NORTHERN MARIANA ISLANDS – Census of Agriculture 2018 – Metadata review

The Northern Mariana Islands is one of the areas 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 Oceania Region). Consequently, results related to the United States of America bear only upon the continental territory of the country.

1. **Historical outline**

The first agricultural census in the Commonwealth of Northern Mariana Islands (CNMI) was conducted in 1970, in conjunction with the decennial population census. This practice was continued in 1980 and 1990. However, in 1998, the CNMI carried out the first agricultural census separately from the population census. The self-standing agricultural census was conducted by NASS. The 2002 and 2007 Census of Agriculture (CA) in the CNMI, were the fifth and sixth in the series respectively. These censuses were synchronized with the quinquennial programme of agricultural censuses followed in the mainland United States of America. The CA 2018 in the CNMI continued the programme on the same five-year cycle used for the main agriculture census of the United States of America and was the seventh agricultural census.

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 years. The CA 2018 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 CNMI Secretary of Commerce.

Institutional framework and international collaboration

The NASS of the USDA was the government agency responsible for conducting the CA 2018, with cooperation and assistance from the Department of Commerce (DC) of the CNMI. The NASS provided technical assistance at various levels, while the DC of the CNMI was responsible for recruiting and training local officers and field staff and supervising local administrative matters. The CA 2018 was funded by the United States Federal budget.

Census staff

The CA 2018 in CNMI employed one project manager, one crew leader/supervisor, and eight 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 June 2019.

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

The **census scope** covered agricultural activities (crop and livestock production).

The *statistical unit* was the farm, defined as any place from which USD 1 000 or more of agricultural products were produced and sold, or normally would have been sold, during the calendar year 2018.

The farm definition is the same definition used for the rest of the U.S. 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 the CNMI.

Cut-off threshold and other exclusions

The CA 2018 covered all places from which USD 1 000 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 CA 2018 frame consisted of a list[1] of farm operators compiled by the DC of the CNMI.

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

Data collection was done by means of traditional face-to-face interviews. The information was collected in paper forms (PAPI method).

Questionnaire(s) and items covered

A single questionnaire (report form) was used for data collection in the CA 2018. The CA 2018 covered 15 out of the 23 essential items recommended in the WCA 2020.[2]

8. Use of technology

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

9. Data processing

The NASS undertook the data processing activities. Each report form was reviewed and coded prior to data entry. Reports for individuals or establishments not meeting the census farm definition were excluded. The remaining report forms were examined for accuracy, consistency and completeness.

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[1] The core of this list was a compilation of all persons having a business license to sell agricultural products.

[2] 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.

After all report forms had been reviewed and coded, the data were keyed and subjected to a thorough computer edit. 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 and trend discrepancies.

10. **Quality assurance**

Quality checks included strict field supervision, clerical screening for farm activity, follow-up on non-respondents, keying and transmission 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.

Ten percent of the captured data were keyed a second time for quality control. If differences existed, an adjudicator handled resolution. This was used to grade the performance of the keyers, who were required to maintain a certain accuracy level or receive additional training. The measured error rate for the entire survey was 0.39 percent.

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

14. **Data sources**

United States Department of Agriculture, National Agricultural Statistics Service. 2017 Census of agriculture, Northern Mariana Islands (2018) Commonwealth and Island Data, Volume 1, Geographic Area Series, Part 56, AC-17-A-56, Washington, D.C., United States of America. (also available at https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Outlying_Areas/cnmi.pdf).

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