

# **BANGLADESH BUREAU OF STATISTICS**

## **AGRICULTURE WING**

BANGLADESH is predominantly an agricultural country. The Government has, therefore, accorded a highest priority to agricultural development. For determining policy for planning, policy formulation and for developing action program in agriculture, basic data regarding the structural and other characteristics of agriculture are essential. Data required for these purpose are provided through the Agriculture Wing of Bangladesh Bureau of Statistics. In view of this, Agriculture Wing has been undertaking different programs all over the country throughout the year for collecting agricultural statistics.

Agricultural statistics consist of structural and annual statistics. The structural statistics are generated through full count/sample census normally at a regular interval of ten years as per FAO guidelines. The annual agricultural statistics are generated by Agriculture Wing through annual/seasonal sample surveys.

### **Current programme of Agriculture Wing**

The programme of the current agriculture statistics is designed to:

1. Prepare estimates of acreage, production and yield per acre of 6 major crops and more than 100 minor crops which are cultivated in the country;
2. Prepare the area and production forecast report of 6 major crops.
3. Estimate crop damages caused by floods, cyclone, storms and other natural calamities;
4. Prepare monthly Agriculture Labour Wage Rate based on monthly agriculture labour wage survey;
5. Make annual land utilization and irrigation statistics by regions;
6. Prepare annual publications named Yearbook of Agricultural Statistics of Bangladesh. The Yearbook of Agricultural Statistics is prepared exclusively with agriculture related data. Of these, data are collected and compiled by BBS and some others are collected from secondary sources and compiled by BBS;
7. Make annual Fisheries, Forestry, Livestock and Poultry statistics by region. These are newly included from the year 2005-2006;
8. Improve both scopes of current programs and estimation techniques.

## Methods of data collection and estimation of crop statistics

Both subjective and objective methods are used to obtain crop statistics. Subjective method is used for estimating minor crops. Objective method refers to the use of probability sample areas and objective yield measurements. Crop-cutting technique is conducted mainly for determining the yield rates of major crops.

**Subjective Method:** Crop estimation are usually initiated at upazila level. Upazila statistical offices select one mouza from each union by simple random sampling. Then household list is prepared within the selected mouza and stratify the households according to the farm sizes i.e large, medium and small farmers are categorized. By simple random sampling, one large, one medium and three small farmers are selected. Upazila statistical offices collect data through interview of those selected farmers for crop area, per acre yield of last year as well as current year. For estimating proportion of crop area five respondent farmers are interviewed. Current year crop area of the union is obtained by multiplying the rate of proportion with the crop area of last year of the union. Upazila area is determined by adding up the union figures and district estimates in the same manner by adding upazila estimates. Same procedure is followed to estimate the crop production. Here also, those five selected farmers are interviewed.

### Objective Method

9348 sample cluster plots are constituted all over the country for measuring area cultivated and yield per acre of major crops.

### Area Estimation

These clusters are visited four times in a year and acreage under different crops in each plot are recorded by the field staffs in the prescribed schedule. The filled in schedules are sent to head office through regional statistical offices. These forms are checked, scrutinized and then processed for area estimation. Area estimates by crop and by district are determined by ratio method and the expressions are as follows:

$$\text{Area for a crop for the district} = \text{Effective area for the district} \times \text{Area ratio devoted to the crop for the district} \quad (1.1)$$

Where,

$$\text{Effective area for the district} = \text{Total land area for the district} - \text{Area not utilized for Agri. purposes for the district}$$

$$\text{Area ratio devoted to the crop for the district} = \frac{\text{Sum of area devoted to the crop from plots within the clusters for the district}}{\text{Sum of areas of corresponding cluster for the district}}$$

## **Measuring yield rates by crop cutting**

Yield per hectare for major crops ( Aus rice, Aman rice, Boro rice, Wheat, Jute and Potato) are estimated through crop cutting experiments in the clusters. Circular cuts of 100 sq. ft. are taken from the plots reporting the crop within sample clusters. The cuts are located randomly from the sample plots. The 100 sq. ft. cut is obtained in three concentric circular cuts. The cut is delineated using equipment with extendible arms. The inner most cut is defined by a 2 ft. radius; then middle by extending another 2 ft. and the third with an additional extension of 1.625 ft. District estimates of yield per hectare are simple average of yield rates computed from the sample plots.

The area estimates given by the formula (1.1) multiplied by the above yield estimates provides the production estimate for the district. The national estimates are obtained through adding up the district estimates.

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