



GUAM – Census of Agriculture 2018 – Metadata review

Guam is one of the territories collectively referred to as “U.S. Outlying Areas”. For statistical purposes, it is recorded as a separate entity in the World Census of Agriculture Database (in the Americas Region). Consequently, the results related to the United States of America bear only upon the continental territory of the country.

1. Historical outline

The U.S. Bureau of the Census conducted the first Census of Agriculture (CA) in Guam in 1920, as part of the decennial Population and Housing Census (PHC) of that year. From 1930 through 1960, CAs continued to be carried out in conjunction with the decennial PHC program. Beginning in 1964, censuses in Guam were conducted as part of the quinquennial censuses of agriculture and have been conducted on a five-year cycle. The CA 2018 was the fifteenth agricultural census to be undertaken in Guam.

2. Legal basis and organization

Legal framework

The CA is required by law under the Census of Agriculture Act of 1997, Public Law 105-113 (Title 7, United States Code, Section 2204g). The law directs the Secretary of Agriculture to conduct a census of agriculture every five year. The CA 2018 of Guam was conducted in accordance with a Cooperative Agreement approved by the Director of the Census and Survey Division of National Agricultural Statistics Service (NASS) of the U.S. Department of Agriculture (USDA), and by the University of Guam, College of Natural and Applied Sciences, and its Cooperative Extension and Outreach Service.

Institutional framework and international collaboration

The NASS of the USDA is the government agency responsible for conducting the CA 2018 in Guam. The CA 2018 was conducted with the cooperation and assistance of the University of Guam (UoG). The NASS provided technical assistance at various levels, while the UoG was responsible for recruiting and training local officers and field staff and supervising local administrative matters. The census was funded by the United States federal budget.

Census staff

The CA 2018 in Guam employed one project manager, one crew leader/supervisor, and ten enumerators and they received special training in accordance with instructions prepared by NASS. The training included practice in interviewing and filling out the report form plus detailed discussion of the enumerator's instructions.

3. Reference date and period

Reference day: the day of enumeration for inventory items such as livestock, *poultry*, machinery and equipment.

Reference period: the calendar year, from 1 January to 31 December 2018, for crop production, crop and livestock sales, expense data, etc.

4. Enumeration period

The enumeration was conducted from April to August 2019.

5. Scope of the census and definition of the statistical unit

The **census scope** covered agricultural activities (crop and livestock production). Information on capture fisheries and aquaculture activities carried out by the agricultural holdings was also collected.

The **statistical unit** for the CA 2018 was the farm operators, defined as any place from which USD 1,000 or more of agricultural products produced and sold, or normally would had been sold, during the calendar year 2018. According to the census definition, a farm is essentially an operating unit, not an ownership tract. All land operated or managed by one person or partnership represents one farm. In

the case of tenants, the land assigned to each tenant is considered a separate farm, even though the landlord may consider the entire landholding to be one unit rather than several separate units.

Community-level data

There were no community-level data collected along with the census.

6. Census coverage

Geographic coverage

The CA 2018 covered the entire territory of Guam.

Cut-off threshold and other exclusions

The CA 2018 in Guam covered “all places” from which USD 1000 or more of agricultural products were produced and sold, or normally would have been sold, during the 12-month period between 1 January and 31 December 2018.

7. Methodology

Methodological modality for conducting the census

The classical approach was used in the CA 2018.

Relation to other censuses

No relationship with other censuses.

Frames

The census frame of the CA 2018 consisted of a list of farm operators compiled by the Cooperative Extension and Outreach Service of the University of Guam, and the Guam Department of Agriculture.

Complete or/and sample enumeration methods

The census was a complete enumeration of all farms from the frame, according to census scope.

Sample design (if sampling was used)

Not applicable.

Data collection methods

A direct enumeration procedure (face-to-face interviews) with PAPI was used in the CA 2018.

Questionnaire(s) and items covered

One questionnaire (report form) was used for the CA 2018; it was prepared by the NASS, in cooperation with the Guam DA. The questionnaire covered 15 out of the 23 essential items recommended in the WCA 2020.¹

8. Use of technology

Optical scanning was used to capture data from the questionnaires. The census results were disseminated online, through the USDA website.

9. Data processing

Completed questionnaires of the CA 2018 for Guam were sent to the Census Bureau’s National Processing Center (NPC) in Jeffersonville, Indiana for data capture and scanning. NASS staff on site at the NPC provided technical guidance and monitored NPC processing activities. Each report form was reviewed and coded prior to data keying. Report forms that did not meet the census farm definition were voided. Missing information was derived using reported data for similar farms (in terms of type

¹ The following essential items were not covered: (i) 0107-Main purpose of production of the holding; (ii) 0407-Number of permanent crop trees in scattered plantings (for each tree crop); (iii) 0411-Use of each type of fertilizer; (iv) 0501-Type of livestock system; (v) 0503-Number of female breeding animals; (vi) 0601-Use of agricultural pesticides; (vii) 0801-Household size by sex and age groups; (viii) 0903-Number and working time of employees on the holding by sex.

and size) in nearby areas. After all the report forms had been reviewed and coded, the data were keyed and subjected to a thorough computer edit. Once keyed, the data from each report form were available to NASS analysts in Washington, DC, via electronic media, for computer editing and analysis. The corrected data were then tabulated by the computer and reviewed by analysts. Prior to publication, tabulated totals were reviewed by analysts to identify inconsistencies and potential coverage problems. Comparisons were made with previous census data, as well as other available data. The computer system provided the capability to review up-to-date tallies of all selected data items for various sets of criteria, which included, but were not limited to, geographic levels, farm types and sales levels. Data were examined for each set of criteria and a write-up (criticism) was produced for data that were inconsistent. When necessary, data inconsistencies were resolved by carrying out corrections to data records.

10. Quality assurance

Quality checks included strict field supervision, clerical screening for farm activity, follow-up of non-respondents, keying and transmittal of completed report forms, computerized editing of inconsistent and missing data, review and correction of individual records referred from the computer edit, review and correction of tabulated data, and electronic data processing. Efforts were made to measure error associated with the adjustments for farm operations that were on the list of farm operators, but did not respond to the census report form. This error measurement was developed from the standard error of the estimates at the island level, where appropriate, and were expressed as coefficient of variation (CV) at the island level. Every estimate has a corresponding CV published with it.

11. Data and metadata archiving

Completed report forms were automatically checked in by scanning devices that identified each case by the bar code in the address label of the form. The report forms were then scanned to create images used for data keying. Data from each report were subjected to a detailed computer edit.

Agriculture Census website, United States Department of Agriculture, National Agricultural Statistics Service. <https://www.nass.usda.gov/AgCensus/index.php>

12. Data reconciliation

There was no reconciliation process of CA 2018 data.

13. Dissemination of census results and microdata

The 2018 CA final report was published in July 2020. The census report included methodological notes and the census questionnaire are available on the NASS website. Published data are available in searchable database of NASS, Quick Stats. The access of external users to the CA microdata was not provided.

14. Data sources

United States Department of Agriculture, National Agricultural Statistics Service. 2017 Census of agriculture, Guam (2018) Island Data, Volume 1, Geographic Area Series, Part 53, AC-17-A-53, Washington, D.C., United States of America. (also available at https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Outlying_Areas/guam.pdf).

15. Contact

University of Guam
College of Natural and Applied Science
303 University Drive, Mangilao, GU 96929; Guam, United States of America
Telephone: (+671) 7352060
Website: <https://www.uog.edu/schools-and-colleges/college-of-natural-and-applied-science>

United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Address: 1400 Independence Ave., SW Washington, D.C. 20250
Telephone: (+1) (800) 7279540; (+1) 202 7203878
E-mail: nass@nass.usda.gov
Website: <https://www.nass.usda.gov>