1. HISTORICAL OUTLINE

The first Agricultural Census (AC) in Thailand was conducted in 1950, followed by the ACs carried out in 1963, 1978, 1993 and 2003. The sixth agricultural census, to which the metadata review and data presented here refers, was carried out in 2013.

2. LEGAL BASIS AND ORGANIZATION

Legal framework

Under the Statistics Act, B.E 2550 (2007), the National Statistical Office (NSO) is mandated to conduct censuses and surveys on various statistics of the country.

Institutional framework and international collaboration

The overall responsibility for the 2013 AC was delegated to the National Statistical Office (NSO), which implemented the census in cooperation with the Ministry of Agriculture, Department of Agricultural Extension. A National Census Administration Committee was formed, with representatives from the NSO and related ministries. Under the NSO, census subcommittees were set up for the operative coordination of the following operations: elaboration of census questionnaire and instructions manual; mapping; public relations; and data processing. The census was entirely funded through the national budget.

Census staff

There were altogether approximately 21 100 persons involved in the census operations, of which 15 411 field enumerators ("village agricultural volunteers"), 3 081 field supervisors ("district agricultural extension officers") and 2 604 NSO staff.

3. REFERENCE DATE AND PERIOD

Reference day: 1 May 2013, for items referring to the identification and main characteristics of the holdings, land use, land tenure, livestock numbers, machinery and equipment, etc.

Reference period: the 12 months preceding the census, for planted area, harvested area, production, destination of production, etc.

4. ENUMERATION PERIOD

The census was conducted from 1 May to 31 May 2013.

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

The **census scope** covered agricultural activities (crop and livestock production) and aquaculture activities.[1] The AC 2013 included also sea salt farms.[2]

The **statistical (enumeration) unit** was the agricultural holding, defined as an economic unit of agricultural production (cultivating crops, rearing livestock) and aquaculture production, under single management, comprising all livestock kept and all land used wholly or partly for agricultural production purposes, performing an agricultural activity on owned agricultural land, or on land owned by other persons, or on public land, regardless of legal permission. The holding's land could consist of one or more parcels, located in one or more separate areas; however, the land had to be in the same province.

6. GEOGRAPHIC COVERAGE

Data collection covered the entire country.

7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

All agricultural holdings, in the household and in the non-household sector, were covered by the census.

8. METHODOLOGY

Methodological modality for conducting the census

The AC 2013 used the classical approach. The census was carried out by applying a short-long questionnaire.

Frame

A screening form was applied to all households, to identify and list agricultural holdings or fishing households.

Complete and/or sample enumeration methods

A combination of complete and sample enumeration was applied for the AC 2013. The questionnaire was divided into two parts. The first part was used for collecting key agricultural structural items from all holdings, whereas the entire questionnaire was used for collecting census data from a sample of holdings.

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[1] "Culturing fresh water".

[2] "Salt evaporation ponds".

Sample design (if sampling was used)

A systematic sampling method was applied to draw the sample of agricultural holders from each EA. The sampling fraction in each EA was 1 in 4 (the sample comprised 25 percent of the total number of holdings). The selected agricultural holders were enumerated using the entire questionnaire (sections 1-16).

Data collection method(s)

Data were collected by means of electronic devices (tablets), using the CAPI method.

Questionnaire(s)

In the AC 2013, one questionnaire was used for data collection. It was divided into two parts: one part (sections 1–10) was used for all holdings, while the other (sections 11–16) – for sampled holdings.

The AC 2013 questionnaire covered all 16 core items recommended for the WCA 2010 round.

9. USE OF TECHNOLOGY

New technology was used for data collection (CAPI)[3] and for the dissemination of census results (online).

10. DATA PROCESSING AND ARCHIVING

After the data collection stage, during which the census information was collected using electronic devices (tablets), and after initial checking during the fieldwork, the data were sent to the NSO server for further processing, to verify data consistency, accuracy and coverage. After final checking for correctness and completeness, the census data were further processed for statistics tabulations and summarized to report the census results at provincial, regional and country level.

11. CENSUS DATA QUALITY

After the census fieldwork was completed, the NSO carried out a PES, to evaluate the quality of the census data. The PES was conducted for all households of the selected EAs throughout the country.[4]

12. DATA DISSEMINATION

The reports, with preliminary and final census results, were published in 2013 and 2014, respectively. The census results were disseminated at provincial, regional and national levels. The census results are available on the NSO's website.

13. DATA SOURCES

FAO. 2016. Regional Roundtable on the World Programme for the Census of Agriculture 2020 (WCA 2020). 19–23 September 2016, Bangkok, Thailand. In: *World Programme for the Census of Agriculture* [online]. Rome, Italy. [Cited 4 September 2019]. http://www.fao.org/world-census-agriculture/events/wca2020bangkok/en/

National Statistical Office of Thailand. 2014. Agricultural census. In: *National Statistical Office* [online]. Bangkok, Thailand. [Cited 28 July 2019] http://web.nso.go.th/en/census/agricult/cen_agri03.htm

14. CONTACT

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[3] Use of CAPI made it possible to: (i) enable census staff to immediately check for data consistency and completeness; (ii) reduce the time required for data processing and present results in a timely manner; (iii) enable identification of the location of each enumerator's field operation through GPS, which enhanced the quality control of the enumerator's work according to their assigned EAS; and (iv) constantly upload data to the server in the cloud computing system.

[4] The purpose of the PES was to estimate coverage and content errors (for selected characteristics). Stratified single-stage sampling was applied to this PES. There were four strata, each referring to four regions – Central, North, Northeast and South; in each region, the provinces were represented as substrata. Within each substratum, the EAs were systematically selected; the total samples were 1 280 EAs. After the PES field operation, information between the census and the PES were processed for a matching check. Then, errors in census coverage and content were analysed and evaluated.

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
Total	5 911 567	18 659 786
Individual	5 844 114	18 374 487
Two or more individuals	61 446	209 181
Corporation	1 859	44 778
Government agency	2 077	19 307
Others	2 071	12 032

LAND FRAGMENTATION		
	Holdings	Area (ha)
Total	5 911 567	18 659 786
1 parcel	3 396 516	7 047 558
2 parcels	1 368 120	4 791 263
3 parcels	613 385	2 913 921
4 parcels	272 263	1 622 748
5 parcels	126 496	891 609
6 parcels	134 787	1 392 687

DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES		
	Holdings	Area (ha)
Total	5 911 567	18 659 786
Less than 0.3 ha	331 743	34 828
0.3–1 ha	1 045 756	606 487
1–1.6 ha	817 473	958 985
1.6–3 ha	1 606 257	3 467 294
3–6 ha	1 393 786	6 002 413
6–9 ha	444 160	3 334 890
9–22 ha	244 665	3 123 534
22–80 ha	26 094	855 625
80 ha and over	1 633	275 732

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX AND AGE	
	Number
Total	5 905 714
Male	3 761 602
Female	2 144 112
Under 25 years	34 313
Male	17 920
Female	16 390
25–34 years	306 140
Male	176 910
Female	129 225
35–44 years	1 088 389
Male	657 388
Female	430 998
45–54 years	1 834 958
Male	1 187 167
Female	647 791
55–64 years	1 545 605
Male	1 027 818
Female	517 791
65 years and over	1 096 316
Male	694 399
Female	401 919

HOLDINGS BY HOUSEHOLD SIZE	
	Number
Total holdings	5 905 714
1 person	719 284
2–3 persons	2 795 246
4–5 persons	1 713 859
6–9 persons	667 702
10 persons and over	9 623

MEMBERS OF HOLDER'S HOUSEHOLD, BY SEX	
	Number
Total	18 202 113
Male	8 809 508
Female	9 392 605
Engaged in agricultural activities on the holding	8 548 391
Male	4 145 690
Female	4 402 701

PERMANENT EMPLOYEES WORKING ON THE HOLDING	
	Number
Total	1 161 182
Male	644 808
Female	516 374

LIVESTOCK		
	Holdings	Head
Total holdings with livestock	n.a.	
Cattle	582 635	3 648 738
Buffaloes	173 426	701 587
Sheep	2 471	33 867
Goats	22 994	324 836
Pigs/swine	150 681	6 584 479
Poultry (1 000 head)	n.a.	n.a.
Chickens	574 918	251 339
Ducks	142 060	13 335
Geese	6 896	174

HOLDINGS, BY MAIN PURPOSE OF PRODUCTION		
	Holdings reporting	Area (ha)
Total producing for	3 777 470	11 308 090
Home consumption	992 847	1 023 963
Sale	363 644	2 938 307
Home consumption and sale	2 420 979	7 345 820

MACHINERY AND EQUIPMENT USED ON THE HOLDING		
	Holdings	Units
Total tractors of all kinds	n.a.	2 371 425
Four-wheel tractors	2 427 001	370 484
Two-wheel tractors	2 438 848	2 000 941
Combine harvesters	1 639 016	38 340
Other (machine-powered)	n.a.	
Sprayer	1 323 153	910 214
Weeder	1 155 443	756 653
Planter	167 413	69 510
Reaper	82 044	3 621
Rice and cereal thresher	542 887	15 347
Corn sheller	173 568	4 460
Rice and cereal winnower	207 718	5 366
Rice miller	1 808 871	45 587
Milking machine	9 610	11 707