on the holding	128 546
Male	91 787
Female	36 759

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX AND AGE	
	Number
Total	80 987
Male	68 389
Female	12 598
15–19 years	182
Male	152
Female	30
20–24 years	1 077
Male	875
Female	202
25–29 years	2 196
Male	1 794
Female	402
30–39 years	8 765
Male	7 135
Female	1 630
40–49 years	18 336
Male	15 354
Female	2 982
50 years and over	50 431
Male	43 079
Female	7 352

LIVESTOCK		
	Holdings	Head
Total holdings with livestock	58 176	
Cattle	37 171	1 278 817
Sheep	1 792	35 800
Goats	2 348	12 852
Pigs/swine	14 355	435 243
Poultry (1 000 head)	36 752	18 589
Other animals	20 122	
Insects		
Bees (hives)	1 893	30 851

MACHINERY AND EQUIPMENT OWNED BY THE HOLDINGS		
	Holdings	Units
Total tractors of all kinds	10 743	11 512
Ploughs (machine-powered)	7 672	4 139
Other (machine-powered)	n.a.	
Biodigester	1 737	1 990
Pumps	72 371	131 391
Harvester	1 047	1 010
Milk cooler	2 794	3 306
Dryers	561	700
Chainsaw	31 241	34 957
Milk machine	4 051	10 178
Solar panel	1 931	3 195
Grass chopper	8 283	8 718
Harrow	4 658	3 644
Rotator	2 030	1 151
Seeder	659	600
Sprayer	2 143	2 637

¹ Holding with insignificant land area (equivalent to 0.0 ha) and/or without any land used for agricultural production.