

# Bangladesh - Census of Agriculture 1996

**BANGLADESH BUREAU OF STATISTICS**

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# Overview

## Identification

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BGD-BBS-AGRI-1996-v01

## Version

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VERSION DESCRIPTION

PRODUCTION DATE  
1999-07-01

## Overview

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### ABSTRACT

Bangladesh Census of Agriculture and Livestock-1996 was conducted on the basis of full count enumeration of all rural (non-Municipal) households. A short census questionnaire (Schedule-I) was canvassed for the purpose. The census enumeration was planned to be conducted in 1993. But due to various constraints the census operation could not be undertaken in time. Finally the full count Agriculture Census and Sample Survey for collecting supplementary information of some of the major items of the census were conducted between January 6 and 25, 1997 and June, 1997 respectively.

Two Censuses of Agriculture were conducted on sample basis in the territory which now constitutes Bangladesh in the years 1960 and 1977. Thereafter in 1983-84 another Census of Agriculture was conducted on full count-cum-sample basis in two phases covering half of the alternate Unions in 1983 and the other half in 1984. But the recommendations of the Technical Committee was that the current Census of Agriculture should be conducted on full count-cum-sample basis in a single year. Accordingly full count enumeration was conducted in January, 1997

with the reference period of crops constituting the calendar year of 1996. A short census questionnaire called Schedule-I containing major structural items of the agriculture sector was canvassed in all the households of rural Bangladesh.

At the end of the census operation, detailed supplementary information on land tenure, land use, fragmentation, share-cropping, irrigation and fertilizer, agricultural equipment, farm population and employment, rural transport, cottage industry, storage and rural indebtedness were collected through a sample survey in the month of June, 1997. This sample survey was conducted by means of an elaborate survey questionnaire (Schedule-II) containing detailed information of the items of the main census.

Bangladesh Bureau of Statistics officials who had worked as Zonal Officers during the census operation were employed as enumerators for the sample enumeration. Statistical Officers and Assistant Statistical Officers posted at Regional Statistics Offices acted as supervisory officers at the District and Regional level respectively.

The report has been compiled on the basis of the findings of the above Sample Survey-1997. The tables in this report provide information mainly at the national level. Only one table (Table-01) containing basic indicators of the survey results, at the district level. For general users a summary of basic indicators of the items canvassed in the Sample Survey has also been furnished for easy understanding.

KIND OF DATA  
Census/enumeration data [cen]

## Scope

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### NOTES

Field enumeration of the Agriculture Census was carried out in 101,741 Enumeration Areas (BA) throughout the rural Bangladesh between 6 and 25 January, 1997. A two stage sampling design was recommended by the Technical Committee

for selecting the farm households for conducting the Sample Survey which provided estimation at the district level. Accordingly a sample of 17,377 out of the total 101,741 EAs were selected systematically at the first stage from the Mauzawise BA list: In the second stage, a maximum of 10 farm holdings from each BA were selected at random. A farm was defined to be a holding/household having cultivated area of 0.05 acre or more. If the number of farms in an EA were 10 or less, all of them were selected for the sample enumeration. Thus a total of about 163,000 farm holdings (about 1.4% of all the farm holdings) were selected for the Sample Survey throughout the rural Bangladesh. A statement showing the coverage of the Sample Survey- 1997 is furnished herewith at the next page. The technical staff who had done the supervisory work during the census operation were employed as enumerators for the sample enumeration.

Although the plan of operation of the Agriculture Census-1996 envisaged conducting enumeration in all urban and rural households (including the institutional holdings) on a full count basis, enumeration in urban (Municipal) areas scheduled to be conducted in November, 1998 could not be held due to the devastating flood that engulfed almost two-third of the country.

Thus the physical area covered under rural (Non-Municipal) area in 1996 was substantially less than what was covered in 1983-84 under the same rural (Non-Municipal) conception. In 1983-84 there were 79 Municipalities whereas in 1996 the number of municipalities rose to 147. Besides the physical area of the Municipalities and Metropolitan areas as existed in 1983-84 was almost doubled. Although the exact reduction of physical area has not been worked out, its extent would be around 150,000 (15 lakh) acres or around 1000 sq. km.

## Producers and Sponsors

### PRIMARY INVESTIGATOR(S)

Name	Affiliation
BANGLADESH BUREAU OF STATISTICS	Statistics and Informatics Division, Ministry of Planning

### FUNDING

Name	Abbreviation	Role
Statistics and Informatics Division	SID	

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## Sampling

### Sampling Procedure

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Primary sampling unit (PSU) was defined as comprising one enumeration area which might be either a whole mauza or an EA from a large mauza where there were more than one EA. The secondary sampling unit was defined as a household operating a net cultivated area not less than 0.05 acres. Samples were selected by two stage random sampling.

Geo-code sequence of Division, District, Thana, Union and Mauza were maintained in the Agricultural Census computer tape. Mauzas with 220 or less households constituted an EA and large mauzas were divided into appropriate number of EAs.

Primary sampling units (EAs) were selected systematically from the Agricultural Census computer tape. The sampling interval was determined by the total number of households on record.

In each selected PSU, a fixed number (10 units or farm holdings) were selected on random basis. All farm holdings of small primary sampling units which had 10 or less farm holdings were enumerated.

# Questionnaires

## Overview

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## Data Collection

### Data Collection Dates

Start	End	Cycle
1996-01	1996-10	N/A

### Data Collection Mode

Other [oth]

### Data Collection Notes

The draft schedule and the tabulation plan was prepared as had been done for the 1983-84 sample survey. The plan was duly examined and approved by the concerned committee and the following classes of holdings were determined:

Small

- i) 0.05 to 0.49 acre
- ii) 0.50 to 0.99 acre
- iii) 1.00 to 1.49 acres
- iv) 1.50 to 2.49 acres

Medium

- v) 2.50 to 4.99 acres
- 5.00 to 7.49 acres

Large

- vi) 7.50 to 14.99 acre .
- 15.00 to 24.99 acre
- 25.00 acres and above

The tabulation plan was made exhaustive and efforts were made to bring out all the significant relationships which exist between various sections of agriculture. The tables were designed to make them easily understandable. The tables provided percentages and averages wherever applicable. Provision for detailed information on broad items viz, number and size of holdings, land utilization, frequency of land use, intensity of cropping, permanent crops, irrigation, chemical fertilizers, agricultural equipment, livestock and poultry, agricultural population, hired workers, pisciculture and fishing, cottage industry, rural transport and storage of crops were made. A plan for special tabulation was made on the following issues:

- 1) Details of Share Cropping (Barga) system
- 2) Land leased on other than Barga system
- 3) Application of chemical fertilizer with quantities used
- 4) Area irrigated
- 5) Subsidiary occupation
  - i) Fishing
  - ii) Fishery
  - iii) Cottage industry
  - iv) Rural transport
- 6) Storage facilities.

### Questionnaires

### Data Collectors

Name	Abbreviation	Affiliation
Statistics and Informatics Division	SID	Ministry of Planning

## Data Processing

### Data Editing

The overall policy decision of the Bangladesh Bureau of Statistics was for decentralisation of data processing activities along with other human resource development activities at the regional and field offices. It was therefore planned to accomplish the manual editing and data entry activities relating to the Sample Survey at the Regional Offices all of whom had been given a Micro Computer for data entry and related works in 1996.

Detailed instructions for manual editing were developed centrally and training was imparted to the editors at the Head Office. Editing works mainly related to:

- ensure receipt and systematic storage of all filled in questionnaires.
- ensure correctness of the PSU number and Geo-code.
- examine all the entries for clarity, accuracy and consistency.

In case of missing entries, inaccuracies or inconsistencies, editors were asked to refer it to the Supervisor who in turn corrected those relevant entries, if necessary, through revisit of the concerned sample household.

A software program using Fox-Pro was developed at the Head Office for data entry purposes. It contained all possible checks to ensure accuracy and consistency. The Regional Statistical Officer and two persons from each Regional Office were imparted exhaustive training in data entry activities at the Head Office.

After the Regional Offices had accomplished the required task, they sent the diskettes containing the data entered along with all the relevant questionnaires to the Head Office. However, some Regional Offices could not accomplish their tasks satisfactorily. Therefore, data relating to those regions were reentered from the questionnaires at the Head Office. Data of all the regions were then merged and a single data file was created. All the data were again edited to ensure completeness, accuracy and consistency.

### Other Processing

Data processing is one of the most important phases of any survey or census undertakings. Unlike the 1983-1984 Agricultural Census where the census questionnaire was designed for optical mark reading, the Census of Agriculture-1996 data was designed to be manually keyed into microcomputer. As data entry is the principle factor likely to delay data processing, a carefully system was designed so that the census questionnaires could be keyed very quickly and efficiently. As soon as the field operation was over the documents were stored systematically to ensure their easy retrieval as and when needed. Systematic storage of documents was a very important step that ensured smooth processing. An appropriate editing instruction manual was developed for the editors and copies distributed to them.

Following the written instructions, the figures in the tally sheets attached to the census schedules were checked with the internal serial of the household. Consistent with the plan of operation, data sheets from the selected EAs (PSUs) identified for the purpose of national report were kept separated and then sent for keying the information at the data entry centres of BBS. In order to ensure accuracy of data entry, the number of crops reported in a holding was copied into editing control form-IA along with other holding identification and later was compared through a computer MIS program with the actual data entered by the data entry operator.

Consistent with the plan of operation, Census questionnaires of the selected EAs (PSUs) identified for the purpose of national report were kept separated and then sent for keying the information at the different data entry centres. Data entry work was carried out using microcomputers while exhaustive computer programmes for edit and tabulations were developed for using both on the main frame (IBM-9300) as well as the microcomputers.

The data entry software was developed using the programming language called Realia COBOL which runs both on personal and the main frame computers of BBS. Some basic checks were built in the software to ensure accuracy during data entry. In case of livestock, poultry, agricultural implements and rural transports, certain checks were provided to ensure accuracy of data beyond certain limit.

As mentioned earlier, data of sample enumeration areas of a district selected for preparing national report Were entered in the first phase. The data of the remaining enumeration areas of the district were entered separately in the second phase. The data of both these phases were then merged together into a single file containing 100% data for a district. This report is based on the merged file.

A computer edit program with exhaustive edit checks was developed to edit the entered data. Although some basic checks were provided in the data entry program, the edit program ensures that all those checks were satisfied in all the data fields of a household. In case of any error, the relevant data element(s) was imputed following a series of steps for such imputation. At the end of the edit, a series of edit Statistics was produced and printed. This provided the basic information such as number of holdings, farm holdings, different areas and above all the number of imputations made in every data field. These were critically examined by the subject matter personnel. At this stage, certain corrections were made whenever required to ensure completeness, consistency and accuracy of data.





## Data Appraisal

No content available