

**PRELIMINARY REPORT
ON
AGRICULTURE SAMPLE SURVEY 2005**



OCTOBER 2005

BANGLADESH BUREAU OF STATISTICS
PLANNING DIVISION
MINISTRY OF PLANNING
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
DHAKA

COMPLIMENTARY

FOREWORD

Bangladesh is an agricultural country and over 60% of its population are directly or indirectly involved in agricultural activities. At present about 22% of GDP of the country comes from agriculture sector. So the need for comprehensive, accurate and up-to-date data for further agricultural development plan is of utmost importance. With this end in view, Bangladesh Bureau of Statistics (BBS) conducted Agriculture Sample Survey 2005 during 17-31 May 2005. This sample survey covered 10% of total mauzas and mahallas of the country. The survey provided certain important basic information relating to the structure and operational pattern of agricultural lands and their utilization.

In spite of budgetary constraints, I am very happy to note that BBS did a tremendous job in completing the survey as per schedule, overcoming all problems and other deficiencies in operational procedures. Dedicated efforts were put towards better management and collection of quality information in the survey.

I appreciate the dedicated services of all involved in the survey operation. Special thanks to the Secretary, Planning Division Mr. Akhtar Husain Khan, Director General, BBS, Mr. A.K.M Musa and the Programme Director Mr A.M. Saidur Rahman for their efforts in making available this report in a remarkably short span of time. I also appreciate the untiring efforts and relentless endeavour of officers and staff of BBS for successful implementation of the programme. I also commend the advice given by various experts from other organisations in carrying out the survey and analysing the data.

I hope and believe that the preliminary results of the agriculture sample survey will provide the much needed information to the planners, policy makers and other users involved in agricultural development activities of the country.

The 13 October 2005

(M.Saifur Rahman)

Minister

Ministry of Finance and Planning
Government of the People's Republic of Bangladesh

PREFACE

Holding agriculture census at an interval of ten years has become an established national and international practice aimed at collection of data on the structural changes of agriculture and also to meet diversified need of information in this field. The first agriculture census in Bangladesh territory was undertaken on sample basis in 1960. Subsequently, agriculture censuses were conducted in 1977, 1983/84 and in 1996/97. These were done in line with the programme of 1980 series of the World Census of Agriculture, sponsored by the Food and Agricultural Organization (FAO) of the United Nations. Out of these three censuses, only the second one conducted in 1983/84 was the full count census. The rest were all on sample basis.

The agriculture sample survey 2005 was conducted during the period 17-31 May 2005 using a short questionnaire canvassed to every household in 13,539 selected enumeration areas (EA) spread all over the country. Information on taking loans and their utilization, crop diversification during last five years, household population by sex, aged below and above 10 years, migration of agricultural population to other districts, etc. were included as new items in this survey.

Needless to mention that this report contains basic information on a wide variety of items of our agriculture sector. We hope to publish the final report containing detailed information shortly. Before that the data contained in the preliminary report will be fairly useful for the promotion of agricultural production and for planning in this sector.

It is appreciated that in this survey active community participation and co-operation were ensured through Zila and Upazila survey committees involving local administration. Local educated unemployed youths were selected and imparted intensive training for the collection of data in the field. They were temporarily employed in this survey.

I am very happy to see this preliminary report published in a remarkably short time. I would like to thank the Director General, BBS Mr. A.K.M Musa and the Programme Director Mr. A.M. Saidur Rahman and all officers and staff of BBS who have worked hard in conducting the survey and in bringing out this report.

(Akhtar Husain Khan)
Secretary
Planning Division
Ministry of Planning

ACKNOWLEDGEMENT

Bangladesh Bureau of Statistics conducted a National Sample Survey on Agriculture in May, 2005 to meet the data needs of users in the interim period between censuses. The survey covered information pertaining to land ownership status, ownership of agriculture equipments, persons engaged in agriculture occupation, land use pattern and yield of crops by crop variety, etc.

I am very happy to mention that the preliminary report of the agriculture sample survey has seen the light of the day in a very short time. All officers and staff members of BBS were involved for smooth and efficient administration of the activities of the programme. Quality data collection was ensured through strict supervision and intensive vigilance at the field level during the data collection phase.

I would like to mention with gratitude that the Survey Committee proposed by the Ministry of Planning and approved by the Hon'ble Speaker of the Parliament encouraged the local MPs to participate in the programme. Cabinet Division's initiative ensured active support from the Zila and Upazila level administration. Intensive publicity programme at grass-root level helped create enthusiasm among the public for their hearty cooperation and participation. Computerized field control system, map based enumeration area demarcation, widespread use of small area maps for control and supervision, were the special features of the survey programme. These contributed to better management and ensured collection of quality data within the quickest possible time.

I am grateful to the Secretary, Planning Division for his valuable guidance and generous support to successfully complete the data collection on schedule and for bringing out the preliminary report on time.

My sincere thanks to all for whose sincere co-operation and active participation the successful completion of the programme become possible. Specially, I thank the Programme Director Mr. A.M. Saidur Rahman for the tremendous job he performed through dedication and hard work in conducting the survey smoothly and efficiently and for compilation of the report in the shortest possible time amidst various limitations. This extra-ordinary work will be instance for emulation by others in BBS in future. May I take this opportunity to thank the various experts from government organisations and academic who have unstintingly helped the BBS to carry out this huge task.

I would also like to thank all the BBS personnel who worked hard day and night in conducting the survey and compilation of this preliminary report which I hope will help the planners, policy makers and the users to a great extent.

(A.K.M. Musa)
Director General
Bangladesh Bureau of Statistics

A Few Words

Bangladesh is an agrarian country. Its economy still depends on agricultural production and for creation of job opportunity for rural masses. The first agriculture census in Bangladesh territory was undertaken on sample basis in 1960 under the legal provision of the Agriculture Census act XLI of 1958 (as amended in 1983). Under the provision of the same Act Bangladesh conducted its first census in April-May 1977 on sample basis. The first full count census was however, conducted in Bangladesh in 1983/84 in conformity with the 1980 series of the world census of agriculture sponsored by the Food and Agriculture Organization (FAO) of the United Nations. The third nationwide agriculture census was undertaken in 1996/1997 following 1990 series of World Census of agriculture.

The agriculture sample survey 2005 was undertaken using a short questionnaire canvassed in every household within the selected enumeration areas (EAs) spread all over the country during the period 17-31 May 2005. The information collected through a short questionnaire related to household head by sex, household members by sex, members aged less than equal to and above 10 years, employment in agriculture, agricultural labour, land ownership, tenancy, land use, land under temporary and permanent crops, cultivated land, farms run commercial basis on livestock and poultry, loans taken and their uses, agriculture equipment and ownership, rural transports, cropping pattern and intensity, crop diversification etc. during the last five years.

For the purpose of agriculture sample survey each upazila/thana was divided into two or more zones. On an average, each zone comprised 12 EAs totaling 1,193 zones in the whole country. A zonal officer, a permanent employee of BBS, was deputed in each zone and was empowered to control and supervise the zonal activities under direct supervision of Upazila Census Coordinators (UCC). About 13,539 enumerators, who participated in data collection process at the field level, were selected from amongst the local educated unemployed youths. This report contains the basic data on total number of holdings and their classification as agricultural holdings, tenant holdings, landless holdings, agricultural labour holdings, holdings possessing and using agricultural equipments and the holdings having loans, etc.

With a view to collecting data with high precision in the sample survey, the officers and staff members of BBS were engaged as coordinators. The Director General, Deputy Director General, and the Programme Directors worked as National coordinators. Under their supervision and guidance 8 Directors/Joint Directors performed their duties as Divisional coordinators. Twenty five (25) Deputy Directors worked as the Regional coordinators under the supervision and guidance of the Divisional coordinators. These Regional coordinators were assisted by 66 Zila coordinators who worked at the Zila level. The Zila coordinators were the Regional Statistical Officers or the Statistical Officers of BBS. At the Upazila level 506 Upazila coordinators supervised the activities of zonal officers. The zonal officers were responsible for the recruitment, training and supervision of the activities of field level enumerators for data collection.

This preliminary report was compiled using the information collected through the Tally Sheet filled in for each E.A. and the Summary Sheet (Form 16) which provided only the key information about each household of the E.A. The quality and consistency of data were ensured through strict supervision and careful editing at the field and desk level. The consistency check with the help of computer ensured the quality of data.

I am grateful to the Secretary, Planning Division and the Director General, BBS for their valuable guidance and support to complete the survey operation successfully and for bringing out this preliminary report at the shortest possible time by overcoming all related constraints.

I would like to offer my heartiest thanks to all of them for their co-operation and active participation without which the successful completion of this report would not be possible. I am also thankful to the members of the technical committee, expert committee of sample design and sub-committee of questionnaire design including the BBS personnel who worked hard in the field in conducting the survey and at head quarter to do the job.

(A M Saidur Rahman)
Programme Director
Agriculture Sample Survey Programme.
Bangladesh Bureau of Statistics

CONTENTS

FINDINGS AT A GLANCE

i

PART-I: TECHNICAL NOTES ON AGRICULTURE CENSUS AND SURVEYS IN BANGLADESH

1.1	Scope and coverage of agriculture census	1
1.2	Legal basis of agriculture census	1
1.3	Agriculture censuses and surveys in Bangladesh	2
1.4	Comparison of agriculture censuses and surveys of Bangladesh 1960-2005	3-4

PART-II: METHODOLOGY

2.1	Sample design	5
2.2	Estimation procedure	5
2.3	Pre-testing of survey questionnaire	6
2.4	Field organisation of the agriculture sample survey	6
2.5	Zonal operations	7
2.6	Technical committee	7
2.7	Formation of survey committees	7
2.8	Publicity programme	8
2.9	Organization of training	8
2.10	Reference year and dates	9
2.11	Items of information collected	10
2.12	Data processing	10
2.13	Data dissemination plan	11

PART-III: SURVEY RESULTS

3.0	Introduction	13
3.1	Results	13-18
3.1.1	Holdings and farm holdings	13
3.1.2	Holdings owning no land (landless)	15
3.1.3	Some basic information at national and rural level	16
3.1.4	Percentage distribution of holdings and farm holdings by division	16
3.1.5	Holdings taken and used loan	17
3.1.6	Own and operated land	17
3.1.7	Holdings owning agriculture equipments and transports	17
3.1.8	Holdings discontinued and cultivated new crops	18

FINDINGS AT A GLANCE

Number in '000'

Items	Agri. Sample Survey 2005 Bangladesh			Agri. Census- 1996 Bangladesh
	Total	Urban	Rural	Rural
1. Number of holdings				
Total number of holdings	28191.6	3628.7	24562.9	17828.2
Total number of farm holdings	14941.5	405.1	14536.4	11798.2
Total number of non-farm holding	13250.1	3223.6	10026.5	6030.0
Percent of farm holdings to total holdings	53.00	11.16	59.18	66.18
Percent of non-farm holdings to total holdings	47.00	88.84	40.82	33.82
Percent of holdings owning no land (absolute landless) to total holdings	14.03	36.86	10.65	10.18
2. Operated area (acre)				
Operated area of total holdings	24172.6	747.5	23425.1	20484.6
Average operated area per holding	0.86	0.21	0.95	1.15
3. Owned area (acre)				
Owned area of total holdings	23547.4	1552.9	21994.5	20333.3
Average owned area per holdings	0.84	0.43	0.90	1.14
4. Cultivated area (acre)				
Cultivated area	18624.4	359.6	18264.8	17771.3
Average cultivated area per farm holding	1.25	0.89	1.26	1.50
Net temporary cropped area	16968.2	286.0	16682.1	16450.5
Average net temporary cropped area per farm holding	1.14	0.71	1.15	1.39
5. Agriculture labour				
Number of agriculture labour holding	7095.0	61.0	7034.0	6401.4
Percent of all holdings	25.17	1.68	28.64	35.91

Note: In 1996 Agriculture Census, only rural areas were covered. In 2005 all municipalities except city corporation and municipalities at Zila Head Quarters are included in rural areas. Therefore the data of 1996 census and rural areas of 2005 may not be comparable .

PART-I: TECHNICAL NOTES ON AGRICULTURE CENSUS AND SURVEYS IN BANGLADESH

1.1 Scope and Coverage of Agriculture Census

The Agriculture Census operation at a regular interval of five or ten years has now been established as a practice world wide, since the first World Census of Agriculture mounted in the year 1930 by the International Institute of Agriculture. In order to meet the growing national and international demands for data on structural changes in agriculture, censuses have become important for providing data on the structure of agriculture within the country in an internationally comparable form. It includes various

characteristics of agricultural holdings and their operation, distribution of agricultural assets among different classes of farmers, auxiliary occupation of farmers, farm production, livestock, poultry, forest, and fishery, etc. Emphasis is also given on other economic activities of the farm households.

1.2 Legal Basis of Agriculture Census

The Agriculture Census operation in Bangladesh have been carried out under the Agricultural Census Act XLI of 1958 (as amended in 1983). The Act, inter alia, authorises the Government to appoint Director General of Bangladesh Bureau of Statistics (BBS) as the Census Commissioner and other required staff for conducting the census. The Act makes it binding on the respondents to answer questions put to them by authorized census enumerators. At the same time it ensures strict confidentiality of the information collected from individual holders. The Act authorises the collection of information of some broad items in the agriculture sector as specified below.

Land ownership and land tenure;	Agricultural equipment and machinery;
Land unit and sub-division of land;	Irrigation and drainage;
Land utilization;	Fertilizers and soil dressing;
Crop acreage and production;	Wood and fishery products;
Livestock and poultry;	Agricultural credit;
Employment in agriculture;	Agriculture and Sericulture;
Agricultural population;	Fruits and vegetables products;

and such other matters which the Government may deem fit to include as census items for collection of information in Agriculture Census. The Census Act is placed at Appendix-A.

1.3 Agriculture Censuses in Bangladesh

The first agriculture census was held in the territory now comprising Bangladesh in 1960 covering 10% cadastral mauzas. The 1st Agriculture Census of Bangladesh was undertaken in 1977 in the rural mauzas. The first 100% census of agriculture and livestock which is second in order, was undertaken in 1983/84. The 3rd full count agricultural census of Bangladesh was undertaken in 1996/97. To meet the immediate data needs of the three years rolling plan of the Government, agriculture sample survey 2005 was undertaken during May 17-31, 2005. However, to continue the decennial periodicity of the agriculture census it is decided to conduct the 4th Agricultural Census of Bangladesh in 2007.

A statement of the major activities of the past censuses of agriculture in Bangladesh is shown at page 3 & 4.

1.4 Comparison of Agriculture Censuses & Surveys of Bangladesh 1960 to 2005

Activity	1960	1977	1983/84	1996/97	2005
Enumeration Dates	15 th February to 21 st March, 1960	24 th April to 31 st May, 1977	April, May & June of 1983 and 1984	25 th December, 1996 to 25 th January 1997	17 th May to 31 st May 2005
Census Methodology	10% sample of rural mauzas using a book type questionnaire for each farm household.	14% sample of rural mauzas using a listing form and a census questionnaire .	Complete count in both rural and urban areas using short questionnaire and long questionnaire	Complete count in rural areas only using both short and long questionnaire.	10% sample EAs in both rural & urban areas using short questionnaires. Long questionnaire will be canvassed in October-November 2005.
Field Personnel	1881 Assistant Tehsildars worked as enumerators who were supervised by 485 officers at different levels.	4300 primary school teachers and 2000 Asstt. Tehsildars worked as enumerators	66,493 worked as enumerators	25 RCCs, 92 DCCs, 466 TCCs, 1,967 Zonal officers and 98,353 worked as enumerators	312 Cordinators at various levels, 1193 Zonal officers and 13,539 worked as enumerators
Training of field staff	Enumerators were given intensive training including class room lectures and practical training in field.	Training was given in two phases- 1 st phase for Master trainers in Dhaka for three days and 2 nd	Two tiers training at Dhaka for Master trainers and for Zonal officers who were trained Division-wise.	Three tiers of training: i) Dhaka for RCCs & DCCs ii) District HQ for UCCs & Zonal officers	Three tiers of training: i) Dhaka for RCCs & DCCs ii) Zila for UCCs & Zonal officers iii) Zonal Centre (Upazila) for

phase for enumerators and supervisors in 83 centres for 7 days.	Zonal officer then trained enumerators and supervisors at Union levels in 1125 center for two days.	iii) Zonal centres for supervisor s and enumerato rs for two days at Zone level.	supervisors and enumerators for two days at Zone level
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PART-II: METHODOLOGY

2.1 Sample design

2.1.1 Sampling plan

The sample design used for conducting the Agriculture Sample Survey 2005 is a stratified cluster sampling. A technical sub-committee was formed for the development of the sampling design. The sub-committee developed a stratified cluster design with Mohalla/ Mauza as cluster of households. For this survey, each agricultural household is the ultimate sampling unit (element) from which agricultural data were collected.

2.1.2 Stratification

Primarily, a two way stratification was done. The first stratification was done by locality dividing the whole country into 3 strata:

- (i) Metropolitan area consisting of municipalities of 6 Metropolitan cities,
- (ii) Urban area consisting of municipalities of other Zila towns,
- (iii) Rural area consisting of remaining areas of the country.

The secondary stratification was done within the selected locality.

A fixed number of clusters (10% mauza/mahalla) were selected in each zila/city and the selected agricultural households were interviewed in each selected cluster. This means that about 10% Mohallas were selected in samples for first 2 strata and about 10% Mauzas were selected in the third stratum. The selected sample Mauzas were divided into 2 size classes, namely (1) Mauzas with up to 500 households and (2) Mauzas with more than 500 households. EAs were delineated with about 200 households from the selected mauzas and 300 households from the selected Mohallas. All EAs comprising of 200 or less households from mauzas of size class-1 were selected and $\frac{1}{3}$ rd EAs of mauzas of size class-2 were selected at random. A total of 13,539 EAs were thus selected for enumeration.

2.1.3 Selection of cluster (Mauza)

Mauzas of rural area vary in size. These were systematically selected with a random start in a zila with probability proportional to estimated size (PPES). In actual practice, one random start and one interval was considered for each stratum and the same interval was applied to all zilas/cities one after another.

2.2 Estimation procedure

Weighting factors were calculated separately for each stratum of urban and rural areas within each zila. This was done by dividing the number of households enumerated in the survey by the expected number of households based on the 2001 population census. These weighting factors were applied for each stratum in the zila for any variable and added up to obtain the estimated value of the variable for the Zila. The zila estimates of any variable were summed up to obtain estimates of division and similarly the division estimates were added up to get the estimate of the variable at the national level.

2.3 Pre-testing of survey questionnaire

The Census Schedule -1 used in the 1996 agriculture census to collect information from farm households was taken as the basis for developing the 2005 sample survey enumeration schedule. There were 19 items of information in the 1996 agriculture census Form-1. A few more items like land use under current fallow, bamboo bushes and ponds, loan taken, new crops cultivated during last 5 years, cultivation of crops discontinued during last 5 years, members of households below 10 years and above 10 years were included on the draft enumeration form for the sample survey 2005. Some items like irrigated net land, net land under chemical fertilizer used and establishment of cottage industry were dropped from the draft census questionnaire of the 2005 sample survey. Considering new cropping pattern in the country, some new widely cultivated temporary crops like banana, tomato, sweet gourd, gourd, tamarind etc. were included in the draft enumeration questionnaire. This draft enumeration questionnaire as prepared with the above mentioned revision, was pre-tested in the field in a few spots with respect to their feasibility of inclusion in the survey. The results of the pre-test were reviewed and another version of the sample enumeration form was prepared and was placed before the Technical Sub-Committee for adoption in the sample survey. The Technical Sub-Committee considered the results and recommendation of the pre-test in a number of meetings and finally approved the sample survey enumeration schedule-1 which contained 24 items of information as shown in Appendix- C

2.4 Field organization of the agriculture survey

With a view to collecting data of high quality in the sample survey all the technical officers and staff member of BBS were engaged either as zonal officer or co-ordinator. The structure of the functional organization was as follows:

Functional Designation	Official Designation	Number
(1) National Survey Co-ordinator	DG, DDG and PD	3 persons
(2) Divisional Survey Co-Ordinator	Directors/Joint Director	8 persons
(3) Regional Survey Co-ordinator	Deputy Directors	25 persons
(4) Zila Survey Co-ordinator	RSO/SO/ASO	66 persons
(5) Upazila Survey Co-ordinator	USO/TS/SI	480 persons
(6) Zonal Officers	SI/SA/JSA/KPO	1193 persons

The officers were involved at each level for training, supervision and control of the whole survey operation. Twenty five Deputy Directors of BBS worked as Regional survey Co-ordinators who were supervised and controlled by eight Divisional Co-ordinators. The Regional Co-ordinators were assisted by sixty six Zila Co-ordinators at the Zila level. Upazila level staff worked as Upazila Co-ordinators who were controlled and supervised by Zila Co-ordinators. The zonal officers who were deputed from the technical staff of BBS worked under direct supervision of Upazila Co-ordinators at the Upazila level. The zonal officers were responsible for recruitment and training of enumerators and supervisors who were recruited temporarily from the local unemployed educated youths.

* These information will however be collected in the subsequent in-depth survey.

2.5 Zonal operations

Two zonal operations were undertaken primarily with the zonal officers and coordinators of the Agriculture Sample Survey Programme. The first zonal operation was conducted during 21-31 December 2004 and the second zonal operation was organized during the period 28 March–10 April 2005. The activities done in the zonal operations included the following

- (i) Forming and demarcating enumeration areas (EAs) and showing location of the EAs in the sketch maps,
- (ii) Preparing a list of enumerators and supervisors from local unemployed and educated youths,
- (iii) Preparing a list of training centres for training of enumerators and supervisors,
- (iv) Formation of survey committees and contacting local administrative authorities,
- (v) Preparing a list of survey control rooms
- (vi) Preparing a list of Sonali Bank branches for disbursing remuneration through cheques.

The zonal operations and their dates of operation are shown below:

Zonal operation	Date and duration of operations
1 st zonal operation	21-31 December, 2004
2 nd zonal operation	28 March-10 April, 2005
Final enumeration	17 –31 May, 2005

2.6 Technical Committee

A 22 members technical committee headed by the Director General Bangladesh Bureau of Statistics was formed. Among others representative of DG, IMED, DG Directorate forestry, DG Directorate of agriculture extension, DG Directorate of fisheries, DG Directorate of livestock, DG BIDS, ISRT, Dhaka University, Agriculture University, Joint Chief, Planning Commission and Deputy Secretary, Planning Division were included as members of this committee. All the technical activities relating to the conduct of agriculture sample survey 2005 including design of questionnaire pre-testing, sample design and survey operation were undertaken with the guidance and approval of this committee.

2.7 Formation of survey committees

For successful implementation of enumeration Zila and Upazila Survey Committees were formed with member of parliament concerned as adviser vide notification No.PB/PM/4(494/94 (part-1)-401 dated 17 March 2005 issued by the Ministry of Planning with the approval of Hon'ble Speaker of the parliament. This notification was endorsed and circulated by the Cabinet Division to the members of parliament and to the field administration for carrying out the following assigned duties and responsibilities during the period of survey operation:

- Supervision and extension of co-operation with necessary directions in controlling survey activities and their implementation properly;
- To provide necessary direction by the Chairperson (Deputy Commissioner for the Zila Survey Committee and Upazila Nirbali Officer for the Upazila Survey Committee) in formulating survey committees and organizing orientation meeting, arrange publicity among the members of the public seeking co-operation and participation in implementation of the survey enumeration;
- To co-operate for temporary employment of local unemployed educated enumerators and supervisors;
- Active participation of the Government officers and staff in operation of the survey;
- To take administrative actions in establishment of survey control rooms at Zila and Upazila levels;

The committees were abolished automatically just after completion of the sample survey.

With the assigned duties and responsibilities of the committees formed at Zila and Upazila level including all the public representatives and local level heads of Government offices made the survey operation easy and well controlled which helped ensure the quality of collected data to a greater extent.

2.8 Publicity programme

A well planned publicity campaign of the sample survey operation was launched with a view to generating public awareness. Posters and stickers were displayed and distributed at the Upazila and enumeration area levels. The Zila and Upazila Committees were involved in the publicity campaign. Basic aim of census publicity was to make people aware of:

- (i) Sample survey programme,
- (ii) Need for providing correct information to enumerators
- (iii) Need for co-operation of mass people in survey work
- (iv) Keep confidentiality of the survey information and
- (v) Providing total co-operation and assistance to enumerators and other survey officials.

Big size poster carrying messages relating to the agricultural activities were distributed and pasted at public places. Stickers were also pasted at appropriate places. Mike announcements, drum beatings, etc. were undertaken at hats, bazars and public places.

2.9 Organization of training

An elaborate training programme for imparting uniform and effective training to personnel of all levels on Agriculture Sample Survey was chalked out. A verbatim training manual was developed for this purpose. A field manual detailing every pros and cons of the field operations, collecting information, survey calendar, specifying duties and responsibilities of officers of all levels, supervisors and enumerators including the responsibilities of the survey committees were developed. The training programme of the survey was divided into three phases:

Phasewise Training on Sample Survey

1st zonal operation

1st phase: Training of the Master Trainers at Dhaka Office
(Divisional, Regional and Zila Co-ordinators)

2nd phase: Upazila Co-ordinators/zonal officers at
Regional Statistical Offices/ Zila HQs

2nd zonal operation

1st phase: TOT for the Master Trainers at Dhaka office
(Divisional, Regional and Zila Co-ordinators)

2nd phase: Upazila Co-ordinators/ Zonal Officers at
Regional Statistical Offices/Zila HQs

Final Enumeration

1st phase: Master Trainers at Dhaka office
(Divisional, Regional and Zila Co-ordinators)

2nd phase: Upazila Co-ordinators/ zonal officers at
Regional Statistical Offices/ Zila HQs

3rd phase: Supervisors and Enumerators at Upazila HQs

Three days and two days training were imparted in 1st zonal operation and in 2nd zonal operation/final enumeration respectively at each level. In conducting the training in final enumeration verbatim manual of instructions were utilized in the classroom on the first day. On the second day of the training, the

participants themselves conducted field demonstration practically. Survey kits containing survey materials including instruction manual of schedule-1 were distributed to enumerators and supervisors at the closing of the training programme. The instruction manual distributed at the field level enumeration areas played an effective role in collection of quality data.

2.10 Reference year and dates

The data collected in the survey referring the period from 14 April, 2004 to 13 April, 2005 corresponding to the **Bangla Year 1411** from 1st Baishakh to 30th Chaitra. For the items of information on holder, size of land holding, land tenure, operated land and farm population the reference time was the day of enumeration. For some major items of information reference period is shown below:

Survey Year	14 th April, 2004 to 13 th April 2005 i.e. 1 st Baishak to 30 th Chaitra 1411 BS
<u>Information on :</u>	<u>Reference Time :</u>
Holdings	The day of enumeration
Size of farm	The day of enumeration
Land tenure	The day of enumeration
Farm population	The day of enumeration
Livestock, poultry and other inventory items	The day of enumeration
Operated land	Survey year
Employment in agriculture	Survey year

2.11 Items of information collected

The schedule-1 (short questionnaire), which was canvassed and used for collecting data on agriculture in the 10% sample enumeration, contained the following information:

- Land ownership
- Land use
- Area under permanent crops
- Area under temporary crops
- Area under bamboo bushes
- Area under ponds
- Homestead land
- Current fallow land
- Cultivated land
- Commercial farms
- Loan taken and use of loan
- Livestock and poultry
- Use of agricultural equipments
- Employment in agriculture
- Farm transports
- Farm population, etc.

The items of information included in the short questionnaire were finalized by the Technical Committee formed for the purpose after considering the issues in a number of meetings.

Another long questionnaire (Schedule-2) will be used to collect detailed information shortly from the selected households through sub-sampling from the enumerated households of the sample survey.

2.12 Data processing

The zonal officer at his respective zone of the Upazila received all filled-in questionnaires just after completion of the enumeration as per schedule. Steps were taken to train zonal officers and supervisors for manual editing and checking of the filled in schedules in the field. Training was imparted to the Zonal Officers and Upazila Co-ordinators for ensuring consistencies of the critical items of information. To eliminate errors made by both respondents and interviewers in the field, a good number of unemployed and educated youths (enumerators and supervisors) edited all the items of the schedule carefully to ensure consistencies. A ten day editing programme was allowed for editing Schedule-1 (**Appendix- C**) and Form-16 (**Appendix- E**) at Upazila level. In some identified cases imputation of missing data in Schedule-1 (short questionnaire) as well as in Form-16 (summary information of every household) was

made by them through spot verification. From this edited data at the field level in Form-16 were quickly taken into computers through specially developed computer programme in Dhaka. Data entry operators worked in successive two shifts in a day and the processing of data in Form-16 was completed in time. The compilation of data processing became possible in a shortest possible time mainly due to introduction of editing system at Upazila level. This was the first venture of its kind in Bangladesh Bureau of Statistics.

2.13 Data dissemination plan

A wide variety of agricultural data were collected through Schedule-1 of the agriculture sample survey 2005 covering a bigger sample of 10% farm households. The results would thus be possible to be estimated up to Upazila level. All the information collected in Schedule-1 would be tabulated at Upazila level and the data be disseminated in one National Volume containing data by Zila and 64 Zila Reports, each containing data by Upazilas of the Zila would be prepared.

As Schedule-2 of the survey will be canvassed to a smaller sample of farm households, the data can be estimated at Zila level and upward and so another National Volume containing detail information will be published containing the zila level results of the survey.

PART-III: SURVEY RESULTS

3.0 Introduction

Key information on agriculture and livestock as collected in the agriculture sample survey 2005 has been processed for preparation of this Preliminary Report. The detailed information on households, farm holdings, land tenure, farm population by sex, agriculture labour households, labour migration, livestock and poultry, rural transports, agriculture equipments, loan, crop diversification, and land use under temporary and permanent crops are now under processing. The detailed results will be published in the National and Zila Reports within the next one year.

For quick processing a tally sheet was filled-in at the end of data collection by each enumerator to summarize the key information of each EA. Another transcription sheet (Form 16) was used to copy the key information of each household. Data from these two forms have been processed in the computer and on these basis the preliminary report has been prepared. Generally, the estimates of key variables have been made at the national level by multiplying the sample observation by the inverse of the sampling fraction. In most cases ratio estimates has been prepared and presented in this report. Ten tables have been compiled from the sample data and appended for reference.

3.1 Results

3.1.1 Holdings and Farm Holdings

The number of holdings in the 1996 agriculture census was 17.83 million in rural areas which has now increased to 24.56 million in 2005 giving an average annual increase of about 4% (T01). The farm holding was 11.80 million in 1996 and increased to 14.55 million in 2005 (chart at page 14).

T01. Comparison of holdings and farm holdings, 1996 and 2005

Type	Bangladesh (Rural)- Figures in '000'		Growth Rate (%)	
	Agriculture Census 1996	Agriculture Sample Census 2005	1996-2005 (9 years)	Annual
All holdings	17,828.2	24,562.9	37.78	4.20

Farm holdings	11,798.2	14,536.4	23.21	2.58
Non- Farm holdings	6,030.0	10,026.5	66.28	7.36

* The rate of increase is higher as the agriculture sample survey 2005 rural area includes some 80 urban areas at upazila level which were treated as urban in agriculture census 1996.

Comparison of holdings in 1996 and 2005

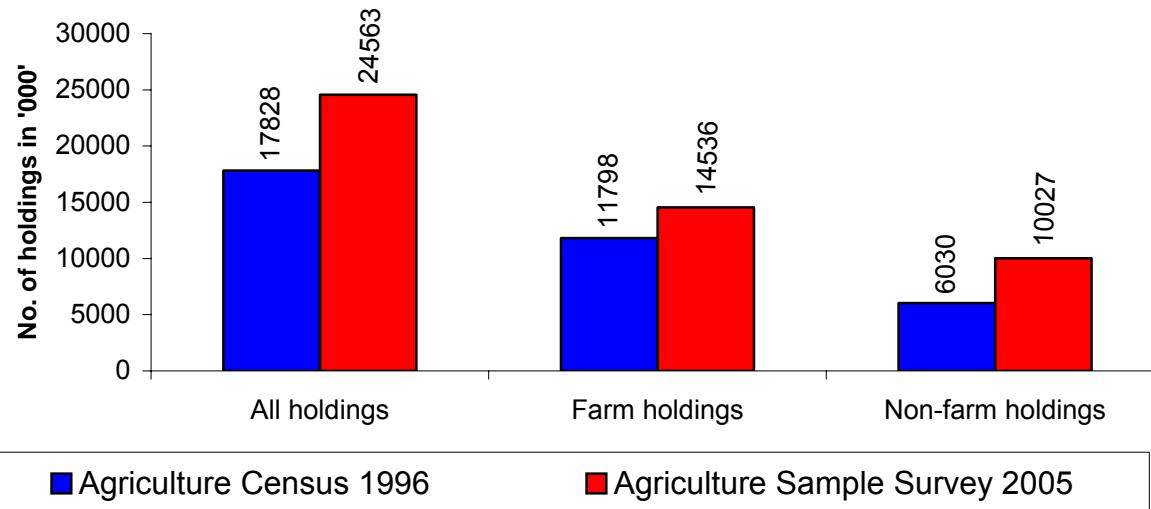


Table T02. Reveals that the percentage distribution of holdings in rural area of 1996, 2005. The number of non-farm holdings in rural areas has increased considerably in the 2005 sample survey to 40.82% from 33.82% in the 1996 agriculture census. Thus, the percentage of farm holdings in 2005 has decreased to about 59.18% from 66.18% in 1996 in rural areas of Bangladesh. The percentage of agriculture labour holdings according to the 2005 sample survey and agriculture census 1996 were about 28.64% and 35.91% respectively in the rural areas.

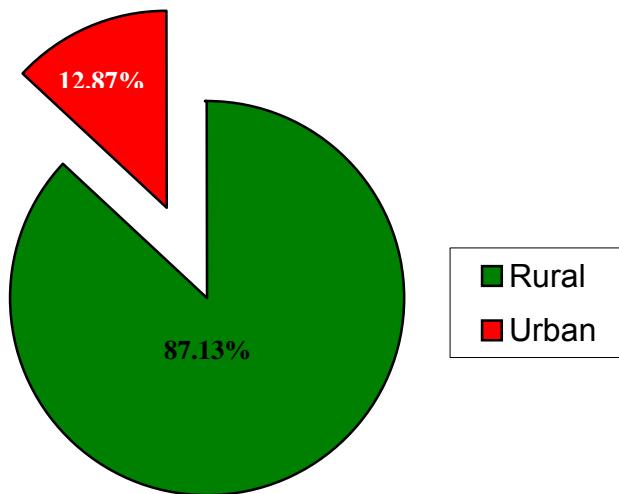
The percentages of holdings, comparison between agriculture census 1996 and agriculture sample survey 2005 are shown in the Table T02.

T02. Percentage distribution of holdings in rural area of 1996 and 2005

Holding Type	1996	2005
Non-Farm-holdings	33.82%	40.82%
Farm holdings	66.18%	59.18%
Agriculture Labour holding	35.91%	28.64%

Findings at a glance show that the estimated **number of holdings** in Bangladesh is 28.19 million out of which 24.56 million are rural and 3.63 million are urban i.e. 87.13% of the households in Bangladesh are of rural characteristics and the remaining 12.87% are of urban characteristics according to 2005 agriculture sample survey, as all municipalities except City Corporation and Zila municipalities are treated as rural. (pie chart at page 15).

Percent of holdings by Urban and Rural



In 2005 out of the total holdings 14.94 million are farm holdings and the remaining 13.25 million are non-farm holdings. In percentage term 53.00% of the holdings are farm holdings and the remaining 47.0% are non-farm holdings.

Absolute number of holdings, Farm and Non-farm holdings from agriculture sample survey 2005 and the agriculture census 1996 are compared in the Table T02.

3.1.2 Holdings owning no land (landless)

The results in table T03 indicate that the holdings owning no land or has increased by about 5 percent annualy in rural areas of the country over last 9 years. But in terms of percent of total holdings, the proportion of households owning no land has increased to 10.7% in 2005 compared to 10.2% in 1996.

T03. Holdings owning no land (landless) by Urban, Rural

Items	Agriculture census-1996		Agriculture sample survey 2005		
	Rural	Total	Rural	Urban	Total
Holdings owning no land	1,814,571		2,617,076	1,337,544	3,954,620
Percent of all holdings	10.18		10.65	36.86	14.03

3.1.3 Some basic information at National and Rural levels

Information on some of the basic items that are available only from the 2005 sample survey and compiled from the tally sheets at rural and national level are presented in table T04. The number of commercial farm holdings that include poultry farms, diary farms, fishery and hatchery farms, nursery and horticulture, etc. were reported to be around 3 lakh. Breakdown of this number by each category of farms can be obtained subsequently when the detailed information are processed and compiled.

T04. Basic information of agriculture sample survey 2005

Basic Items	Bangladesh Rural	Bangladesh Total
Number of commercial farm holdings	320345	337657
Percent of all holdings	1.30	1.20
Loan taken and used	7284070	7833774
Percent of all holdings	29.65	27.79
Ownership of agriculture equipments	8690868	8881987
Percent of farm holdings	59.79	59.45
Ownership of transports	7535922	8133687
Percent of all holdings	30.68	28.85
Farm households cultivating new crops during last 5 years	559861	573056
Percent of all farm holdings	3.85	3.84
Farm household discontinued crops during last 5 years	556159	564778
Percent of all farm holdings	3.83	3.78

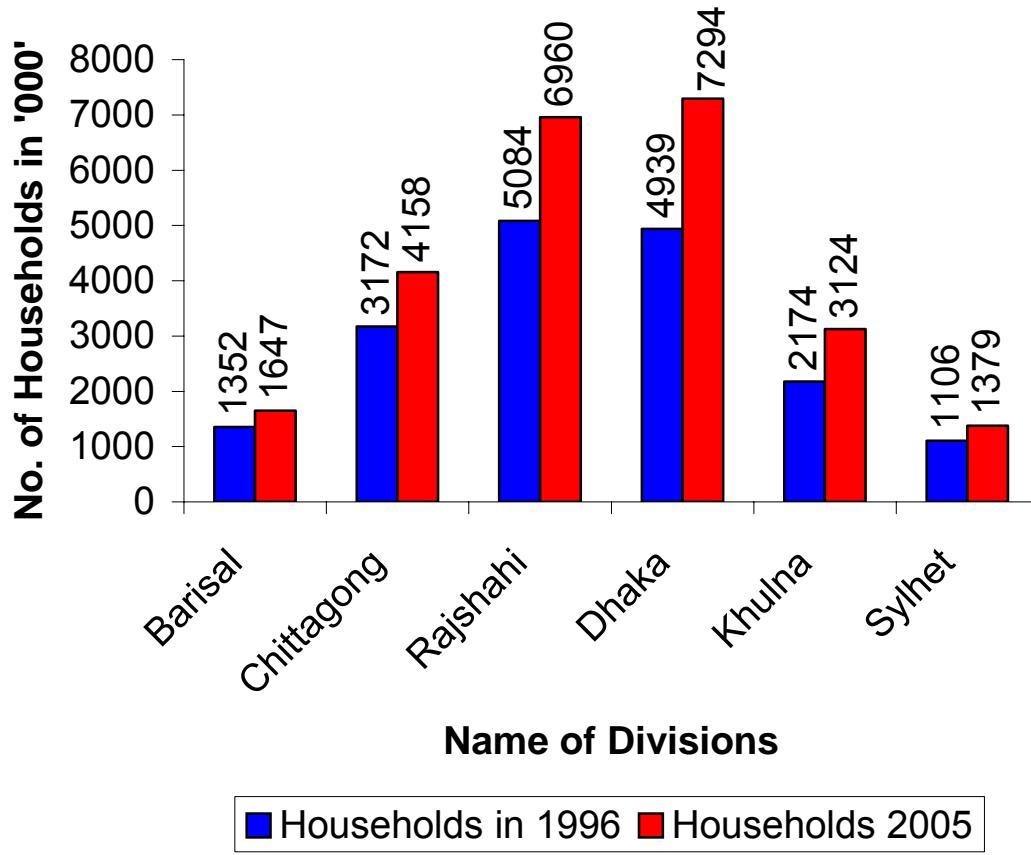
3.1.4 Percentage distribution of holdings and farm holdings by Division

It appears from the table T05 that no considerable change in the percentage distribution of households and farm households in six administrative divisions has occurred between 1996 and 2005. It shows that the percentage of households decreased slightly between 1996 and 2005 in Barisal, Chittagong, Rajshahi and Sylhet Divisions and increased slightly in Dhaka and Khulna Divisions. The percentage of farm households increased slightly in Rajshahi & Khulna Divisions and decreased slightly in Barisal, Chittagong, Dhaka and Sylhet Divisions. Bar chart is shown at page 17.

T05. Percentage Distribution of Households and Farm Holdings by Division

Division (Rural)	Households		Farm holdings	
	1996	2005	1996	2005
Barisal	7.4	6.7	8.7	8.5
Chittagong	17.6	16.9	18.0	16.8
Rajshahi	28.8	28.3	27.2	28.4
Dhaka	27.7	29.7	27.3	26.8
Khulna	12.3	12.7	12.9	13.7
Sylhet	6.2	5.6	6.0	5.8
Bangladesh (Rural)	100	100	100	100

Comparison of Households by Division



3.1.5 Holdings taken and used loan

Nearly 28% of all holdings of rural Bangladesh were reported to have taken loan for various purposes.

3.1.6 Own and operated land

The own land reported by urban and rural holdings are 1,552,891 and 21,994,493 acres respectively. The total own area thus stands at 23,547,385 acres in the country. Land area per holding are 0.42, 0.90 and 0.84 acre in urban holding, rural holding and Bangladesh in order. The corresponding operated land area as calculated are 747,500, 23,425,100 and 24,172,600 acres respectively and their respective sizes are 0.21, 0.95 and 0.86 acre.

3.1.7 Holdings owning agriculture equipments and transports

Sixty percent of the farm holdings owned agricultural equipments which include power tiller, tractor, spray machine, power pump, deep tube well, shallow tube well etc.

Nearly 30% of the farms reported to have owned transport to carry passenger and agricultural or other goods. These transports include all types of mechanized and non-mechanized vans, boats, carts, etc.

3.1.8 Holdings discontinued and cultivated new crops

The percentage of farm holdings that discontinued crops from cultivation or taken new crops under cultivation during last 5 years were reported to be of the same order of nearly 4 %.

Activity	1960	1977	1983/84	1996/97	2005
Data Dissemination	East Pakistan Census data were published in three reports- Report-1 giving data by Districts, Report-2 giving data by sub-Division and Report-3 providing Analytical notes.	The preliminary results were published in November, 1980 and the final results were published in one National Volume giving summary results for Districts.	Census data were published in 6 National Volumes and 64 Zila Reports. The National Volumes were subjects-wise viz agriculture holding cropping pattern, sample enumeration characteristic s Municipal Areas, Institutional holdings etc.	The results of the full count census was published in one National Volume and 64 Zila Reports and those of the sample enumeration was published in one National Volume. Preliminary Report was published in July, 1997.	A preliminary report was released in July 2005 basing on the summary control forms. A National Volume-1 based on the short Questionnaire data by Zila and 64 Zila Reports consisting of Upazila level data and the National Volume-2 basing on the long Questionnaire data are planned to be published by Zila.