

## 1. HISTORICAL OUTLINE

India participated in the World Programme for the Census of Agriculture (WCA) 1930, 1950 and 1960 through sample surveys carried out by the Directorate of National Sample Surveys. The 1970/1971 Census is considered the first comprehensive agricultural census (AC) to be conducted in the country. Quinquennial ACs were successively undertaken in 1976/1977, 1980/1981, 1985/1986, 1990/1991, 1995/1996, 2000/2001 and 2005/2006. The ninth census in the series is the 2010/2011 AC, to which the metadata review and data presented here refer.

## 2. LEGAL BASIS AND ORGANIZATION

### *Legal framework*

ACs in India are conducted every five years and are coordinated by the Agriculture Census Division, Department of Agriculture, Cooperation & Farmers' Welfare, of the Ministry of Agriculture & Farmers' Welfare. In the AC, data collection is done through the retabulation of administrative land records and the household enquiry approach.

### *Institutional framework and international collaboration*

In India, the AC requires a high degree of coordination, technical expertise, statistical control and supervision over the states. The governments of state and Union Territories (UTs) are responsible for undertaking statistical operations in their respective administrations, and the central Government acts as a coordinating agency. The Steering Committee, consisting of various stakeholders and domain experts, provides guidance on technical and administrative issues relating to the implementation of the Agriculture Census Scheme.

The AC was funded entirely from the national budget.

### *Census staff*

The total number of census staff involved in the 2010/2011 AC was approximately 131 143 enumerators and 131 supervisors (HQ).

## 3. REFERENCE DATE AND PERIOD

**Reference day:** 15 October 2011, for inventory items such as the number of cattle.

**Reference periods** used in the AC:

- Phase I and Phase II: agricultural year 2010–2011 (from July 2010 to June 2011);
- Phase III: agricultural year 2011–2012 (from July 2011 to June 2012).

## 4. ENUMERATION PERIOD

Data collection for the 2010/2011 AC was carried out according to the three phases of the census: (i) Phase I: July – September 2011 (listing and community – village – survey); (ii) Phase II: January – June 2012 (sample surveys on the agricultural characteristics of holdings); and (iii) Phase III: July – September 2012 (sample surveys on parcels, input use and livestock).

## 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 operational holding, defined as an entity comprising all land that is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others, without regard to the title, legal form, size or location. A technical unit was defined as the unit that is under the same management and has the same means of production, such as labour force, machinery, animals, credit, etc. The operated area includes both cultivated and uncultivated area, provided that a part of it is put to agricultural production during the reference period.

## 6. GEOGRAPHIC COVERAGE

The census covered the entire country.

## 7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

No exclusions.

## 8. METHODOLOGY

### *Methodological modality for conducting the census*

The modular approach was used for data collection. The states in the country were grouped into two categories: states with land records (covering 91 percent of the country area); and states/UTs without land records (Punjab, although it is a land records state (LRS), followed the procedure for data collection envisaged in cases of states without land records). In states where the revenue agency maintains the record of ownership of holdings and regular crop inspections are carried out, these records were the basis for conducting Phase I of the census operations.<sup>1</sup> The census was conducted in three phases.

### *Frame*

The sampling frame for Phase II consisted of the operational holdings identified in Phase I, while the sampling frame for Phase III were 20 percent of the holdings selected in phase II.

<sup>1</sup> In non-land record States and UTs, a list of landholding households is prepared in 20 percent of villages, are same as those selected under the scheme for the Establishment of an Agency for Reporting of Agricultural Statistics (EARAS) for the reference year of the AC.

**Complete and/or sample enumeration methods**

In Phase I, all holdings in LRSs (covering 91 percent of total land area) were completely listed, while in states/UTs without land records, listing was conducted only on sample villages. In Phase II, all holdings in the sample villages in LRSs were enumerated. In all states, sample surveys were carried out in Phase III.

**Sample design (if sampling was used)**

Phase I in non-land record states/UTs and Phase II in all states: a one-stage sampling scheme was applied; a sample of 20 percent of villages (first-stage sample) and complete enumeration of households in selected villages of LRSs and 25 percent of households in non-LRSs were done.

Phase III, in all cases, is a two-stage sampling design according to which, in the first stage, villages are selected (7 percent of villages in each *tehsil*) and in the second stage, four holdings from each of the five size classes are sampled in the selected villages.

**Data collection method(s)**

Face-to-face interviews using paper questionnaires (the PAPI method) was applied in the census.

**Questionnaire(s)**

Three questionnaires were used, one for each of the three phases of the census:

- Phase I questionnaire, for collecting data on number and area of operational holdings, according to the prescribed size classes<sup>2</sup> for different social groups,<sup>3</sup> types of holdings<sup>4</sup> and gender.
- Phase II questionnaire, for collecting data on: (i) dispersal of holdings; (ii) tenancy and terms of leasing; (iii) land utilization; (iv) irrigation status and source-wise area irrigated; and (v) cropping pattern.
- Phase III questionnaire, for collecting additional data.

The AC 2011 questionnaires covered 12 items of the 16 core items<sup>5</sup> recommended for the WCA 2010 round.

**9. USE OF TECHNOLOGY**

Census results were disseminated and are accessible online.

**10. DATA PROCESSING AND ARCHIVING**

In-house software was developed for data entry and processing of census data. Data entry, data validation and error correction, the generation of trial tables, and the generation of final tables and their examination by states or UTs took place according to the three phases of the census. All questionnaires were manually scrutinized by the statistical staff before they were submitted for data entry. Data are archived at *tehsil* level and are available in the public domain.

**11. CENSUS DATA QUALITY**

The data entry and processing software included checks of census data for inconsistencies and mismatch.

**12. DATA DISSEMINATION**

Census data are compiled at the national and *tehsil* level. The All India Report of Agriculture Census 2010–2011 is based on the data collected during Phase-II of the Census. The detailed data of AC 2010/2011 results are available on the website of the Department of Agriculture, Cooperation & Farmers' Welfare.

**13. DATA SOURCES**

**Department of Agriculture, Cooperation & Farmers' Welfare, Ministry of Agriculture & Farmers' Welfare.** 2015. *All India Report on Agriculture Census 2010-11*. New Delhi, India. (also available at <http://agcensus.nic.in/document/ac1011/reports/air2010-11complete.pdf>).

**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 Informatics Centre.** 2019. *Agricultural census data base* [online]. New Delhi. [Cited 26 July 2019]. <http://agcensus.dacnet.nic.in/DatabaseHome.aspx>

**14. CONTACT**

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<sup>2</sup> Marginal, Small, Semi-Medium, Medium, Large.

<sup>3</sup> Scheduled Castes, Scheduled Tribes, Others.

<sup>4</sup> Individual, Joint, Institutional.

<sup>5</sup> The exceptions were: (i) "Presence of aquaculture on the holding", (ii) "Other economic production activities of the holding's enterprise", (iii) "Number of animals on the holding for each livestock type", (iv) "Presence of forests and other woodland on the holding".

# INDIA – AGRICULTURE CENSUS 2010/2011– MAIN RESULTS

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
<b>Total</b>	<b>138 348 000</b>	<b>159 592 000</b>
Civil persons	138 110 000	158 050 000
Individual holdings	118 592 000	130 854 000
Joint holdings	19 518 000	27 196 000
Juridical persons	239 000	1 542 000

LAND TENURE		
	Holdings	Area (ha)
<b>Total</b>	<b>138 348 000</b>	<b>159 592 000</b>
Owned land	135 040 000	155 918 000
Partly owned and partly leased	1 856 000	2 133 000
Wholly leased	724 000	624 000
Other form of tenure	728 000	917 000

DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES		
	Holdings	Area (ha)
<b>Total</b>	<b>138 348 000</b>	<b>159 592 000</b>
Less than 1 ha	92 826 000	35 908 000
1–2 ha	24 779 000	35 244 000
2–3 ha	9 649 000	23 164 000
3–4 ha	4 247 000	14 540 000
4–5 ha	2 431 000	10 762 000
5–7.5 ha	2 511 000	15 129 000
7.5–10 ha	933 000	7 937 000
10–20 ha	799 000	10 489 000
20 ha and above	174 000	6 418 000

LAND USE		
	Holdings	Area (ha)
<b>Total area of holdings</b>	<b>138 348 000</b>	<b>159 592 000</b>
Cultivated land	n.a.	152 793 000
Sown area	n.a.	141 279 000
Land temporarily fallow	n.a.	11 514 000
Uncultivated land	n.a.	4 742 000
Non-agricultural land including forest area	n.a.	2 056 000

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX		
	Number	Area operated (ha)
<b>Total</b>	<b>138 109 900</b>	<b>158 049 900</b>
Male	120 427 100	141 540 400
Female	17 682 800	16 509 600

HOLDERS IN THE HOUSEHOLD SECTOR, BY SEX AND AGE		
	Number	
<b>Total</b>	<b>138 109 900</b>	
Male	120 427 100	
Female	17 682 800	
18–30 years	4 826 000	
31–40 years	17 433 200	
41–50 years	46 563 800	
51–60 years	45 822 000	
61–65 years	14 552 200	
66 years and over	8 912 700	

HOLDINGS BY HOUSEHOLD SIZE	
	Number
<b>Total</b>	<b>138 109 900</b>
3 persons	37 362 700
4–6 persons	70 322 800
7–9 persons	25 251 000
10–12 persons	3 778 400
13–15 persons	875 400
16–19 persons	327 500
20 persons and over	192 000

LIVESTOCK	
	Head
Cattle	201 633 900
Buffaloes	96 725 900

IRRIGATION BY LAND USE TYPES		
	Holdings	Area irrigated (ha)
<b>Holdings with irrigated land</b>	<b>71 721 000</b>	<b>64 567 000</b>
Land under temporary crops	37 468 751	62 150 760
Land under permanent crops	34 252 249	2 416 240

SOURCES OF IRRIGATION WATER		
	Holdings	Area irrigated (ha)
<b>Holdings with irrigated land</b>	<b>71 721 000</b>	<b>64 567 000</b>
Canals	18 414 000	16 908 000
Tanks	4 180 000	2 248 000
Wells	14 101 000	11 917 000
Tubewells	31 722 000	29 165 000
Other sources	6 046 000	4 329 000

MACHINERY AND EQUIPMENT USED ON THE HOLDING	
	Holdings
Total tractors of all kinds	61 133 000
Combine harvesters	2 795 900
Other (machine-powered)	n.a.
Sprayer	13 152 200
Diesel engine pumpset	30 081 900
Electric pumpset	22 760 700
Power tiller	7 953 900
Thresher	17 110 600
Chaff cutter	5 551 400
Cane crusher	588 100
Cultivator	11 204 600
Rotavator	4 411 700
Sheller	1 465 400
Self-propelled reaper	1 262 700