Report on The Productivity Survey of Turmeric Crop

2013

Productivity Assessment Survey of Different Agricultural Crops Programme

BANGLADESH BUREAU OF STATISTICS

Statistics and Informatics Division

Ministry of Planning

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August 2014

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BANGLADESH BUREAU OF STATISTICS (BBS)
Statistics and Informatics Division (SID)
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Secretary
Statistics and Informatics Division (SID)
Ministry of Planning

Foreword

Agriculture plays a pivotal role in the economy of Bangladesh. This sector alone contributes 17% of annual GDP of the country. On the other hand, it offers both the opportunities of employment and livelihood to a large extent. It is worth mentioning that the country has a strong agriculture structure to maintain a sustainable development of the agriculture production of major and minor crops. As such the country enjoys the food security, sometimes with a buffer stock of major crops. Farmers of Bangladesh simultaneously produce various minor crops which also fulfill the demand of internal consumption of bulk population. In persuasion of the demand of statistics on production, cost of production and market price of various crops, Bangladesh Bureau of Statistics (BBS), apart from major crops, has also been putting efforts in conducting surveys on a series of minor crops.

I am happy that the Survey on Turmeric, the second of this series of nine minor crops, was conducted successfully and the report is being brought out timely. Turmeric production is confined in some of the districts of Bangladesh and especially it is widely cultivated in Chittagong Hill Tracts (CHT). Now-a-days Jhum farmers in CHT have become more interested in turmeric cultivation as it is more profitable than other crops. Easy method of cultivation, less monetary involvement and less risk of animal or pesticide attack are also the reasons for their interest in turmeric cultivation. It also gained popularity among farmers of other districts of plain land as well. Increasing production of turmeric is accounting a decline in price and it leads to higher export. As a result the country has been experiencing a steady growth of turmeric export for last several years. Farmers are now planting turmeric commercially. But it was not so far ago, when this herb grew without care on otherwise fallow land, plot boundaries and even in homesteads. Among various spices, turmeric has been used from antiquity as condiments, as dye and as an aromatic stimulant in several medicines.

I would like to take this opportunity to extend my thanks to the Director General, BBS and his colleagues who were involved in different stages of the survey and finalizing the report. I believe that the policy makers, researchers and all other stakeholders will find this report very useful.

Dhaka
August, 2014

Md. Nojibur Rahman
Secretary

Director General
Bangladesh Bureau of Statistics (BBS)

Preface

Bangladesh is predominantly an agriculture country. Agriculture being the engine of growth of the economy, there is no other alternative but to develop agriculture sector for alleviation of poverty. Since provision of food security, improvement of the living standard and generation of employment opportunity of our population are directly linked to the development of agriculture, there have been continued efforts by the government for the overall development of this sector.

Production of crops cost of production of crops and market price of both major and minor crops are directly interrelated. Government has to give proper attention on these three factors, so that the farmer get fair price of the crops produced during the harvest time.

In order to formulate proper policy and planning for the development of agriculture sector reliable and realistic data regarding production cost of crops in different phases such as cost relating to land preparation, seeds, weeding, insecticides, fertilizers, harvesting, transportation, leasing of land etc. are needed. Keeping these in view, the Productivity Assessment Survey of different Agricultural Crops (PASDAC) Program under the Bangladesh Bureau of Statistics has conducted survey on nine minor crops to obtain cost of production of each individual crops following the scientific survey methods. This report contains the findings of the survey on Turmeric conducted during May-June 2013.

I express my sincere gratitude to the members of the Technical Committee and the Sub-Committee of the PASDAC Program for providing technical guidance for choosing nine crops for study, sample design, finalizing questionnaire and other related matters. I would like to convey thanks to Mr. Md. Nurul Islam, Joint Secretary (Rtd), Local consultant, Ms. Salima Sultana, Director, Agriculture wing, BBS and Mr. Md. Akhter Hassan Khan, Programme Director of this study and other officers/staff who worked hard in bringing out this report in time.

Any comments or constructive suggestions for improvement of such report in future will be appreciated.

Dhaka
August, 2014

Golam Mostafa Kamal
Director General

Acknowledgement

Now-a-days agriculture production statistics and cost of production statistics of different crops have wide demand among the users. This statistics provide necessary information to development planners & Policy makers. It also helps business community with market related information. The report on “The Productivity Survey of Turmeric Crop-2013” will be of great informative publication relating to minor crops production and cost of production.

I would like to express my gratitude to the honorable Secretary, Statistics and Informatics Division for his valuable guidance and directions provided during the survey. I would also remain grateful to Mr. Golam Mostafa Kamal, Director General, BBS for his continued suggestions and support to me in doing all the things during the survey and for preparing the report.

I would like to appreciate Mr. Md. Nurul Islam, Joint Secretary (Rtd) for developing the methodology of the survey as well as the report and also thanks to Ms Salima Sultana, Director of Agriculture Wing, for her valuable guidance and support that helped to implement the survey. My thanks also go to Mr Md. Rezaul Karim, Assistant Statistical Officer for his works in data processing. I acknowledge the valuable suggestions and hard work of officials and staff of Agriculture Wing.

I am also grateful to the respondents who extended their cooperation for filling questionnaire and spending their valuable time in spite of their busy occupations. My sincere thanks to the field officials and staff involved in the survey.

Finally I acknowledge the work of the officers and staff who were involved in typing questionnaire, manuals and this report.

Dhaka
August, 2014

Md. Akhter Hassan Khan
Programme Director

Contents

Key Findings

SL. No	Items	Bangladesh	Stratum-1 (Cox's bazar, Chittagong & CH districts)	Stratum-2 (Rest of the fifty nine districts)
1	2	3	4	5
1.	Area under turmeric producing in acre (Turmeric farm holding)	77837	29447	48390
2.	Percentage of household growing turmeric by turmeric;	100.00	37.83	62.17
	a. Owned	86.85	35.64	51.21
	b. Share crop	5.25	0.45	4.80
	c. Mortgage	0.99	0.08	0.91
	d. Lease	5.88	1.04	4.84
	e. Others	1.01	0.62	0.40
3.	Percentage of area growing turmeric by cultivation type			
	a. Single	22.64	7.22	15.32
	b. Mixed	77.36	62.40	16.48
4.	Percentage of area growing turmeric by land type			
	a. Shady	16.53	3.68	12.85
	b. Open	83.47	34.14	49.32
5.	Number of labourers employed by component for per acre production of turmeric			
	a. Planting	19.30	13.49	22.83
	b. Weeding	18.26	9.66	23.50
	c. Harvesting	24.86	16.65	29.86
	Total	62.42	33.80	76.19
6.	Number of labourers employed by land type			
	a. Shady	20.75	12.90	23.00
	b. Open	19.01	13.56	22.79
7.	Per acre leasing value (Tk.)	21422	10130	24643
8.	Per acre production cost (Tk.) by type of input			
	a. Land preparation	3857	3486	4083
	b. Seed	6161	4417	7222
	c. Plantation	4295	3545	4751
	d. Weeding	3766	2327	4642
	e. Irrigation/Pesticide related	1096	815	1267
	f. Fertilizer	3536	635	5302
	g. Harvesting	5899	4259	6897
	h. Boiling	1848	2018	1744
	i. Transport and others	1118	1399	947
	Total	31575	22901	36854

SL. No	Items	Bangladesh	Stratum-1 (Cox's bazar, Chittagong & CH districts)	Stratum-2 (Rest of the fifty nine districts)
1	2	3	4	5
9.	Per acre Production cost (Tk.) by land type			
	a. Shady	32347	23846	34782
	b. Open	31423	22799	37394
10.	Per kilogram production cost (Tk.) by type			
	a. Raw	5.32	5.74	5.17
	b. Dry	26.62	28.73	25.89
11.	Per kilogram production cost (Tk.) by land type			
	a. Shady	5.81	6.65	5.67
	b. Open	5.23	5.66	5.07
12.	Per acre Production cost (Tk.) by tenancy			
	a. Owned	31533	22966	37495
	b. Share crop	30732	22062	31547
	c. Mortgage	32836	22194	33832
	d. Lease	33622	21555	36214
	e. Others	26440	22161	33091
13.	Per acre yield rate(Kg) by type (5 Kg. Raw= 1 kg. dry)			
	a. Raw	5947.0	4031.0	7113.0
	b. Dry	1189.4	806.2	1422.6
14	Per acre production value(Tk.)	64348	39707	79343
15.	Per acre production value (Tk.) by land type			
	a. Shady	60107	38980	66160
	b. Open	65188	39785	82778
16.	Per acre production value (Tk.) by tenancy			
	a. Owned	64616	81765	56679
	b. Share crop	56679	58524	68082
	c. Mortgage	68082	71246	69068
	d. Lease	69068	76360	50123
	e. Others	50123	77666	64616
17	Per acre cost-benefit ratio by land type			
	a. Shady	1.86	1.65	1.90
	b.Open	2.07	1.74	2.21

Chapter-1

Introduction

Introduction

Bangladesh is an agro based country. The most of her inhabitants directly or indirectly are involved in agricultural activities for their livelihood. Agriculture is the single largest producing sector of the economy since it comprises around 17% of the country's GDP. This sector employs 47% of the total labour force. As such agriculture plays a pivotal role and is known as the most important sector of the economy.

Bangladesh possesses very fertile land in which diversified crops are produced. The agriculture land of the country is mainly devoted to rice production and is also utilized for the cultivation of jute, potato, maize, wheat, fruits, seasonal minor crops and vegetables.

Turmeric is a spice made from the roots of the Curcuma longa plant referred as "Queen of Spices". It is a relative of the ginger plant and produces a stalk over 5 feet tall with yellow flowers. The spice is produced by boiling the roots and bulbs, drying them to obtain the characteristic yellow color and grinding them into powder.

Turmeric is considered as essential spice in Bangladesh and many of the country consider curry to be incomplete without it. It also has medicinal qualities.

It has diversified uses. The people of Bangladesh usually use turmeric in all curry preparation like meat, fish, vegetables, pulses etc. for its typical color and flavor. Besides, it is used in medicine and cosmetics and as dye in textile industries. It contents about 69.43% carbohydrate, 6.30% protein, 5.10% oil and 3.50% mineral and other important element in dry turmeric. It is intensively grown in the highland with sandy loam soil.

Turmeric is the most essential and important spices crop which shares about 9% of total spices production (BBS annual estimate 2011-12). The production of turmeric largely depends on the use of fertilizer, irrigation, pesticide etc. The government of Bangladesh has, therefore, given priority to the cultivation of this product by providing subsidy to the farmers on different inputs such as seeds, fertilizer, irrigation etc. for self sufficiency in turmeric production. As a result farmers are encouraged and it has gained popularity in some districts of Bangladesh due to favorable condition and its high price in the market.

Farmers are now planting turmeric commercially. But it was not so much even 20 years ago when this herb grew without care on otherwise fallow land, plot boundaries and even in homesteads. Increase of turmeric production is now adding more value in agriculture sector of GDP and comprising a good number of country's labour force.

Poverty cannot be reduced to a desired level excepting increasing productivity of agriculture sector and at the same time it is to be assured that farmers get fair price of the crops. Natural calamities like draught, flood, cyclone, tornado etc. are a very regular phenomenon which hinders the production of agriculture to a great extent. Cultivable land is being decreased due to the urbanization as well as industrialization. As a result, food security is being threatened and the risk of poor people is being increased.

Government of Bangladesh is deeply concerned for the continuous development of agriculture sector. A huge portion of annual budget has consistently been allocated for the last couple of years for sustainable agriculture development. The country has a strong structure down to the grass root level to closely supervise and monitor the issues of farmers and lead to maximize the productivity by optimal uses of sources.

Production estimates of crops, cost of production and market price of crops are directly interrelated and important factor that influence the farmers in their decision of land utilization. Statistical data on these issues are essential for government policy making in agriculture sector. The government fixes up procurement price at the harvesting time considering the investment of farmers for certain crops. If procurement price is lower than the production cost, producers get looser and are discouraged to produce those crops. This type of loss and profit influences the farmers for cultivating the crop in the following years. Accurate information in this regard can facilitate policy makers, planners, researchers, and stakeholders in understanding factors those are needed to be taken into care. It is mentioned that considering the necessity Bangladesh Bureau of Statistics conducted cost of production survey for 10 crops in 2009 and 4 crops in 2013. In contribution to that, BBS has also conducted the cost of production survey of turmeric crop in 2013 under the Productivity Assessment Survey of Different Agricultural Crops (PASDAC) Program.

1.1 Production of turmeric

Turmeric is cultivated commercially as an annual crop, by planting small rhizomes or pieces of rhizome either on flat soil or in furrows between ridges. The growing plants require heavy manuring to get the best yield possible.

Turmeric is ready for harvesting 7 to 10 months after planting, when the lower leaves turn yellow. Harvesting is done by digging the rhizomes up. Leafy tops are then cut off and the roots and adhering earth is removed. Rhizomes are then washed. Some of these are retained for replanting as a future crop. The remainders are processed into turmeric.
To develop the yellow color and characteristic aroma, cleaned rhizomes are cooked in boiling water for one hour under slightly alkaline conditions. The cooked rhizomes are then dried either artificially or in the sun for 6 to 8 days. Dried rhizomes are polished to smooth their exterior and also to improve the color. They are then sold in this form or ground into powder. Turmeric, specially Timla and local variety Sinduri, have huge demand in the market.

Farmers of Bangladesh are growing turmeric following indigenous methods with the poor yield rate. The reasons behind such low yield due to lack of high yielding variety and lack of modern method of production practices followed by the local growers. The yield of turmeric can be increased by adopting improved production technology like proper plant spacing. Although turmeric is a major spice crop of Bangladesh, but its production technology has not been standardized from the scientific and economic point of view. Therefore, more research needs to bring improvement in production technologies for maximum economic return. If nature favors, farmers get moderately good harvest. Estimated acreage, production and yield rate of turmeric for last nine years are shown below:

Table: Acreage, Production and yield rate of Turmeric during the year2003-04 to 2011-12

Year	Acreage (in '000')	Production (in '000' M. Tons)	Yield rate (M. tons)
2003-04	45.6	70.7	1.6
2004-05	46.8	79.2	1.7
2005-06	50.4	92.4	1.8
2006-07	53.2	109.6	2.1
2007-08	56.6	130.3	2.3
2008-09	56.3	130.2	2.3
2009-10	56.2	117.1	2.1
2010-11	57.5	125.3	2.2
2011-12	60.6	149.6	2.5

Source: Yearbook of Agricultural Statistics of Bangladesh-2008, 2011 & 2012) BBS.

The figure in the above Table shows that acreage and production of turmeric crop during 2003-04 to 2011-12 is increasing gradually with a slight fluctuation in the year 2009-10. The turmeric has been cultivated in an area of 60 thousand acres last year in Bangladesh.

1.2 Objectives of the Survey

The Turmeric Survey 2013 is designed to provide national estimates for various indicators that are needed for national accounts and policy purposes.

The objectives of the survey are to estimate

(a) Per acre production cost

(b) Per acre yield rate

(c) Per acre production value and

(d) The total area under Turmeric cultivation

1.3 Scope and coverage of the survey

The productivity survey of Turmeric crop 2013 is a household based survey. Under the purview of this survey the target population was having at least five decimal area of land under Turmeric cultivation of all dwelling households of the sample area. The survey covers the whole country. A total of hundred PSUs were taken from two strata on the basis of production cost. Stratum-1 covered five districts such as Chittagong, Cox's Bazar, Rangamati, Bandarban, and Khagrachhari. And stratum-2 consists of rest of the fifty nine districts.

Chapter-2

Methodology

Methodology

2.1 Sample Design

The Turmeric Survey has been conducted in the whole country excluding the City Corporation areas using the Agriculture Census-2008. According to the Turmeric cultivation procedure, namely traditional and scientific, the whole country has been divided into two strata; Hill tracts based areas and the rest of the country. The first stratum includes five out of 64 districts namely Chittagong, Cox's Bazaar, Rangamati, Bandarban and Khagrachari and the second stratum covers the rest of 59 districts. In both the strata, households having at least 5 decimal area of land under Turmeric cultivation were considered as the ultimate sampling units. A two stage stratified cluster sampling method has been used to conduct the survey, where a mauza having at least 25 Turmeric farm holdings was treated as the primary sampling unit (PSU) and within the selected mauzas, Turmeric farm households were chosen as the ultimate sampling units. In each stratum, a mauza has been selected following the probability proportional to size (PPS) method taking land under Turmeric cultivation as measure of size. In the second stage, all the Turmeric households were listed and then 30 households were selected following the systematic random sampling. From the first stratum, 30 mauzas and from the second stratum 70 mauzas were selected. From the selected mauzas having more than 250 households, 250 of them were listed from either southwest corner or north-east corner of a mauza. The south west corner approach was followed if selected mauzas carry even numbers and north east corner approach was applied if selected mauzas were of odd numbers. However, if a selected mauza posses less than 25 Turmeric producing farm households then the remaining households were taken from the adjacent mauza or mauzas.

2.2. Data Collection

As data collection has a noteworthy impact on the quality of survey results, it is treated as a significant part of a survey. Considering its importance, the following measures were taken during the preparation of questionnaire as the tool of data collection:

- Questionnaire Design;

- ❖ Questionnaire has been pre-tested;
- ❖ Comprehensive manual of data collection with clearly defined concepts and definitions have been made;
- ❖ Training programme for the enumerators and supervisors were conducted;
- ❖ Required number of field survey staff were set up in order to ensure smooth data collection;
- ❖ Extra-care was taken for the data collection activity, sufficient number of supervisors was assigned.

2.2.1. Questionnaire Design:

A questionnaire is a powerful evaluation tool that allows the collection of data through the use of multi-dimensional questions. A questionnaire written without a clear goal and purpose is inevitably going to overlook important issues and waste enumerators' as well as respondents' time by asking and responding useless questions. All these matters were addressed to the extent possible for developing the questionnaire of survey.

2.2.2. Process of questionnaire design:

A working committee comprising of all the Directors of Bangladesh Bureau of Statistics (BBS), headed by the Deputy Director General was formed in order to facilitate the questionnaire development activity. Programme Director and some other members of the working committee had paid several visits to the field with a view to be knowledgeable about the factors of production and the pros and cons of the whole process of the production of Turmeric. They discussed the matter with the farmers who gRaw Turmeric. After having the knowledge on the issue, they provided feedback to the meeting of the working committee. Working committee had thoroughly examined the feedback and selected the topics of the survey. Programmme Director was assigned to form a questionnaire on the selected topics and eventually, he developed a questionnaire with seven questions. Subsequently the questionnaire was brought forward to the Technical Committee, the highest statistical body comprising of representatives from different Ministries, Universities and BBS, which had finally approved the questionnaire.

2.2.3. Pre-testing the questionnaire:

The questionnaire was pre-tested to examine the time necessary to complete the interview, test the reliability i.e. whether it captured the information desired, and also investigated the consistency whether the information gathered by it was related to the whole purpose of the survey. The test had also targeted to check the logistics required for successful operation of the survey.

In order to ensure the best performance of the questionnaire in respect of data collection, processing and analyzing, the pre-testing was carried out during the month of March 2013 prior to the survey at rural area of Shibganj Upazila under Bogra District and Gobindoganj Upazila belonging to Gaibandha District. A group including Programme Director, some members of the working committee had gone to the two places mentioned to take part in testing the questionnaire. They had chosen some of the farmers at random as the respondents.

2.2.4. Findings of the Pre-test:

Depending on the findings of the pretest, modifications to the questionnaire have been made in the structure and wording of the questionnaire. It has also taken care of semblance of the question, that is, the meaning and clarity which yields the intended information from the respondent. Furthermore, considerable amendment has also taken place in the enumerator's manual in view of ensuring proper questionnaire administration.

After pre-testing some significant suggestions from the respective team had been made, this had been eventually adopted properly in the final questionnaire. During the pre-test, it had been found that farmers, the respondents did not feel comfortable to respond to the questions relating to the total area of the land under Turmeric crop. Considering the fact, the structure of the questionnaire had been changed. Deleting the aggregate area in a single Raw, the new concept, area by farming year/land type had been incorporated.

2.2.5. Finalization of the Questionnaire:

After addressing all the changes following the recommendations evolved from the pre-test, the questionnaire was placed to the Technical Committee. The committee also put notable contribution to the questionnaire. Eventually, the questionnaire had been finalized with the approval of the Technical Committee.

2.2.6. Training of the Supervisors and Enumerators:

A two days training had been arranged in order to make the Supervisors and Enumerators perfectly conceptualized with the concepts and definitions of each word of the questionnaire as well as to convey the proper way of data collection. Two days training programme conducted by the Programme Director had been arranged at the head office of BBS in Dhaka. On the first day the participants received rigorous training on the concepts, definitions and the questionnaire and on the next day they had gone to the rural area of Savar Upazila with a view to having hands-on exercise on the questionnaire. In the second phase, Enumerators had been trained for two days by the Master Trainers at the Regional Statistical Offices (RSOs) following the same sequence as the training arranged at the first phase. At first, Enumerators received training on the questionnaire and in the next day they also visited field at remote area of the respective region in order to have experience on hand. However, most of the trainees- both Supervisors and Enumerators- actively participated in the training and also made some suggestions which were subsequently taken into consideration.

2.2.7. Method of Data Collection:

Face to face interview had been carried out following Paper and Pencil (PAPI) method.

2.2.8. Data Collection and Supervision:

Data collection had taken place during May-June 2013 at the homestead of the household. Usually the respondents are the head of household. The total of 100 enumerators, who were the employees of BBS and had proven experience in this field, had been engaged in data collection from the farm households and the total of 29 Supervising Officers named Regional Coordinators were responsible for supervising the data collection task. All Supervising Officers had been directed to stay at the respective

region during the period of data collection so that they could extensively supervise data collection task and address instantly any untoward problem arising during data collection. Four Divisional Coordinators including Program Director were also responsible to oversee all activities at field level relating to data collection. Furthermore, all possible measures had been taken to obtain a good quality of data.

2.2.9. Data Editing and Coding:

Data editing and coding were other vital phases of the survey, which were indispensable for data processing. It should be completed before data processing. In case of this survey coding had been done along with questionnaire development so that the enumerator could easily and accurately mark the right answers.

Data editing referred to the activity of checking and cleaning data that had already been collected from the field. A group of experienced staff from Agriculture Wing under the supervision of two officers from the same Wing had carried out the work of data editing with careful attention.

2.3 Data Processing:

Data processing involved many steps that were very important because it affected survey results according to the involved steps. During data processing following steps had been taken.

- Data entry
- Appending and Merging files
- Data validation (further computer checking, editing, and imputation)
- Final decision on errors
- Completion of data processing and generation of data files
- Final documentations
- Conversion of data files to another software.
- Storage of all files.

2.3.1 Data Entry:

After editing, all questionnaires had been sent to Computer Lab of Agriculture Wing of BBS in order to do all works of data processing. Programmer had maintained the steps as mentioned aiming to ensure perfect data processing:

(1). Software Used:

Five software named CSPro, FoxPro, Oracle (SQL), SPSS and Excel had been used for processing the survey data. CSPro had been used for data entry, FoxPro also for editing, Oracle for tabulation, SPSS for data analysis and Excel for printing output.

(2). Designing data entry application:

The first thing to do was to create the data dictionary based on the questionnaire. The data dictionary had consisted of ID items, records, items of the records, and also values of the items. Logic check was also maintained to avoid errors of inconsistency. After finishing the data dictionary, the data entry forms had been developed depending on data dictionary. After that, the data entry form were tested and, therefore, readily available for use.

(3). Data capturing and Preliminary Validation:

Just after the completion of data editing manually, data had been captured in computer. During data capturing, a variety of common errors had been identified. As a result data had been checked and cross checked with questionnaire depending on error message. During data processing, the appropriate corrective measures mentioned below have been used to have clean data.

- **Wrong data and out of range codes:**

  Firstly, the data collection instrument restricted the enumerator to a set of codes within the acceptable range for most of the questions. Secondly, the values had been set for avoiding wild codes for most of the questions. For example, the code for ownership of land had been set 1 to 5.

- **Inconsistency checking:** It had been done during designing the data entry program to avoid errors and inconsistency.

- **Treatment of Missing values:** The data entry program had been designed not to allow blanks that ensure not having missing values in the data.

- **Incomplete records and dropped cases.** The data entry program had designed to accept the complete data case; otherwise, it would not be saved. This had been set to avoid incomplete records and dropped cases.
- **Duplication of entries.** The data entry program had been designed in view of rejecting duplication of entries based on the identifiers.

(4). Appending and Merging files:

After data entry, files had properly been appended and merged in order to bring all data in a single file.

(5). Data Validation:

Validation had been accomplished after appending and merging files by checking the number of variables, the cases, wild codes, missing value and consistency. It had been made sure that the number of variables generated matched with the number of variables in the data set.

(6). Final decision on errors:

If there had been found any error during data validation, it was checked and rechecked; and sometimes it had been sent back to the survey authority to decide how it would be treated.

(7). Completion of data processing and generation of data file:

Addressing the final decision on error, data processing task had been completed and generated a data file which contained micro data.

(8). Data preservation:

After completion of processing, data had been stored in ASCII format. The data had also been converted to Microsoft Excel format in order to have the print out. Both original and new format had been preserved. The questionnaires had also been filed for safe storage. A copy of the data set had been put forward to the survey authority for tabulation and analysis.

2.4 Tabulation

Twenty five tables focusing on the vital components such as total number of labours engaged in production of Turmeric, cost of land preparation, seedlings used and their price, fertilizer used and their price, cost of insecticides, cost of production by

phases etc. had been generated. All these tables had been given in the part of analysis and annexure.

2.5 Data Analysis

Survey results had been analyzed in tabular form. Major variable was explained vertically (columns) and cross tabulation by another related variable(s) horizontally. In the analysis, it had described the variation of the magnitude of the major variables by national. Many aspects of production and the cost of production of Turmeric had also been explained nationally.

2.6. Data Dissemination

The final report had been disseminated both in electronic form and hard copy as book. Results are available in the website of BBS. Some data may also be published in other publications of BBS such as Statistical Yearbook of Bangladesh, Yearbook of Agriculture Statistics of Bangladesh, and Monthly Statistical Bulletin etc.

Chapter-3

Area and household

Area and household

This chapter contains data about turmeric cultivation area and their household, also mixed crops cultivation area and their household, including with leasing value of the cultivated land. The information is obtained from the Productivity Survey-2013 of turmeric crops in Bangladesh.

Table-3.1: Percentage distribution of turmeric crops area (acres) by tenureship & land type.

Type of land	Tenureship											
	Total		Owned		Crop Share		Mortgage		Lease		Other	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
All areas												
Total	77837	100.00	67603	86.85	4091	5.25	773	0.99	4580	5.88	790	1.01
Shady	12869	16.53	11023	14.16	1012	1.31	65	0.08	642	0.82	126	0.16
Open	64968	83.47	56580	72.69	3078	3.95	708	0.91	3938	5.06	663	0.85
Stratum-1												
Total	29447	37.83	27739	35.64	352	0.45	66	0.08	810	1.04	481	0.62
Shady	2866	3.68	2829	3.63	37	0.05						
Open	26581	34.14	24910	32.80	314	0.40	66	0.08	810	1.04	481	0.62
Stratum-2												
Total	48390	62.17	39864	51.21	3739	4.80	707	0.91	3770	4.84	309	0.40
Shady	10003	12.85	8194	10.53	975	1.25	65	0.08	642	0.82	126	0.16
Open	38387	49.32	31670	40.69	2764	3.55	642	0.82	3128	4.02	183	0.24

* 1 hector=2.47 acre, * Stratum-1 = Chittagong, Cox's bazar & CH districts, * Stratum-2= Rest of the 59 districts

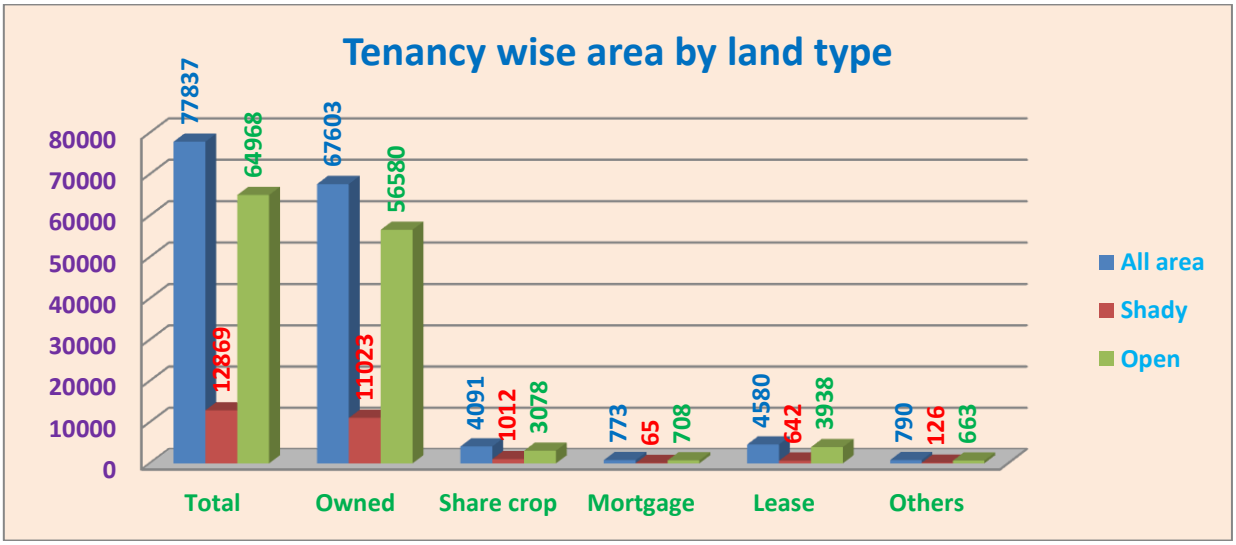


Table 3.1 described the area under turmeric crops in all tenureship of Bangladesh by categories of owned land, share crop, mortgage, lease and others separately for land type open, shady and all areas, Stratum-1 and Stratum-2 for the year 2013. Percentage

distribution of land type is also shown in this table. The table shows that a total of 77837 acres are under turmeric crops an overwhelming majority of 67603 acres are owned land (86.85%) followed by 4580 acres lease land (5.88%), 4091 acres share crops land (5.25), 790 acres others land (1.01%) and 773 acres mortgage land (0.99%). On the other hand, it is observed from the table that 64968 acres of land are under farming open (83.47%) followed by 12869 acres in Shady (16.53%). The table also shows that 48390 acres of land are under Stratum-2 (62.17%) and 29447 acres are under stratum-1 (37.83%) of the total land.

Table-3.2: Percentage distribution of turmeric cultivation household by land type and tenancy.

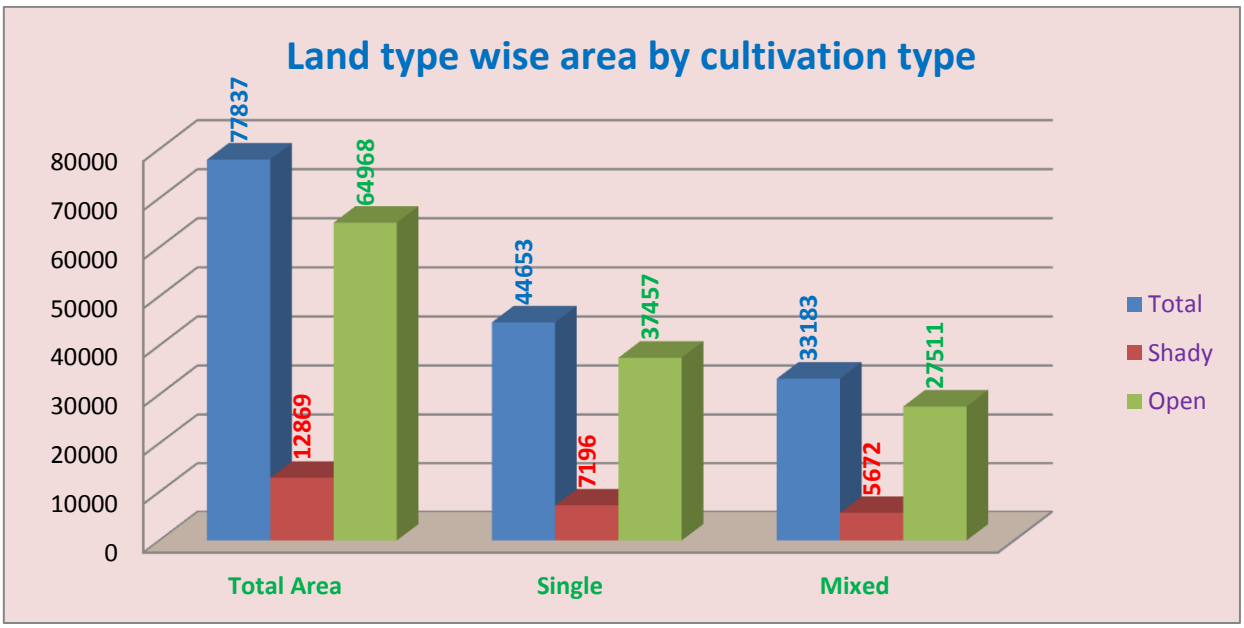
Type of land	Tenancy											
	Total		Owned		Crop Share		Mortgage		Lease		Other	
	H/H	%	H/H	%	H/H	%	H/H	%	H/H	%	H/H	%
All areas												
Total	328798	100.00	294323	89.51	21564	6.55	2752	0.84	10548	3.21	4949	1.51
Shady	91559	27.85	80002	24.33	8177	2.49	125	0.04	1752	0.53	1502	0.46
Open	242577	73.78	214321	65.18	13387	4.07	2626	0.80	8796	2.68	3447	1.05
Stratum-1												
Total	74438	22.64	70882	21.56	910	0.27	248	0.08	910	0.28	1820	0.56
Shady	12572	3.82	12406	3.77	165	0.05						
Open	62197	18.92	58475	17.78	744	0.22	248	0.08	910	0.28	1820	0.56
Stratum-2												
Total	254360	77.36	223441	67.96	20654	6.28	2504	0.76	9639	2.93	3129	0.95
Shady	78987	24.02	67596	20.56	8011	2.44	125	0.04	1752	0.53	1502	0.46
Open	180380	54.86	155846	47.40	12643	3.85	2378	0.72	7886	2.40	1627	0.49

The above table 3.20 shows that out of 328798 turmeric producing households 89.51% have own households, 6.55% have households of share crop tenureship, 3.21% have households of lease tenure ship, 1.51% has other category of tenureship and only 0.84% have mortgage category of tenureship households. On the other hand, 254360 and 74438 households in stratum-2 (77.36%) and stratum-1 (22.64%) respectively are producing turmeric.

Table-3.3: Percentage distribution of turmeric producing area (acres) by land & cultivation type.

Type of land	Type of cultivation					
	Total		Single		Mixed	
	Area	%	Area	%	Area	%
All areas						
Total	77837	100.00	44653	57.36	33183	42.63
Shady	12869	16.53	7196	9.24	5672	7.29
Open	64968	83.47	37457	48.12	27511	35.34
Stratum-1						
Total	29447	37.83	7001	8.99	22446	28.84
Shady	2866	3.68	1268	1.63	1598	2.85
Open	26581	34.15	5733	7.36	20848	26.78
Stratum-2						
Total	48390	62.17	37652	48.37	10738	13.76
Shady	10003	12.85	5928	7.62	4075	5.24
Open	38387	47.32	31724	40.76	6663	8.56

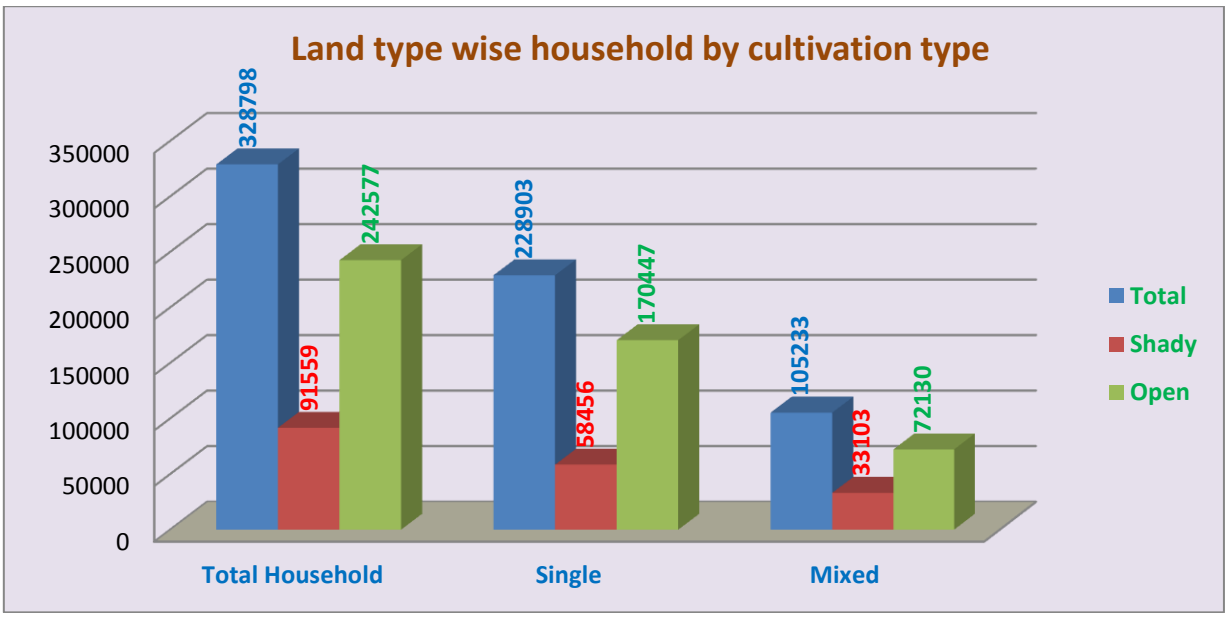
- 1 hector= 2.47 acre



The above table 3.3 shows that out of total land 77837 acres used for turmeric production, single cropped area is found 44653 acres and mixed cropped area is 33183 acres of land. Stratum wise cropping pattern for turmeric land is seen different to some extent. In the mixed crop areas cultivation is 28.84% in stratum-1 and 13.76% in stratum-2. On the other hand, turmeric cultivation is 48.37% in single crop area in stratum-2 and only 8.99% in stratum-1.

Table-3.4: Percentage distribution of turmeric producing households by land and cultivation type.

Type of land	Type of cultivation					
	Total		Single		Mixed	
	Household	%	Household	%	Household	%
All areas						
Total	328798	100.00	228903	69.62	105233	32.01
Shady	91559	27.85	58456	17.78	33103	10.07
Open	242577	73.78	170447	51.84	72130	21.94
Stratum-1						
Total	74438	22.64	23737	7.22	51031	15.52
Shady	12572	3.82	4880	1.48	7692	2.34
Open	62197	18.92	18858	5.74	43339	13.18
Stratum-2						
Total	254360	77.36	205165	62.40	54202	16.48
Shady	78987	24.02	53576	16.29	25411	7.73
Open	180380	54.86	151590	46.10	28791	8.75



The table 3.4 indicates that 69.62% of the households are producing only turmeric crops and 32.01% of the households are producing turmeric along with other crops. In stratum-1, 51031 households (68.56%) are producing turmeric with other crops out of the total 74438 households. On the other hand, in stratum-2 only 54202 households (21.31%) are producing turmeric crops along with other crops out of the total 254360 households.

Table-3.5: Per acre leasing cost of turmeric crop by land type.

Land type	Leasing cost (Tk)		
	All areas	Stratum-1	Stratum-2
Total	19995	10130	22319
Shady	11316	-	11316
Open	21422	10130	24643

Leasing means the land taken from others by the household for the cultivation of turmeric crop only on payment of money to the land owner. Leasing value per acre is found to be significantly different between two areas. Local leasing value has also been counted in case of households who cultivate the crop in their own lands. The average per acre leasing cost for turmeric crop in Bangladesh is taka 24643. Leasing is old system in stratum-2 and now a day it is being introducing to stratum-1.

Chapter-4

Production Cost

Production Cost

This chapter contains data on per acre production cost based on stratum, tenureship and land type used in the turmeric productivity survey. The cost includes per acre production cost, per kilogram production cost, tenure ship and varieties of turmeric. The various ingredient of turmeric production viz land preparation, seedling, plantation, weeding, irrigation, pesticide, fertilizer, harvesting, boiling, transport, other have been taken into consideration in obtaining the cost of production

Table-4.1: Percentage distribution of per acre production cost (Tk.) by stratum.

Production Cost	All areas		Stratum-1		Stratum-2	
	Cost	%	Cost	%	Cost	%
Total	31575	100.00	22901	100.00	36854	100.00
Land Preparation	3857	12.22	3486	15.22	4083	11.08
Seed	6161	19.51	4417	19.29	7222	19.60
Plantation	4295	13.60	3545	15.48	4751	12.89
Weeding	3766	11.92	2327	10.16	4642	12.59
Irrigation/Pesticide related	1096	3.47	815	3.56	1267	3.44
Fertilizer	3536	11.20	635	2.77	5302	14.39
Harvesting	5899	18.68	4259	18.60	6897	18.71
Boiling	1848	5.85	2018	8.81	1744	4.73
Others	1118	3.54	1399	6.11	947	2.57

Note: Others means transport and others

* 1 hector=2.47 acre, * Stratum-1 = Chittagong, Cox's bazar & CH districts, * Stratum-2= Rest of the 59 districts

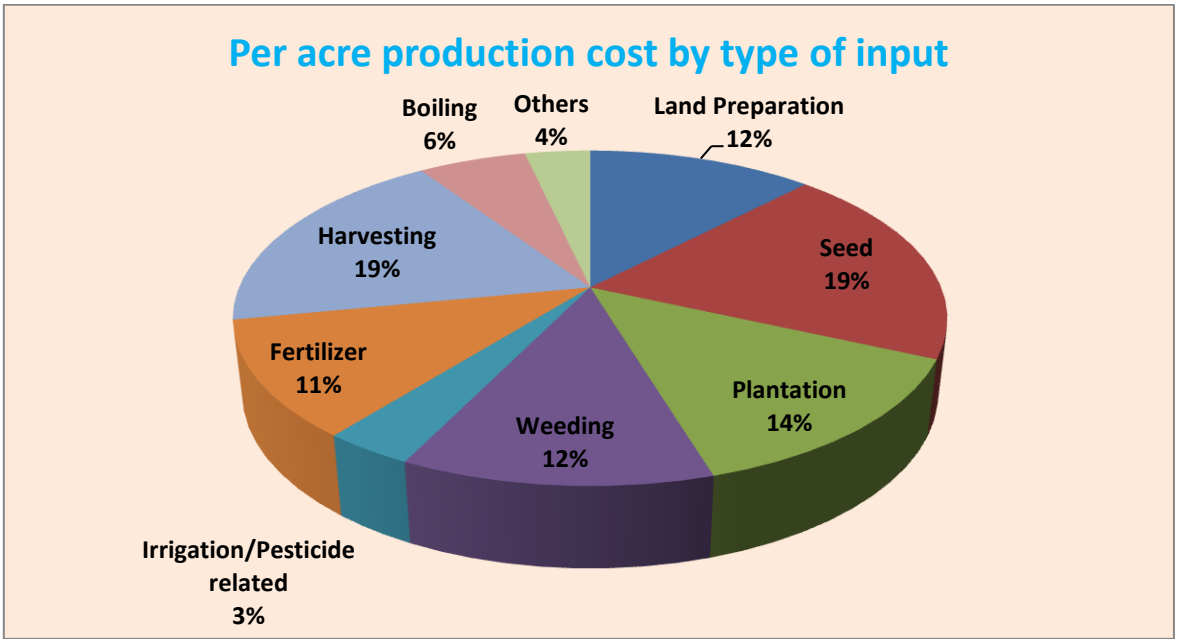


Table-4.1, presents that overall per acre production cost in all areas is Taka 31575 on an average for the year 2013. Whereas the average production cost per acre in stratum-1 is

Taka 22901 and in stratum-2 is Taka 36854. As regard to the type of production cost, the highest cost is found for seeds Taka 6161, followed by harvesting cost Taka 5899, plantation cost Taka 4295, land preparation cost Taka 3857 etc. It is mentionable that per acre fertilizer cost for the stratum-1 is taka 635 whereas the cost under stratum-2 is only taka 5302.

Table-4.2: Percentage distribution of per acre production cost (TK) by land type.

Production Cost	All areas		Shady		Open	
	Cost	%	Cost	%	Cost	%
Total	31575	100.00	32347	100.00	31423	100.00
Land Preparation	3857	12.22	4388	13.57	3752	11.94
Seed	6161	19.51	5854	18.10	6222	19.80
Plantation	4295	13.60	4449	13.75	4264	13.56
Weeding	3766	11.92	3999	12.36	3720	11.84
Irrigation & Pesticide related	1096	3.47	992	3.07	1117	3.55
Fertilizer	3536	11.20	3865	11.95	3471	11.05
Harvesting	5899	18.68	5820	17.99	5915	18.82
Boiling	1848	5.85	1994	6.16	1819	5.79
Others	1118	3.54	986	3.05	1144	3.64

In the above table it is observed that average per acre production cost in shady area is Taka 32347 and open area is Taka 31423. In stratum-1, the highest production cost is found for seed Taka 5854, followed by harvesting cost Taka 5820, plantation cost Taka 4449, land preparation cost Taka 4388 etc. On the other hand, in stratum-2, the highest production cost for seed Taka 6222, followed by harvesting cost Taka 5915, plantation cost Taka 4264, land preparation cost Taka 3752 and so on.

Table-4.3: Percentage distribution of per acre production cost (Tk.) by tenureship.

Production Cost	Tenureship											
	All areas		Owned		Share crop		Mortgage		Lease		Others	
	Cost	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	%
Total	31575	100.0	31533	100.0	30732	100.0	32836	100.0	33622	100.0	26440	100.0
Land Preparation	3857	12.22	3856	12.23	3971	12.92	3438	10.48	3944	11.73	3278	12.40
Seed	6161	19.51	6248	18.82	5506	17.92	5075	15.46	6003	17.85	4143	15.67
Plantation	4295	13.60	4232	13.42	4468	14.54	6137	18.69	4640	13.80	4925	18.63
Weeding	3766	11.93	3725	11.82	4168	13.56	5055	15.39	4003	11.91	2541	9.61
Irrigation & Pesticide rel.	1096	3.47	1103	3.50	966	3.14	910	2.77	1183	3.52	850	3.21
Fertilizer	3536	11.20	3381	10.73	3679	11.97	4003	12.19	5820	17.31	2413	9.13
Harvesting	5899	18.68	5944	18.85	5932	19.31	5712	17.39	5464	16.25	4558	17.24
Boiling	1848	5.85	1900	6.03	1215	3.95	1727	5.26	1576	4.68	2389	9.04
Others	1118	3.54	1146	3.64	827	2.69	779	2.37	991	2.95	1344	5.08

It is found from the above table-4.3 that average cost of per acre production in Bangladesh is Taka 31575 in 2013. However, in the lease tenure ship category the average cost of per acre production is the highest at Taka 33622 followed by mortgage tenancy of Taka 32836, owned land is Taka 31533, share cropping is Taka 30732 and all other category of land tenure ship is only Taka 26440. For leased category of tenure ship, the highest per acre production cost for seeds is Taka 6003 followed by fertilizer cost is Taka 5820, harvesting cost is taka 5464.

Table-4.4: Per acre production quantity (Kg.) and cost (Tk by land type and type of turmeric.

Type of land	Per acre production Cost (Tk.)	Per acre production quantity(Kg) by type		Per kilogram Production Cost(Tk) by type	
		Raw (kg.)	Dry(Kg)	Raw (Tk.)	Dry(Tk.)
All					
Total	31575	2857	618	5.31	26.54
Shady	32347	2925	527	5.82	29.09
Open	31423	2844	636	5.22	26.08
Stratum-1					
Total	22901	1591	488	5.68	28.41
Shady	23846	1569	403	6.65	33.27
Open	22799	1593	497	5.59	27.95
Stratum-2					
Total	36854	3628	697	5.18	25.91
Shady	34782	3313	562	5.68	28.40
Open	37394	3710	732	5.07	25.37

Note: 1 kilogram dry = 5 kilogram raw

Table-4.4 shows the average per acre production cost (Tk.), per acre production quantity (Kg) and per kilogram production cost (Tk.) by land type in the year 2013. The average per kilogram production cost for raw turmeric of Bangladesh is Taka 5.31 whereas, the

cost in stratum-2 is seen Taka 5.18 and in stratum-1 is Taka 5.68 respectively. On the other hand, the average production cost per kilogram for dry turmeric of Bangladesh is Taka 26.54 whereas, in stratum-2 the cost of items is Taka 25.91 and in stratum-1 is Taka 28.41 respectively.

Table-4.5: Per acre production quantity (Kg) and their cost (Tk.) by tenureship.

Tenureship	Per acre production Cost (Tk.)	Per acre production by type		Per (Kg) Production Cost(Tk) by type	
		Raw (kg)	Dry(Kg)	Raw (Tk.)	Dry(Tk.)
All areas					
Total	31575	2857	618	5.31	26.55
Owned	31533	2760	634	5.33	26.59
Share crop	30732	3110	428	5.85	29.27
Mortgage	32836	2459	787	5.14	25.68
Lease	33622	4218	528	4.90	24.51
Others	26440	2338	515	5.38	26.91
Stratum-1					
Total	22901	1591	488	5.68	28.41
Owned	22966	1536	505	5.66	28.28
Share crop	22062	2359	302	5.70	28.51
Mortgage	22194		814	5.45	27.26
Lease	21555	3250	16	6.47	32.36
Others	22161	1590	353	6.61	33.03
Stratum-2					
Total	36854	3628	697	5.18	25.91
Owned	37495	3612	723	5.19	25.94
Share crop	31547	3180	440	5.86	29.32
Mortgage	33832	2690	785	5.11	25.57
Lease	36214	4426	638	4.75	23.77
Others	33091	3500	773	4.49	22.46

The highest production cost of per kilogram for share cropping is Taka 5.85 followed by other category of tenure ship Taka 5.38. It is also found that the different type of land tenure ship, the production cost per kilogram is nearly the same for all level in stratum-2. Per kilogram production cost in stratum-1 is found slightly different with various tenureship.

Chapter-5

Labour and Labourer’s Cost

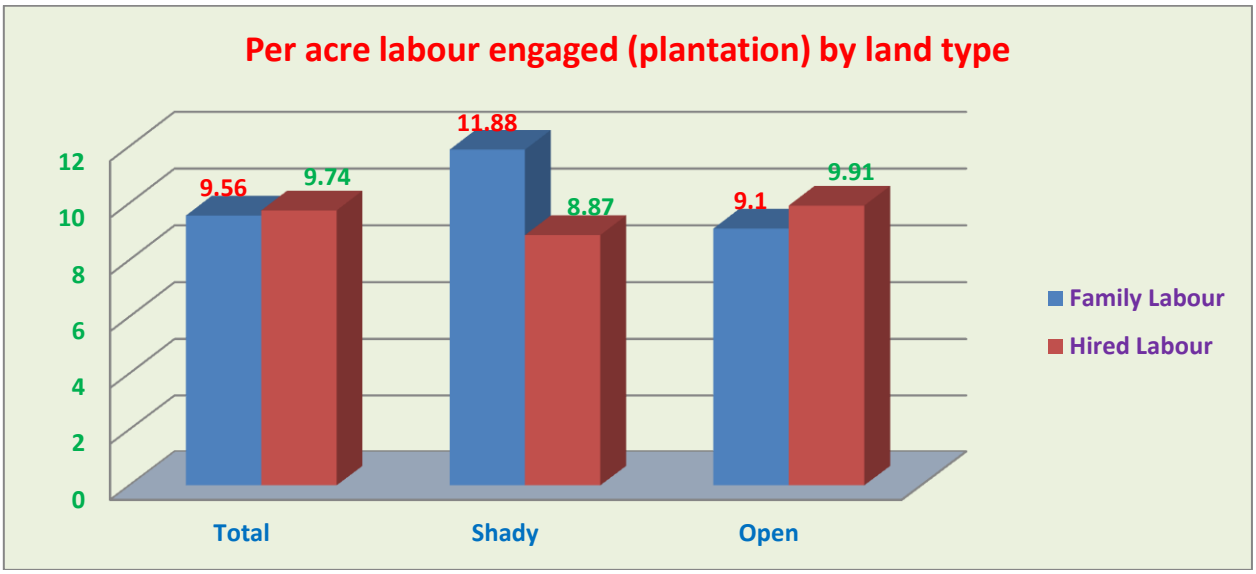
Labour and Labourer's Cost

Information relating to number of laboures involvement cost, planting, weeding and harvesting costs have been discussed in this chapter

Table-5.1: Per acre number of labour engaged and cost (Tk.) of plantation by land type.

Land type	Number of Labour			Per acre cost	Per labour cost
	Family	Hired	Total		
All areas					
Total	9.56	9.74	19.30	4295	222.54
Shady	11.88	8.87	20.75	4449	214.41
Open	9.10	9.91	19.01	4264	224.30
Stratum-1					
Total	8.93	4.56	13.49	3545	262.79
Shady	8.48	4.42	12.90	3533	273.88
Open	8.98	4.58	13.56	3546	261.50
Stratum-2					
Total	9.94	12.89	22.83	4751	208.10
Shady	12.85	10.15	23.00	4711	204.83
Open	9.18	13.61	22.79	4761	208.91

* Stratum-1 = Chittagong, Cox's bazar & CH districts, * Stratum-2= Rest of the 59 districts

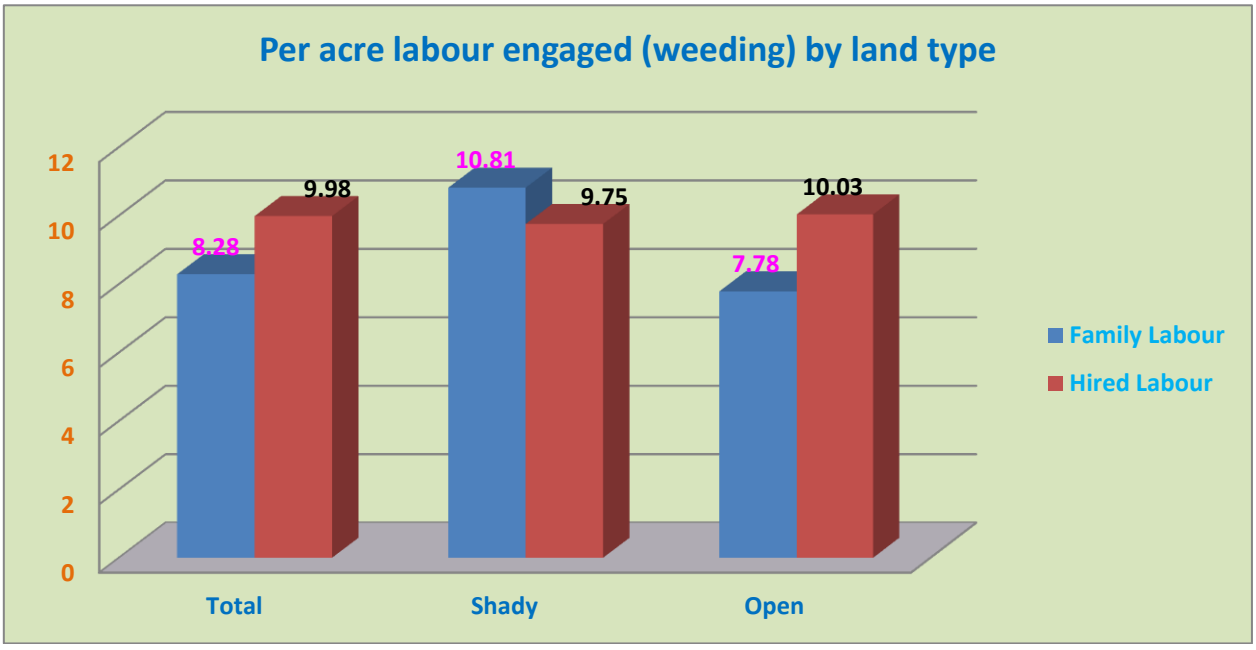


From the above table, it is observed that the average number of labourers required for per acre plantation at national level is 19.30 persons and their cost is Tk 4295. In shady area, per acre 20.75 persons labour and for open area it is 19.01 persons. Average number of labourers required is significantly different between two strata. The average number of

labourers is required 22.83 persons under stratum-2 and 13.49 persons under stratum-1. It is notable that 0.69% more labour is required for stratum-2 than that of stratum-1.

Table-5.2: Per acre number of labour engaged and cost of weeding by land type.

Land type	Number of Labour			Per ace cost	Per labour cost
	Family	Hired	Total		
All areas					
Total	8.28	9.98	18.26	3766	205.97
Shady	10.81	9.75	20.56	3999	194.50
Open	7.78	10.03	17.81	3720	208.34
Stratum-1					
Total	6.12	3.54	9.66	2327	239.54
Shady	5.89	4.04	9.93	2328	234.44
Open	6.14	3.48	9.62	2327	240.44
Stratum-2					
Total	9.60	13.90	23.50	4642	197.53
Shady	12.23	11.39	23.62	4478	189.59
Open	8.92	14.56	23.48	4684	199.49



From the Table 5.2, it is revealed that the average number of labourer engaged for per acre weeding at national level is 18.26 persons and their cost is Taka 3766. In the shady area the number of labourers required is 20.86 persons and their cost is Taka 3999 whereas in the open area the number of labourers required is 17.81 persons and their cost is Taka 3720. Average number of labour required for per acre weeding under stratum-1 is 9.66 persons and their cost taka is Taka 2327. On the other hand, average number of

labour required is 23.50 persons under stratum-2 and their cost is Taka 4642.The number of labourers for per acre weeding is seen significantly different between the two strata.

Table-5.3: Per acre wise number of labourer engaged and cost(Tk.) of harvesting by land type.

Land type	Number of Labour			Per acre cost	Per labour cost
	Family	Hired	Total		
All areas					
Total	11.91	12.95	24.86	5899	237.28
Shady	14.29	12.62	26.91	5820	215.20
Open	11.44	13.02	24.46	5915	241.82
Stratum -1					
Total	10.64	6.01	16.65	4359	261.80
Shady	11.00	6.41	17.41	4295	246.70
Open	10.62	5.96	16.58	4255	256.63
Stratum-2					
Total	12.68	17.18	29.86	6897	230.98
Shady	15.23	14.40	29.63	6257	211.17
Open	12.02	17.91	29.93	7046	235.42

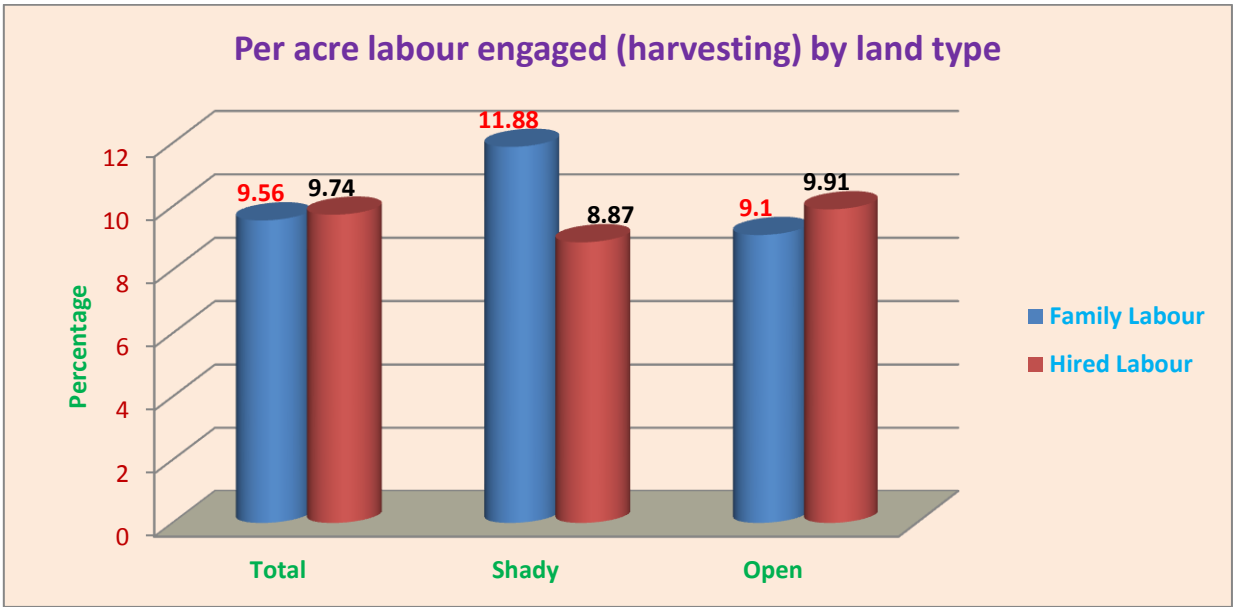


Table 5.3 provides per acre average number of labourers required for harvesting at the national level, which is 24.86 persons and their cost is Taka 5899 during the survey year. The average number of labourers required for the shady area is 24.91 persons and their cost is Taka 5820.Whereas in the open area the number of labourers required is 24.46 persons and their cost is Taka 5915. Average number of labourers required per acre for harvesting under stratum is 16.65 persons and their cost is taka 4359, which is 29.86 persons and their cost is Taka 6897 in stratum-2. The average number of labourers required is nearly double in stratum-1 in comparison with the stratum-2.

Chapter-6

Production and Production value

Production and Production value

The estimated per kilogram production value (Taka), per acre production (kilogram) and production value (Taka) by land type and tenureship of turmeric crops have been presented in this chapter.

Table-6.1: Per acre production quantity (Kg.) and value (Tk) by type & land type.

Land type	Per acre production Value (Tk.)	Per acre production for raw		Per (KG) production value (Tk)	Per acre production for dry		Per (KG) production value (Tk)
		Qty.(Kg)	Value (Tk.)		Qty.(Kg)	Value (Tk.)	
All areas							
Total	64348	2857	29435	10.30	618	34913	56.49
Shady	60107	2925	31525	10.78	527	28582	54.24
Open	65188	2844	29021	10.20	636	36167	56.87
Stratum-1							
Total	39707	1591	15770	9.91	488	23937	49.05
Shady	38980	1569	16170	10.31	403	22377	55.53
Open	39785	1593	15680	9.84	497	24105	48.50
Stratum-2							
Total	79343	3628	37750	10.41	697	41593	59.67
Shady	66160	3313	35800	10.80	562	30360	54.02
Open	82778	3710	38258	10.31	732	44520	60.82

* 1 hector=2.47 acre, * Stratum-1 = Chittagong, Cox's bazar & CH districts, * Stratum-2= Rest of the 59 districts

Table-6.1 shows the per acre production value (Tk.), category wise per acre quantity (Kg) and value (Tk.) of turmeric crops by land type for the survey 2013. The table shows that average per acre production value in all areas is estimated at taka 64348 of which taka 34913 for dry and taka 29435 for raw turmeric crops respectively. It is seen from the table per acre production value and yield rate are significantly different in between the two stratums, which is more than two times higher in stratum-2 than that of stratum-1.

Table-6.3: Per acre production quantity (Kg.) and value (Tk.) by type and tenancy.

Tenancy	Per acre production value (Tk)	Per acre production for raw		Per (Kg.) production value (Tk.) for raw	Per acre production for dry		Per (Kg.) production value (Tk.) for dry
		Qty. (Kg)	Value (Tk.)		Qty (Kg.)	Value (Tk.)	
All areas							
Total	64364	2857	29435	10.30	618	34913	56.49
Owned	64616	2760	28661	10.38	634	35955	56.71
Share crop	56679	3110	32439	10.43	428	24240	56.64
Mortgage	68082	2459	25384	10.32	787	43584	55.38
Lease	69068	4218	39466	9.36	528	29602	56.06
Others	50123	2338	25916	11.08	515	24208	47.00
Stratum-1							
Total	39707	1591	15770	9.92	488	23937	49.05
Owned	39970	1536	15110	9.83	505	24861	49.23
Share crop	37058	2359	24280	10.29	302	12778	42.31
Mortgage	34256				814	34256	42.08
Lease	35112	3250	34344	10.57	16	768	48.00
Others	34911	1590	18549	11.67	353	16362	46.35
Stratum-2							
Total	79343	3628	37750	10.41	697	41593	59.67
Owned	81765	3612	38090	10.55	723	43675	60.41
Share crop	58524	3180	33206	10.44	440	25318	57.54
Mortgage	71246	2690	27759	10.32	785	43487	55.40
Lease	76360	4426	40566	9.17	638	35795	56.11
Others	77666	3500	37364	10.68	773	36401	47.09

Table 6.3 present the per Kg. production value, per acre yield rate (kg) and value (Tk.) by tenancy. It is also observed that the highest per acre yield rate and their value are in lease tenureship are 4218 kilograms (raw), 528 kilogram (dry) and Taka 69058 respectively followed by mortgage tenure ship of 2459 kg (raw), 787 Kg. (dry) and Taka 68082. It is seen from the table that per acre yield rate (kg) and their production value are highly different in the two strata. Per acre production (kg) and value (Tk) for all type of tenureship in stratum-2 is more than 2 times higher than that of stratum-1. Similarly, per kilogram production value in taka is higher in stratum-2 than that of stratum-1 for type of tenure ship.

Chapter-7

Sampling Error and Data Reliability

Sampling Error and Data Reliability

Using the Random Group Method the estimating variance of R, the following formula is used:

$$\text{Var®} = \frac{\sum_{g=1}(R_g - R)^2}{K(K-1)}$$

Where : R= the estimated average cost (land preparation / seedling/ fertilizer / Pesticide//harvesting)

R_g= the estimated mean for the g^{th} random group

K = the number of random group

Table-7.1: Estimated average per decimal production cost (excluding leasing) for the year 2013 in stratum-1 and their standard errors by land type.

Production Cost	Land type								
	Stratum-1			Shady			Open		
	Cost	SE	RSE (%)	Cost	SE	RSE (%)	Cost	SE	RS (%)
All	229.01	1.44	0.63	238.46	1.82	0.76	228.00	1.50	0.66
Land Preparation	34.86	0.42	1.20	41.69	0.94	2.25	34.11	0.48	1.41
Planting/Weeding	102.89	0.30	0.29	97.57	0.76	0.78	103.47	0.30	0.29
Irrigation/Pesticide	8.15	0.65	7.98	10.14	0.52	5.13	7.93	0.75	9.46
Fertilizer	6.35	0.48	7.56	8.54	0.54	6.32	6.11	0.56	9.17
Harvesting	76.77	1.35	1.77	80.52	0.82	1.02	76.36	1.42	1.86

Note: Land type wise SE have been calculated as there are differences in cost of production in different land type

The table shows that the average production cost per decimal for in stratum-1 of 229.01 taka is not significantly different from the 238.46 taka average production for shady area at 95% confidence interval. Similarly, the average production cost per decimal for in stratum-1 area of 229.01 taka is not significantly different from the 228.00 taka average production cost for open type area at 95% confidence interval.

Although the estimated per acre production cost for shady type area is subject to the higher standard error than for in stratum-1. Similarly the estimated production cost per decimal for open type area is also subject to the higher standard than for in stratum-1. Production cost per decimal for all estimates have acceptable reliability in terms of sampling error.

Table-7.2: Estimated average per decimal production cost (excluding leasing) for the 2013 in stratum-2 and their standard errors by land type.

Production Cost	Land type								
	Stratum-2			Shady			Open		
	Cost	SE	RSE (%)	Cost	SE	RSE (%)	Cost	SE	RSE (%)
All	368.54	1.67	0.45	347.82	2.14	0.67	373.94	1.78	0.48
Land Preparation	40.83	0.61	1.49	44.50	0.99	2.22	39.87	0.84	2.11
Planting/Weeding	166.15	0.50	0.30	156.04	0.53	0.34	168.78	0.63	0.37
Irrigation/Pesticide	12.65	0.47	3.72	9.85	0.62	6.29	13.39	0.52	3.88
Fertilizer	53.01	0.62	1.17	47.28	0.98	2.07	54.51	0.79	1.45
Harvesting	95.88	0.77	0.80	90.15	0.90	1.00	97.37	0.83	0.85

Note: Land type wise SE have been calculated as there are differences in cost of production in different land type

It is seen from the above table that the average production cost per decimal for in stratum-2 of 368.54 taka is not significantly different from the 347.82 taka average production cost for shady area at 95% confidence interval. On the hand the average production cost per decimal for in stratum-1 of 368.54 taka is not significantly different from the 373.94 taka average production cost for open area at 95% confidence interval.

However the estimated production cost per decimal for shady and open area production cost are subject to higher standard errors than for first year. Production cost per decimal for all estimates have acceptable reliability in terms of sampling error.

Table-7.3: Estimated cultivated area wise average per decimal production cost (excluding leasing) per acre for the 2013 and their standard errors.

Production Cost	Land type								
	Bangladesh			Shady			Open		
	Cost	SE	RSE (%)	Cost	SE	RSE (%)	Cost	SE	RSE (%)
All	301.65	1.41	0.47	314.75	3.48	1.11	299.26	1.12	0.37
Land Preparation	37.97	0.15	0.40	43.65	0.79	1.81	36.93	0.21	0.57
Planting/Weeding	135.82	0.78	0.57	138.35	1.21	0.87	135.35	0.80	0.59
Irrigation/Pesticide	10.50	0.30	2.86	9.94	0.52	5.23	10.60	0.43	4.06
Fertilizer	30.64	0.43	1.40	35.56	1.31	3.68	29.75	0.35	1.18
Harvesting	86.72	0.75	0.86	87.23	0.67	0.77	86.63	0.80	0.92

Note: Land type wise SE have been calculated as there are differences in cost of production in different land type

The averages per decimal average cost for Bangladesh of 301.65 taka are not significantly different from the average production cost per decimal for two type of land

at confidence 95% interval. Although the estimated average per decimal production cost for Bangladesh is subject to lower than that of shady land. Production cost per decimal for all estimates have acceptable reliability in terms of sampling error.

Table-7.4: Estimated average per decimal production value (excluding leasing) for the 2013 and their standard errors by land type and stratum.

Land type	Bangladesh			Stratum-1			Stratum-2		
	Value	SE	RSE (%)	Value	SE	RSE (%)	Value	SE	RSE (%)
Shady	579.39	11.53	1.99	389.80	18.64	4.78	661.60	4.51	0.68
Open	607.78	8.35	1.37	397.85	8.89	2.23	827.78	21.19	2.56
All	603.40	8.09	1.34	397.07	8.67	2.18	793.43	17.52	2.21

The estimated average production values per decimal for Bangladesh of 603.40 taka are significantly different from the average production value for stratum-1 and stratum-2 at 95% confidence interval. The highest average production values for open area in stratum-2 of 827.78 taka are significantly different from the all in stratum-1 & stratum-2 at 95% confidence interval. However the estimated averages per decimal production values for open area in stratum-2 are subject to higher than that of the shady area. Production values per decimal for all estimates have acceptable reliability in terms of sampling error.

Annex

ANNEX-A: STATISTICAL TABLE
ANNEX-B: CONCEPTS AND DEFINITIONS
ANEEX-C: QUESTIONNAIRE (BANGLA)
ANNEX-D: QUESTIONNAIRE (English)
ANNEX-E: STATISTICAL PRINCIPLES & ACT
ANNEX-F: REFERENCE

Annex-A: Statistical Table

Table-1: Distribution of area (acres) and number of households under turmeric cultivation by land type and tenureship.

Land type	Tenure ship											
	Total		Owned		Share crop		Mortgage		Lease		Other	
	Area	H/H	Area	H/H	Area	H/H	Area	H/H	Area	H/H	Area	H/H
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	77837	328798	67603	294323	4091	21564	773	2752	4580	10548	790	4949
Shady	12869	91559	11023	80002	1012	8177	65	125	642	1752	126	1502
Open	64968	242577	56580	214321	3078	13387	708	2626	3938	8796	663	3447
Stratum-1												
Total	29447	74438	27739	70882	352	910	66	248	810	910	481	1820
Shady	2866	12572	2829	12406	37	165	-	-	-	-	-	-
Open	26581	62197	24910	58475	314	744	66	248	810	910	481	1820
Stratum-2												
Total	48390	254360	39864	223441	3739	20654	707	2504	3770	9639	309	3129
Shady	10003	78987	8194	67596	975	8011	65	125	642	1752	126	1502
Open	38387	180380	31670	155846	2764	12643	642	2378	3128	7886	183	1627

Table-2: Distribution of area (acres) and number of households under turmeric cultivation by land type and cultivation type.

Land type	Type of cultivation					
	Total		Single		Mixed	
	Area	Household	Area	Household	Area	Household
1	2	3	4	5	6	7
All						
Total	77837	328798	44653	228903	33183	105233
Shady	12869	91559	7196	58456	5672	33103
Open	64968	242577	37457	170447	27511	72130
Stratum-1						
Total	29447	74438	7001	23737	22446	51031
Shady	2866	12572	1268	4880	1598	7692
Open	26581	62197	5733	18858	20848	43339
Stratum-2						
Total	48390	254360	37652	205165	10738	54202
Shady	10003	78987	5928	53576	4075	25411
Open	38387	180380	31724	151590	6663	28791

Table-3: Per acre land preparation cost (Tk.) by land type.

Land type	Area	Type of land preparation					
		Total Cost (Tk.)	Plough		Power tiller		Other
			Number	Cost(Tk.)	Number	Cost (Tk.)	Cost (Tk.)
1	2	3	4	5	6	7	8
All							
Total	77837	3857	8	2037	5	984	836
Shady	12869	4388	14	3050	6	978	360
Open	64968	3752	6	1837	4	985	930
Stratum-1							
Total	29447	3486	4	1852	*	23	1611
Shady	2866	4169	8	3387	-		782
Open	26581	3412	4	1686	*	23	1700
Stratum-2							
Total	48390	4083	10	2150	7	1569	364
Shady	10003	4450	16	2954	8	1258	239
Open	38387	3987	8	1941	7	1650	397

Note: * means less than one.

Table-4: Per acre quantity (kg) seed & their cost (Tk.) and per acre number plantation labour & their cost (Tk.) by land type.

.Land type	Total Cost	Seed		Plantation			
		Quantity (Kg)	Cost(Tk.)	Number of labour			Cost (Tk.)
				Family	Hired	Total	
1	2	3	4	5	6	7	8
All							
Total	10456	442	6161	9.56	9.74	19.30	4295
Shady	10303	408	5854	11.88	8.87	20.75	4449
Open	10486	448	6222	9.10	9.91	19.01	4264
Stratum-1							
Total	7962	327	4417	8.93	4.56	13.49	3545
Shady	7428	252	3895	8.48	4.42	12.90	3533
Open	8020	335	4474	8.98	4.58	13.56	3546
Stratum-2							
Total	11973	511	7222	9.94	12.89	22.83	4751
Shady	11126	453	6415	12.85	10.15	23.00	4711
Open	12194	527	7433	9.18	13.61	22.79	4761

Table-5: Per acre number of weeding labour & their cost (Tk.) and per acre number of harvesting labour & their cost (Tk.) by land type.

Land type	Total cost (tk.)	Weeding				Harvesting			
		Number of labour			Cost (tk.)	Number of labour			Cost (tk.)
		Family	Hired	Total		Family	Hired	Total	
1	2	3	4	5	6	7	8	9	10
All									
Total	10194	9.56	9.74	19.30	4295	11.91	12.95	24.86	5899
Shady	10269	11.88	8.87	20.75	4449	14.29	12.62	26.91	5820
Open	10179	9.10	9.91	19.01	4264	11.44	13.02	24.46	5915
Stratum-1									
Total	6686	6.12	3.54	9.66	2327	10.64	6.01	16.65	4359
Shady	6623	5.89	4.04	9.93	2328	11.00	6.41	17.41	4295
Open	6582	6.14	3.48	9.62	2327	10.62	5.96	16.58	4255
Stratum-2									
Total	11539	9.60	13.90	23.50	4642	12.68	17.18	29.86	6897
Shady	10735	12.23	11.39	23.62	4478	15.23	14.40	29.63	6257
Open	11730	8.92	14.56	23.48	4684	12.02	17.91	29.93	7046

Table-6: Per acre production cost (Tk.) by land type.

Land Type	Total Cost	Land pre-paration	Seed	Planting	Weeding	Irrigation	Fertilizer	Pesticide & related	Harvesting	Boiled	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	31575	3857	6161	4295	3766	105	3536	991	5899	1848	714	404
Shady	32347	4388	5854	4449	3999	122	3865	870	5820	1994	635	351
Open	31423	3752	6222	4264	3720	102	3471	1015	5915	1819	730	414
Stratum-1												
Total	22901	3486	4417	3545	2327	15	635	800	4259	2018	884	515
Shady	23846	4169	3895	3533	2328		854	1014	4295	2034	936	787
Open	22799	3412	4474	3546	2327	17	611	777	4255	2017	878	486
Stratum-2												
Total	36854	4083	7222	4751	4642	160	5302	1107	6897	1744	611	336
Shady	34782	4450	6415	4711	4478	157	4728	829	6257	1983	548	226
Open	37394	3987	7433	4761	4684	160	5451	1178	7064	1682	627	365

Table-7: Per acre types of fertilizer used quantity (kg.) & their value (Tk.) by land type.

Land type	Total Value	Urea		TSP/DAP		MOP		Organic		Khoil (Oil cake)		Others	
		Qty (kg)	Price (Tk.)	Qty (kg)	Price (Tk.)	Qty (kg)	Price (Tk.)	Qty (kg)	Price (Tk.)	Qty (kg)	Price (Tk.)	Qty (kg)	Price (Tk.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
All													
Total	3536	50	975	42	1203	23	430	539	697	4	72	14	160
Shady	3865	52	1072	44	1236	23	427	73	900	1	22	19	208
Open	3471	50	955	41	1197	23	430	501	657	4	82	13	150
Stratum-1													
Total	635	19	380	6	180	2	35	3	6	-	-	2	34
Shady	854	18	373	11	349	6	116	14	16	-	-		
Open	611	19	380	6	162	1	26	2	4	-	-	2	38
Stratum-2													
Total	5302	69	1337	64	1826	36	670	865	1118	6	115	21	236
Shady	4728	61	1272	54	1490	28	516	939	1154	2	28	25	268
Open	5451	71	1354	66	1913	38	710	846	1109	7	138	20	228

Table-8: Per acre production quantity (Kg) and their value (Tk.) by land type.

Land type	Per acre production quantity (Kg) and their value (Tk.)				
	Total	Raw		Dry	
	Value (tk)	Qty (Kg)	Value (tk)	Qty (Kg)	Value (tk)
1	2	3	4	5	6
All					
Total	64348	2857	29435	618	34913
Shady	60107	2925	31525	527	28582
Open	65188	2844	29021	636	36167
Stratum-1					
Total	39707	1591	15770	488	23937
Shady	38980	1569	16603	403	22377
Open	39785	1593	15680	497	24105
Straum-2					
Total	79343	3628	37750	697	41593
Shady	66160	3313	35800	562	30360
Open	82778	3710	38258	732	44520

Table-9: Per acre production cost (Tk.) by size of land and stratum.

Size of land planted (Acres)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	31575	3857	6161	4295	3766	105	991	3536	5899	1848	714	404
<= 0.04	34816	4540	7184	3147	4076	-	-	5000	5778	2706	746	1640
0.05 – 0.49	34724	4312	6522	4560	4197	146	1119	4246	6324	2135	748	416
0.50 – 0.99	28781	3497	5853	4121	3398	58	868	2453	5693	1667	769	404
1.00 – 1.49	25359	2913	5218	3633	2965	12	842	2645	4906	1429	489	309
1.50 – 2.49	27434	3255	6098	3853	3216	106	652	2949	5019	1131	701	454
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Stratum-1												
Total	22901	3486	4417	3545	2327	15	800	635	4259	2018	884	515
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	25692	4093	4317	4072	2514	1	1150	723	4636	2565	986	636
0.50 – 0.99	22548	3515	4303	3392	2417	45	642	479	4332	1899	969	555
1.00 – 1.49	19022	2534	4409	3111	1910	-	531	774	3645	1400	455	252
1.50 – 2.49	20403	2782	5468	2616	2104	-	375	458	3652	1351	1164	432
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Stratum-2												
Total	36854	4083	7222	4751	4642	160	1107	5302	6897	1744	611	336
<= 0.04	34816	4540	7184	3147	4076	-	-	5000	5778	2706	746	1640
0.05 – 0.49	38129	4395	7354	4744	4831	200	1107	5574	6961	1973	656	333
0.50 – 0.99	35103	3480	7425	4860	4393	71	1096	4456	7074	1431	566	251
1.00 – 1.49	35353	3510	6492	4456	4629	31	1331	5596	6893	1474	542	399
1.50 – 2.49	32305	3582	6534	4710	3987	179	844	4674	5965	979	381	470
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-10: Per acre production quantity (Kg) & their value (Tk.) by size of land and stratum.

Size of land planted (Acres	Per acre production quantity (Kg) and their value (Tk.)				
	Total	Raw		Dry	
	Value (tk)	Qty (Kg)	Value (tk)	Qty (Kg)	Value (tk)
1	2	3	4	5	6
All					
Total	64348	2857	29435	618	34913
<= 0.04	74928	2431	32134	663	42790
0.05 – 0.49	70478	3069	33404	634	37074
0.50 – 0.99	55349	2557	24534	571	30815
1.00 – 1.49	55879	2458	22986	604	32893
1.50 – 2.49	60700	2776	26012	672	34688
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-
Stratum-1					
Total	39707	1591	15770	488	23937
<= 0.04	-	-	-	-	-
0.05 – 0.49	42761	1717	17582	496	25179
0.50 – 0.99	37096	1462	13977	463	23118
1.00 – 1.49	39024	1570	15226	502	23798
1.50 – 2.49	36691	1529	15417	513	21274
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Stratum-2					
Total	79343	3628	37750	697	41593
<= 0.04	74924	2431	32134	663	42790
0.05 – 0.49	80929	3579	39370	686	41559
0.50 – 0.99	73864	3668	35242	681	38622
1.00 – 1.49	82458	3857	35224	763	47235
1.50 – 2.49	77332	3639	33351	783	43981
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-

Table-11: Per acre production cost (Tk.) by size of land and land type.

Size of land planted (Acres)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	31575	3857	6161	4295	3766	105	991	3536	5899	1848	714	404
<= 0.04	34816	4540	7184	3147	4076	-	-	5000	5778	2706	746	1640
0.05 – 0.49	34724	4312	6522	4560	4197	146	1119	4246	6324	2135	748	416
0.50 – 0.99	28781	3497	5853	4121	3398	58	868	2453	5693	1667	769	404
1.00 – 1.49	25359	2913	5218	3633	2965	12	842	2645	4906	1429	489	309
1.50 – 2.49	27434	3255	6098	3853	3216	106	652	2949	5019	1131	701	454
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Shady												
Total	32347	4388	5854	4449	3999	122	870	3865	5820	1994	635	351
<= 0.04	33094	4627	7036	2939	3703	-	-	3352	6136	2909	830	1561
0.05 – 0.49	32780	4449	5770	4545	4106	152	874	4082	5832	2057	581	331
0.50 – 0.99	32680	4184	6522	4234	3913	14	853	3605	6274	1920	779	382
1.00 – 1.49	21491	3775	4394	3549	2197		1028	705	3690	873	817	462
1.50 – 2.49	20450	4500	4000	3500	2000		800		2500	1000	1500	650
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Open												
Total	31423	3752	6222	4264	3720	102	1015	3471	5915	1819	730	414
<= 0.04	36440	4457	7323	3343	4429	-	-	6554	5440	2514	666	1714
0.05 – 0.49	35327	4270	6756	4564	4225	143	1195	4297	6477	2159	799	443
0.50 – 0.99	28241	3402	5760	4105	3327	64	869	2294	5613	1532	768	407
1.00 – 1.49	25477	2886	5243	3636	2988	12	836	2704	4942	1445	479	305
1.50 – 2.49	27656	3215	6164	3865	3255	109	647	3042	5098	1135	676	448
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-12: Per acre production quantity (Kg.) &their value (Tk.) by size of land and land type.

Size of land planted (Acres)	Per acre production quantity (Kg) and their value (Tk.)				
	Total	Raw		Dry	
	Value (tk)	Qty (Kg)	Value (tk)	Qty (Kg)	Value (tk)
1	2	3	4	5	6
All					
Total	64348	2857	29435	618	34913
<= 0.04	74928	2431	32134	663	42790
0.05 – 0.49	70478	3069	33404	634	37074
0.50 – 0.99	55349	2557	24534	571	30815
1.00 – 1.49	55879	2458	22986	604	32893
1.50 – 2.49	60700	2776	26012	672	34688
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-
Shady					
Total	60107	2925	31525	527	28582
<= 0.04	78812	2982	41448	509	37364
0.05 – 0.49	62149	2945	32610	541	29539
0.50 – 0.99	56214	2965	27646	546	28568
1.00 – 1.49	34741	2290	24023	186	10718
1.50 – 2.49	30000	2250	30000		
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Open					
Total	65188	2844	29021	636	36167
<= 0.04	71257	1911	23351	809	47906
0.05 – 0.49	73063	3107	33651	663	39412
0.50 – 0.99	55229	2500	24104	575	31126
1.00 – 1.49	56520	2463	22955	616	33566
1.50 – 2.49	61673	2792	25886	693	35788
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-

Table-13: Per acre production cost (Tk.) for stratum-1 by size of land and land type.

Size of land planted (Acres)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Stratum-1												
Total	22901	3486	4417	3545	2327	15	800	635	4259	2018	884	515
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	25692	4093	4317	4072	2514	1	1150	723	4636	2565	986	636
0.50 – 0.99	22548	3515	4303	3392	2417	45	642	479	4332	1899	969	555
1.00 – 1.49	19022	2534	4409	3111	1910	-	531	774	3645	1400	455	252
1.50 – 2.49	20403	2782	5468	2616	2104	-	375	458	3652	1351	1164	432
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Shady												
Total	23846	4169	3895	3533	2328	-	1014	854	4295	2034	936	787
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	23855	4120	3715	3689	2215	-	1103	928	4439	2177	783	688
0.50 – 0.99	26955	4573	4396	2750	3131	-	645	947	4760	2604	1563	1585
1.00 – 1.49	21491	3775	4394	3549	2197	-	1028	705	3690	873	817	462
1.50 – 2.49	20450	4500	4000	3500	2000	-	800		2500	1000	1500	650
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Open												
Total	22799	3412	4474	3546	2327	17	777	611	4255	2017	878	486
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	26075	4088	4442	4152	2576	1	1159	680	4677	2646	1028	625
0.50 – 0.99	22355	3468	4299	3420	2386	47	642	458	4313	1869	944	510
1.00 – 1.49	18897	2471	4410	3089	1895	-	506	777	3643	1427	437	242
1.50 – 2.49	20399	2643	5587	2545	2112	-	341	495	3746	1380	1136	414
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-14: Per acre production quantity (Kg) & their value (Tk.) for stratum-1 by size of land and land type.

Size of land planted (Acres)	Per acre production quantity (Kg) and their value (Tk.)				
	Total	Raw		Dry	
	Value (tk)	Qty (Kg)	Value (tk)	Qty (Kg)	Value (tk)
1	2	3	4	5	6
Stratum-1					
Total	39707	1591	157770	488	23937
<= 0.04	-	-	-	-	-
0.05 – 0.49	42761	1717	17582	496	25179
0.50 – 0.99	37096	1462	13977	463	23118
1.00 – 1.49	39024	1570	15226	502	23798
1.50 – 2.49	36691	1529	15417	513	21274
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Shady					
Total	38980	1569	16603	403	22377
<= 0.04	-	-	-	-	-
0.05 – 0.49	40199	1517	15033	450	25166
0.50 – 0.99	39683	1010	13479	493	26204
1.00 – 1.49	34741	2290	24023	186	10718
1.50 – 2.49	30000	2250	30000		
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Open					
Total	39785	1593	15680	497	24105
<= 0.04	-	-	-	-	-
0.05 – 0.49	43295	1759	18113	505	25181
0.50 – 0.99	36983	1482	13999	462	22984
1.00 – 1.49	39241	1534	14781	518	24460
1.50 – 2.49	37235	1471	14234	554	23001
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-

Table-15: Per acre production cost (Tk.) for stratum-2 by size of land and land type.

Size of land planted (Acres)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Stratum-2												
Total	36854	4083	7222	4751	4642	160	1107	5302	6897	1744	611	336
<= 0.04	34816	4540	7184	3147	4076	-	-	5000	5778	2706	746	1640
0.05 – 0.49	38129	4395	7354	4744	4831	200	1107	5574	6961	1973	658	333
0.50 – 0.99	35103	3480	7425	4860	4393	71	1096	4456	7074	1431	566	251
1.00 – 1.49	35353	3510	6492	4456	4629	31	1331	5596	6893	1474	542	399
1.50 – 2.49	32305	3582	6534	4710	3987	179	844	4674	5965	979	381	470
2.50 – 4.99	34248	3854	6272	5364	3275	189	1232	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Shady												
Total	34782	4450	6415	4711	4478	157	829	4728	6257	1983	548	226
<= 0.04	33094	4627	7036	2939	3703	-	-	3352	6136	2909	830	1561
0.05 – 0.49	35003	4531	6282	4759	4577	190	817	4868	6179	2027	531	242
0.50 – 0.99	33880	4103	6967	4545	4077	17	897	4162	6591	1776	615	130
1.00 – 1.49	-	-	-	-	-	-	-	-	-	-	-	-
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Open												
Total	37394	3987	7433	4761	4684	160	1178	5451	7064	1682	627	365
<= 0.04	36440	4457	7323	3343	4429	-	-	6554	5440	2514	666	1714
0.05 – 0.49	39234	4347	7733	4738	4921	203	1210	5824	7237	1953	703	365
0.50 – 0.99	35413	3322	7541	4939	4474	85	1145	4531	7196	1343	553	282
1.00 – 1.49	35353	3510	6492	4456	4629	31	1331	5596	6893	1474	542	399
1.50 – 2.49	32305	3582	6534	4710	3987	179	844	4674	5965	979	381	470
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-16: Per acre production quantity (Kg) and their value (Tk.) for stratum-2 by size of land and land type.

Size of land planted (Acres)	Per acre production quantity (Kg) and their value (Tk.)				
	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk)	Qty (Kg)	Value (Tk)
1	2	3	4	5	6
Stratum-2					
Total	79343	3628	37750	697	41593
<= 0.04	74924	2431	32134	663	42790
0.05 – 0.49	80929	3579	39370	686	41559
0.50 – 0.99	73864	3668	35242	681	38622
1.00 – 1.49	82458	3857	35224	763	47235
1.50 – 2.49	77332	3639	33351	783	43981
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-
Shady					
Total	66160	3313	35800	562	30360
<= 0.04	78812	2982	41448	509	37364
0.05 – 0.49	67617	3301	36989	564	30628
0.50 – 0.99	59679	3375	30615	557	29064
1.00 – 1.49	-	-	-	-	-
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Open					
Total	82778	3710	38258	732	44520
<= 0.04	71257	1911	23351	809	47906
0.05 – 0.49	85632	3677	40212	730	45420
0.50 – 0.99	77464	3742	36416	713	41047
1.00 – 1.49	82458	3857	35224	763	47235
1.50 – 2.49	77332	3639	33351	783	43981
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-

Table-17: Per acre production cost (Tk.) by size land and tenancy.

Size of land planted (Acres)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	31575	3857	6161	4295	3766	105	991	3536	5899	1848	714	404
<= 0.04	34816	4540	7184	3147	4076			5000	5778	2706	746	1640
0.05 – 0.49	34724	4312	6522	4560	4197	146	1119	4246	6324	2135	748	416
0.50 – 0.99	28781	3497	5853	4121	3398	58	868	2453	5693	1667	769	404
1.00 – 1.49	25359	2913	5218	3633	2965	12	842	2645	4906	1429	489	309
1.50 – 2.49	27434	3255	6098	3853	3216	106	652	2949	5019	1131	701	454
2.50 – 4.99	34248	3854	6272	5364	3275	189	1235	5685	6360	1008	567	441
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Owned land												
Total	31533	3856	6248	4232	3725	106	997	3381	5944	1900	729	417
<= 0.04	34838	4646	7246	3000	4003	-	-	4875	5629	2921	749	1770
0.05 – 0.49	34989	4371	6671	4544	4212	145	1129	4133	6404	2194	749	436
0.50 – 0.99	28377	3437	5801	4108	3307	65	865	2301	5641	1656	787	409
1.00 – 1.49	24869	2757	5255	3440	2746	14	809	2531	4988	1533	511	285
1.50 – 2.49	26913	3207	6209	3529	3173	119	703	2503	5028	1181	763	499
2.50 – 4.99	34084	3971	6622	4917	3309	-	1434	5283	6342	1103	643	460
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Share crop												
Total	30732	3971	5506	4468	4168	106	860	3679	5932	1215	570	257
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	31075	4124	4929	4541	3977	163	1077	4151	5972	1154	694	293
0.50 – 0.99	32385	4052	7010	4141	5060	-	568	2978	6208	1680	443	246
1.00 – 1.49	25299	3467	4942	5996	3266	-	618	2499	5655	520	155	180
1.50 – 2.49	27563	2584	5988	5982	3593	120	90	3419	4551	838	399	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Mortgage												
Total	32836	3438	5075	6137	5055	57	853	4003	5712	1727	556	223
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	32996	3522	4970	6408	5556	88	851	3851	5687	1440	426	196
0.50 – 0.99	33526	3525	5475	5369	4295	-	820	4664	6584	1689	779	328
1.00 – 1.49	31360	3000	5000	6000	4000	-	900	3800	4750	2910	800	200
1.50 - 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Lease												
Total	33622	3944	6003	4640	4003	108	1075	5820	5464	1576	652	339
<= 0.04	34540	3200	6400	5000	5000	-	-	6580	7660	-	700	-
0.05 – 0.49	35987	3733	6705	4248	4200	157	1110	6846	5579	2330	815	264
0.50 – 0.99	32263	4199	5640	4058	3137	-	1346	4747	6088	1768	842	439
1.00 – 1.49	30974	4361	5452	4775	4964	-	1269	4101	4603	571	438	440
1.50 – 2.49	31302	3846	5302	5557	3411	600	468	6133	5107	860	344	274
2.50 – 4.99	34606	3600	5510	6336	3200	-	800	6560	6400	800	400	400
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	26440	3278	4143	4925	2541	63	787	2413	4558	2389	715	629
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	30555	4000	4526	5127	2949	92	897	3370	5716	2547	936	395
0.50 – 0.99	22333	1667	4000	5000	1333	-	500	833	3667	3333	333	1667
1.00 – 1.49	15936	1660	3106	4340	1702	-	553	128	1532	1702	191	1021
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-18: Per acre production quantity (Kg.) & their value (Tk.) by size of land and tenancy.

Size of land planted (Acres)	Per acre production quantity (Kg.) & their value (Tk.)				
	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk)	Qty (Kg)	Value (Tk)
1	2	3	4	5	6
All					
Total	64348	2857	29435	618	34913
<= 0.04	74924	2431	32134	663	42790
0.05 – 0.49	70478	3069	33404	634	37074
0.50 – 0.99	55349	2557	24534	571	30815
1.00 – 1.49	55879	2458	22986	604	32893
1.50 – 2.49	60700	2776	26012	672	34688
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-
Owned land					
Total	64616	2760	28661	634	35955
<= 0.04	75790	2179	29605	716	46186
0.05 – 0.49	71741	3056	33436	650	38305
0.50 – 0.99	54130	2497	23818	560	30312
1.00 – 1.49	56048	2119	20070	661	35977
1.50 – 2.49	58928	2342	22796	713	36131
2.50 – 4.99	78456	3971	33419	735	45037
5.00 +	-	-	-	-	-
Share crop					
Total	56679	3110	32439	428	24240
<= 0.04	-	-	-	-	-
0.05 – 0.49	52796	2907	30653	380	22142
0.50 – 0.99	65772	3082	32173	668	33599
1.00 – 1.49	56610	3640	35002	231	21608
1.50 – 2.49	58821	4790	50898	116	7923
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Mortgage					
Total	68082	2459	25384	787	42698
<= 0.04	-	-	-	-	-
0.05 – 0.49	66626	2513	25019	812	41607
0.50 – 0.99	73361	2336	21148	738	52213
1.00 – 1.49	67405	2400	32000	750	35405
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Lease					
Total	69068	4218	39466	528	29602
<= 0.04	64000	5600	64000		
0.05 – 0.49	73882	3802	39698	611	34184
0.50 – 0.99	65401	3270	30918	676	34484
1.00 – 1.49	57528	5230	44520	260	13008
1.50 – 2.49	74654	5341	41599	556	33055
2.50 – 4.99	71600	3960	39600	400	32000
5.00 – 7.49	-	-	-	-	-

Size of land planted (Acres)	Per acre production quantity (Kg.) & their value (Tk.)				
	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk)	Qty (Kg)	Value (Tk)
1	2	3	4	5	6
7.50 +	-	-	-	-	-
Others					
Total	50123	2338	25916	557	24208
<= 0.04	-	-	-	-	-
0.05 – 0.49	57358	2603	29015	661	28343
0.50 – 0.99	41500	1667	20667	417	20833
1.00 – 1.49	32011	1766	18553	298	13457
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 – 7.49	-	-	-	-	-
7.50 +	-	-	-	-	-

Table-19: Per acre production cost (Tk.) for stratum-1 by size of land and tenancy.

Size of land planted (Acres)	Per acre production cost (taka)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Stratum-1												
Total	22901	3486	4417	3545	2327	15	800	635	4259	2018	884	515
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	25692	4093	4317	4072	2514	1	1150	723	4636	2565	986	636
0.50 – 0.99	22548	3515	4303	3392	2417	45	642	479	4332	1899	969	555
1.00 – 1.49	19022	2534	4409	3111	1910	-	531	774	3645	1400	455	252
1.50 – 2.49	20403	2782	5468	2616	2104	-	375	458	3652	1351	1164	432
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Owned land												
Total	22966	3460	4453	3585	2347	16	794	638	4298	2070	891	513
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	25739	4092	4310	4063	2516	1	1158	730	4652	2584	989	644
0.50 – 0.99	22555	3509	4330	3360	2450	47	623	456	4311	1956	972	542
1.00 – 1.49	18985	2425	4509	2906	1908		514	820	3763	1472	444	224
1.50 – 2.49	20435	2587	5649	2447	2150		328	463	3758	1393	1209	451
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Share crop												
Total	22062	3882	4316	3376	3259	-	536	-	4071	1294	786	541
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	22617	4132	4469	3151	2962	-	792	-	4038	1547	883	642
0.50 – 0.99	21000	3500	4167	3667	3333	-		-	4000		1333	1000
1.00 – 1.49	21230	3450	4000	3800	4000		180	-	4200	1400	200	
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Mortgage												
Total	22194	3938	4206	3250	1125	-	1250	-	3750	3125	675	875
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	22194	3938	4206	3250	1125	-	1250	-	3750	3125	675	875
0.50 – 0.99	-	-	-	-	-	-	-	-	-	-	-	-
1.00 – 1.49	-	-	-	-	-	-	-	-	-	-	-	-
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Lease												
Total	21555	4461	3536	4923	1491	-	1141	839	3626	281	817	439
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	26096	3269	3904	5769	1923	-	2115	1904	5000	1442	385	385
0.50 – 0.99	22636	4073	3425	4153	1278	-	1220	1297	5272		927	735
1.00 – 1.49	20943	4672	3600	5692	1538	-	430	581	2769	893	872	333
1.50 – 2.49	20056	4911	3493	4464	1607	-	446	402	2500		670	223
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	22161	2974	3938	4854	2065	-	697	636	3270	2346	675	706
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	27240	4329	4608	5245	2517	-	857	1013	4615	2668	1143	245
0.50 – 0.99	22333	1667	4000	5000	1333	-	500	833	3667	3333	333	1667
1.00 – 1.49	15936	1660	3106	4340	1702	-	553	128	1532	1702	191	1021
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-20: Per acre production quantity (Kg.) and their value (Tk.) for stratum-1 by size of land and tenancy

Size of land planted (Acres	Per acre production quantity (Kg.) and their value (Tk.)				
	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk.)	Qty (Kg)	Value (Tk.)
1	2	3	4	5	6
Stratum-1					
Total	39707	1591	15770	488	23937
<= 0.04	-	-	-	-	-
0.05 – 0.49	42761	1717	17582	496	25179
0.50 – 0.99	37096	1462	13977	463	23118
1.00 – 1.49	39024	1570	15226	502	23798
1.50 – 2.49	36691	1529	15417	513	21274
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Owned land					
Total	39970	1536	15110	505	24861
<= 0.04	-	-	-	-	-
0.05 – 0.49	43112	1724	17582	499	25529
0.50 – 0.99	37161	1404	13249	479	23912
1.00 – 1.49	39526	1440	13837	541	25689
1.50 – 2.49	36638	1362	13411	560	23227
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Share crop					
Total	37058	2359	24280	302	12778
<= 0.04	-	-	-	-	-
0.05 – 0.49	36674	2217	21921	362	14753
0.50 – 0.99	37500	3583	37500		
1.00 – 1.49	37810	2000	22600	325	15210
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Mortgage					
Total	34256	-	-	814	34256
<= 0.04	-	-	-	-	-
0.05 – 0.49	34256	-	-	814	34256
0.50 – 0.99	-	-	-	-	-
1.00 – 1.49	-	-	-	-	-
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-

Size of land planted (Acres	Per acre production quantity (Kg.) and their value (Tk.)				
	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk.)	Qty (Kg)	Value (Tk.)
1	2	3	4	5	6
Lease					
Total	35112	3250	34344	16	768
<= 0.04	-	-	-	-	-
0.05 – 0.49	34077	1615	19615	308	14462
0.50 – 0.99	33866	3067	33866	-	-
1.00 – 1.49	35008	3559	35008	-	-
1.50 – 2.49	37277	3348	37277	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Others					
Total	34911	1590	18549	353	16362
<= 0.04	-	-	-	-	-
0.05 – 0.49	35913	1430	18102	385	17810
0.50 – 0.99	40500	1667	20667	417	20833
1.00 – 1.49	32011	1766	18553	298	13457
1.50 – 2.49	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-

Table-21: Per acre production cost (Tk.) for stratum-2 by size of land and tenancy.

Size of land planted (Acres)	Per acre production cost (taka)											
	Total	Land Preparation	Seed	Plantation	Wedding	Irrigation	Pesticide & related	Fertilizer	Harvesting	Boiling & dry	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Stratum-2												
Total	36854	4083	7222	4751	4642	160	1107	5302	6897	1744	611	336
<= 0.04	34816	4540	7184	3147	4076			5000	5778	2706	746	1640
0.05 – 0.49	38129	4395	7354	4744	4831	200	1107	5574	6961	1973	658	333
0.50 – 0.99	35103	3480	7425	4860	4393	71	1096	4456	7074	1431	566	251
1.00 – 1.49	35353	3510	6492	4456	4629	31	1331	5596	6893	1474	542	399
1.50 – 2.49	32305	3582	6534	4710	3987	179	844	4674	5965	979	381	470
2.50 – 4.99	34248	3854	6272	5364	3275	189	1232	5685	6360	1008	567	441
5.00 +												
Owned land												
Total	37495	4131	7496	4752	4684	168	1137	5289	7090	1781	616	350
<= 0.04	34838	4646	7246	3000	4003			4875	5629	2921	749	1770
0.05 – 0.49	38938	4490	7679	4750	4936	207	1116	5586	7153	2028	647	347
0.50 – 0.99	35272	3351	7543	4994	4322	87	1151	4485	7217	1302	567	252
1.00 – 1.49	36134	3392	6684	4462	4349	41	1374	5807	7334	1650	639	402
1.50 – 2.49	32043	3697	6652	4386	3983	214	1000	4118	6034	1012	410	537
2.50 – 4.99	34084	3971	6622	4917	3309		1434	5283	6342	1103	643	460
5.00 +												
Share crop												
Total	31547	3980	5617	4570	4254	116	891	4025	6107	1208	550	230
<= 0.04												
0.05 – 0.49	31885	4123	4973	4674	4074	178	1104	4549	6158	1116	676	260
0.50 – 0.99	32964	4080	7154	4166	5148		597	3129	6320	1765	398	208
1.00 – 1.49	26567	3473	5236	4057	3038		755	3278	6108	245	142	236
1.50 – 2.49	27563	2584	5988	5982	3593	120	90	3419	4551	838	399	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Mortgage												
Total	33832	3391	5156	6407	5423	62	816	4378	5896	1596	545	162
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	34661	3458	5087	6895	6239	102	790	4444	5985	1180	388	92
0.50 – 0.99	33526	3525	5475	5369	4295	-	820	4664	6584	1689	779	328
1.00 - 1.49	31360	3000	5000	6000	4000	-	900	3800	4750	2910	800	200
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-
Lease												
Total	36214	3833	6532	4579	4542	131	1060	6890	5858	1854	616	318
<= 0.04	34540	3200	6400	5000	5000	-	-	6580	7660	-	700	-
0.05 – 0.49	36210	3744	6768	4213	4251	161	1087	6958	5592	2350	824	261
0.50 – 0.99	37083	4262	6749	4010	4068	-	1281	6475	6496	2654	799	291
1.00 – 1.49	36325	4195	6440	4286	6791	-	1474	5978	5582	876	207	497
1.50 – 2.49	36226	3380	6095	6036	4201	-	281	8642	6249	846	201	296
2.50 – 4.99	34606	3600	5510	6336	3200	600	800	6560	6400	800	400	400
5.00+	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	33091	3749	4463	5036	3279	162	927	5174	6559	2455	777	510
<= 0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05 – 0.49	33091	3749	4463	5036	3279	162	927	5174	6559	2455	777	510
0.50 – 0.99	-	-	-	-	-	-	-	-	-	-	-	-
1.00 – 1.49	-	-	-	-	-	-	-	-	-	-	-	-
1.50 – 2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50 – 4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00 +	-	-	-	-	-	-	-	-	-	-	-	-

Table-22: Per acre production quantity (Kg.) and their value (Tk.) for stratum-2 by size of land and tenancy.

Size of land planted (acres)	Total	Raw		Dry	
	Value (Tk)	Qty (Kg)	Value (Tk)	Qty (Kg)	Value (Tk)
1	2	3	4	5	6
Stratum-2					
Total	79343	3628	37750	697	41593
<= 0.04	74924	2431	32134	663	42790
0.05 – 0.49	80924	3579	39370	686	41559
0.50 – 0.99	73864	3668	35242	681	38622
1.00 – 1.49	82458	3857	35224	763	47235
1.50 – 2.49	77332	3639	33351	783	43981
2.50 – 4.99	76297	3967	35365	630	40932
5.00 +	-	-	-	-	-
Owned land					
Total	81765	3612	38090	723	43675
<= 0.04	75790	2179	29605	716	46186
0.05 – 0.49	83964	3624	40205	714	43759
0.50 – 0.99	74224	3791	36332	655	37891
1.00 – 1.49	87679	3417	32003	889	55676
1.50 – 2.49	76578	3118	30228	834	46349
2.50 – 4.99	78456	3971	33419	735	45037
5.00 +	-	-	-	-	-
Share crop					
Total	58524	3180	33206	440	25318
<= 0.04	-	-	-	-	-
0.05 – 0.49	54339	2973	31489	382	22850
0.50 – 0.99	67211	3057	31902	702	35309
1.00 – 1.49	62469	4151	38868	241	23601
1.50 – 2.49	58821	4790	50898	116	7923
2.50 - 4.99	-	-	-	-	-
5.00 +	-	-	-	-	-
Mortgage					
Total	71246	2690	27759	785	43487
<= 0.04	-	-	-	-	-
0.05 – 0.49	71614	2900	28874	812	42740
0.50 – 0.99	73361	2336	21148	738	52213
1.00 – 1.49	67405	2400	32000	750	35405
1.50 +	-	-	-	-	-
Lease					
Total	76360	4426	40566	638	35795
<= 0.04	64000	5600	64000	-	-
0.05 – 0.49	74780	3851	40151	618	34629
0.50 – 0.99	81193	3371	29441	1014	51752
1.00 – 1.49	69543	6122	49595	398	19948
1.50 – 2.49	91021	6213	43491	799	47530
2.50 – 4.99	71600	3960	39600	400	32000
5.00 +	-	-	-	-	-
Others					
Total	73766	3500	37364	873	36401
<= 0.04	-	-	-	-	-
0.05 – 0.49	73766	3500	37364	873	36401
0.50 – 0.99	-	-	-	-	-
1.00 +	-	-	-	-	-

Annex-B: Concepts and Definitions

Mauza:

Mauza is the demarcated lowest administrative territorial unit having separate jurisdiction list (JL) number in the revenue records. Every mauza has its well demarcated Cadastral Survey (CS) map. Mauza should be distinguished from local village since a mauza may consist of one or more villages or part of a village.

Primary Sampling Unit (PSU):

PSU, here in this Turmeric survey refers to one or more than one mauzas or any part of a mauza. For effective implementation of this survey, 100 primary sampling units have been selected from the whole country.

Stratum-1: Stratum-1 consists of five (5) districts namely Chittagong, Cox's Bazar, Bandarban, Rangamati and Khagrachhari

Stratum-2: Stratum-2 consists of the remaining 59 districts.

Ultimate Sampling Units (USUs):

All the households having at least 5 decimal area of land under turmeric cultivation were listed from the selected PSUs and then 30 households have been drawn following the systematic random sampling, where a mouza was treated as the primary sampling unit (PSU) and within the selected mouzas, Banana crop producing households were the ultimate sampling unit.

Household (HH):

A household means a group of persons normally living together and eating in one mess (i.e. with common arrangement of cooking) with their dependents, relatives, servants etc. A household may be a one person household or a multi-person household. In other words, when a group of persons living together generally maintain a family or family like relations and take meals from the same kitchen is termed as a household. Popularly, it is described as "*Khana*". In some cases there may be more than one household in a single house or in one dwelling arrangement. Similarly, a household may have more than one house or structure or shed.

The household must be distinguished from a family which consists of blood related members who may live in different places but members of the household must share the same kitchen and live together.

Owned land:

Owned land means the area of the land owned by the holder including members of this household having a title of land with the right to determine the nature and extent of its use and to transfer the same. Moreover, there might be some land over which the holder or any member of the households has owner-like possession.

Share crop:

Land under share cropping is treated as the land which is cultivated under the condition of sharing the crops between land owner and the cultivator. The ratio of share cropping might vary from place to place. It might be one third (1/3) or half (1/2) or two-thirds (2/3) between owner and cultivator.

Mortgage:

The land which is taken in exchange of money paid by the mortgagee to the land owner for a fixed period of time under the condition that land would be released upon refunding the money to the mortgagee by the owner is considered as the land under mortgage.

Lease:

The land which is taken by the cultivator from the owner in exchange of a certain amount of money for one year or for any period of time for the purpose of cultivating crop is treated as land under lease. Under this criterion, land will automatically be released from the occupancy of the cultivator after the certain period of time.

Others:

The land which does not satisfy any of the four criteria mentioned earlier is treated as the others category.

Homestead area:

This includes land under household residence with all its structures, court yard, and entrance & exit passage. The land adjacent to residence and used for temporary or perennial crops, ponds & tanks, and other compact plantation is excluded from homestead area.

Single cropped areas:

Single cropped area means wherein one crop has been grown in survey year.

Mixed cropped areas:

Mixed cropped area is defined an area where two or more crops are grown simultaneously in a survey year.

Reference period:

The year 2012, prior to the survey year 2013, was considered as reference period.

Turmeric farm holding:

The households having at least five decimal area of land under turmeric cultivation was considered as the turmeric farm holding.

Aneex-C: Questionnaire (Bangla)

গোপনীয়

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ পরিসংখ্যান ব্যুরো
এগ্রিকালচার উইং

প্রোডাক্টিভিটি এ্যাসেসমেন্ট সার্ভে অব ডিফারেন্ট
এগ্রিকালচারাল ক্রপস্ কর্মসূচি
ই-২৭/এ, আগারগাঁও, ঢাকা-১২০৭

হলুদ ফসলের উৎপাদনশীলতা জরিপ-২০১৩

প্রথম অংশ

১। খানার পরিচিতি

স্ট্র্যাটাম নং ☐ পিএসইউ নম্বর ☐☐ কৃষি খানার ক্রমিক নং ☐☐☐ নির্বাচিত নমুনা খানার নম্বর ☐☐

খানা প্রধানের নামঃ . . . . . পিতা/স্বামীর নামঃ . . . . . অঞ্চলঃ . . . . . চাষীর মোবাইল নম্বরঃ							
জেলাঃ	কোড			উপজেলাঃ	কোড		
ইউনিয়নঃ	কোড			মৌজাঃ	কোড		

দ্বিতীয় অংশ

২। হলুদ ফসলের জমির পরিমাণ, মালিকানা, চাষের প্রকার, চাষের জন্য জমি প্রস্তুতি এবং খরচ (টাকায়)

জমির প্রকার	জমির মালিকানা (কোড)	চাষের প্রকার (কোড ও ফসলের নাম)		জমির পরিমাণ		লীজ নেয়া হলে বাৎসরিক কত টাকা দিতে হয়	চাষের জন্য জমি প্রস্তুতি (নিজস্ব হলে বাজার দরে লিখতে হবে)					মোট খরচ (টাকায়) (৭+৯+১১+১২)
				একর	শতক		লাঙ্গল/কোদাল		যান্ত্রিক		অন্যান্য খরচ (টাকায়)	
		কোড	ফসলের নাম				সংখ্যা	খরচ (টাকায়)	সংখ্যা	খরচ (টাকায়)		
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩
ছায়াযুক্ত												
ছায়ামুক্ত												

**চাষের প্রকার কোডঃ একক-১, মিশ্র-২ * মালিকানার কোডঃ নিজস্ব-১, বর্গা-২, বন্ধক-৩, লীজ-৪ এবং অন্যান্য-৫*

৩। হলুদ ফসলের বীজ রোপণ, নালা প্রস্তুতকরণ/নিড়ানি, সেচ, কীটনাশক ও বালাইনাশক (পোকামাকড় ও রোগ দমন)খরচ(টাকায়)

জমির প্রকার	বীজ		হলুদ রোপণ			নালা প্রস্তুতকরণ/নিড়ানি			সেচ খরচ (টাকায়)	পোকা মাকড় ও রোগ দমন খরচ (টাকায়)	অন্যান্য খরচ (টাকায়)	মোট খরচ (টাকায়) (৩+৬+৯+১০+১১+১২)
	পরিমাণ (কেজি)	খরচ (টাকায়)	শ্রমিকের সংখ্যা		খরচ (টাকায়)	শ্রমিকের সংখ্যা		খরচ (টাকায়)				
			পারিঃ	ভাড়া		পারিঃ	ভাড়া					
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩
ছায়াযুক্ত												
ছায়ামুক্ত												

*পারিঃ পারিবারিক
* কীটনাশকের নামঃ ক্যারাটে, এডমায়ার, ডেসিস, রেলোথ্রিন ইত্যাদি।
* ছত্রাকনাশকের (বালাইনাশক) নামঃ ডাইথেন-এম-৪৫,রিডোমিল এম জেড,নিউবেন,বর্দ্দো-মিকচার,সিকিউর,ইনডোফিল-এম-৪৫ ইত্যাদি।

৪। সার ব্যবহারের পরিমাণ (কেজিতে) ও মূল্য (টাকায়)

জমির প্রকার	ইউরিয়া		টিএসপি/ডিএপি		এমওপি		গোবর/জৈব সার		খৈল		অন্যান্য		সর্বমোট মূল্য (টাকায়) (৩+৫+৭+৯+১১+১৩)
	পরিমাণ	মূল্য (টাকায়)	পরিমাণ	মূল্য (টাকায়)	পরিমাণ	মূল্য (টাকায়)	পরিমাণ	মূল্য (টাকায়)	পরিমাণ	মূল্য (টাকায়)	পরিমাণ	মূল্য (টাকায়)	
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩	১৪
ছায়াযুক্ত													
ছায়ামুক্ত													

৫। হলুদ ফসল উত্তোলন, সিদ্ধকরণ ও শুকানো এবং পরিবহন খরচ(টাকায়)

জমির প্রকার	হলুদ উত্তোলনের মাস (কোড)	হলুদ উত্তোলন			সিদ্ধকরণ ও শুকানো খরচ(টাকায়)	পরিবহন খরচ (টাকায়)	অন্যান্য খরচ (টাকায়)	মোট খরচ (টাকায়) (৫+৬+৭+৮)
		শ্রমিকের সংখ্যা		খরচ (টাকায়)				
		পারিঃ	ভাড়া					
১	২	৩	৪	৫	৬	৭	৮	৯
ছায়াযুক্ত								
ছায়ামুক্ত								

*জানুয়ারী-১, ফেব্রুয়ারী-২, মাচ-৩, ... ,ডিসেম্বর-১২

৬। হলুদ ফসলের মোট উৎপাদন মূল্য(টাকায়)

জমির প্রকার	জমিতে মোট উৎপাদিত হলুদ (কাঁচা)		জমিতে মোট উৎপাদিত হলুদ (শুকনো)	
	পরিমাণ (কেজি)	মূল্য (টাকায়)	পরিমাণ (কেজি)	মূল্য (টাকায়)
১	২	৩	৪	৫
ছায়াযুক্ত				
ছায়ামুক্ত				

(১মণ = ৪০ কেজি)

৭। হলুদ মৌসুমে হলুদ চাষের জন্য এক একর জমি লীজ নিতে মালিককে কত টাকা দিতে হয়ঃ টাকাঃ [ ]

তথ্য সংগ্রহকারীর নামঃ ঃ .....
পদবীঃ .....
তারিখঃ.....

সুপারভাইজারের নাম ঃ .....
পদবীঃ .....
তারিখঃ .....

Confidential

Aneex-D: Questionnaire (English)

Government of the People's Republic of Bangladesh
Bangladesh Bureau of Statistics
Agriculture wing
Productivity Assessment Survey of Different
Agricultural Crops Programme
E-27/A, Agargaon, Dhaka-1207

Turmeric Crops Productivity Survey-2013

First Part

1. Identification of Household

Stratum No.[ ] PSU No.[ ][ ] Agriculture HH Sl No.[ ][ ][ ] Selected Sample HH No.[ ][ ]

Name of the Head of HH: . . . . . Region Name:				Father/Husband Name:. . . . . Farmer Mobile No.				
District:	Code:			Upazila:	Code:			
Union:	Code:			Mouza:	Code:			

Second Part

2.Area Under Turmeric Cultivation,Land Tenure,Land Preparation and Cost (Tk.).

Land type	Ownership of land (Code)	Cultivation type (Code)	Land area		Yearly leasing value only for Banana	Land preparation and cost (Tk.) (Market price is shown when cultivated is own)				Other Cost (Tk.)	Total Cost (Tk.) (7+9+11+12)
			Acre	Decimal		Plough/ Hoe		Mechanized (Power Tiller / Tracter)			
						No.	Cost (Tk.)	No.	Cost (Tk.)		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Shady											
Open											

* Cultivation Type: Single-1 and Mixed-2 *****Ownership Code: Owned-1, Share Crop-2, Mortgage-3, Laease-4 and Others-5

3.Costs (Tk.) regarding seed, Planting, Weeding, Irrigation, Insecticide and Pesticide.

Land type	Seedling		Plantation			Weeding/Drain preparation			Irrigation Cost (Tk.)	Insecticide & Pesticide Cost (Tk.)	Others Cost (Tk.)	Total Cost **(3+6+9+10+11+12)**
	Qty (kg)	Cost (Tk.)	No. of labour		Cost (Tk.)	No. of labour		Cost (Tk.)				
			Family	Hired		Family	Hired					
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Shady												
Open												

* Name of insecticide: Karate, Admire, Desis, Relothrin
* Name of Pesticidet Daithane M-45,Ridomil MZ, Nuben, Bordeaux mixture, Secure, Indofil-M-45 etc.

4. Use of Fertilizer Quantity (Kg.) and Price (Tk.).

Land type	Urea		TSP/DAP		MOP		Cow dung/Organic		Khail		Others		Total price (3+5+7+9+11 +13)
	Qty. (Kg)	Price (Tk.)	Qty. (Kg)	Price (Tk.)	Qty. (Kg)	Price (Tk.)	Qty. (Kg)	Price (Tk.)	Qty. (Kg)	Price (Tk.)	Qty. (Kg)	Price (Tk.)	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Shady													
Open													

5. Harvesting, Boil & Dry and Transport Cost (Tk.) of Turmeric crops.

Land type	Month of hervesting (code)	Harvesting of Turmeric			Boil and dry cost (Tk.)	Transport cost (Tk.)	Others Cost (Tk.)	Total Cost (Tk.) (4+5+6+7)
		No. of labour		Cost (Tk.)				
		Family	Hired					
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Shady								
Open								

***** January-1, February-2, March-3 .....December-12

6. Quantity(Kg.) and Value(Tk.) of produced Turmeric.

Land type	Produced Turmeric(Raw)		Produced Turmeric(Dry)	
	Quantity(Kg.)	Value (Tk.)	Quantity(Kg.)	Value (Tk.)
1	**2**	**3**	**4**	**5**
Shady				
Open				

(1Mond = 40 Kg)

7. Per acre yearly leasing value for turmeric crops **Taka** ____

Data Collector Name : .....
Designation: .....
Date : .....

Supervisor Name: .....
Designation: .....
Date : .....

Annex-E: Statistical Principles & Act

STATISTICAL PRINCIPLES

Fundamental Principles of Official Statistics

Background

The need for a set of principles governing official statistics became apparent at the end of the 1980s when countries in Central Europe began to change from centrally planned economies to market- oriented democracies. It was essential to ensure that national statistical systems in such countries would be able to produce appropriate and reliable data that adhered to certain professional and scientific standards. Towards this end, the Conference of European Statisticians developed and adopted the Fundamental Principles of Official Statistics in 1992. Statisticians in other parts of the world soon realized that the principles were of much wider, global significance. Following an international consultation process, a milestone in the history of international statistics was reached when the United Nations Statistical Commission at its Special Session of 11-15 April 1994 adopted the very same set of principles – with a revised preamble- as the United Nations Fundamental Principles of Official Statistics.

At its forty-second session in 2011, the Statistical Commission discussed the Fundamental principles of Official Statistics and acknowledged that the Principles were still as relevant today as they had been in the past and that no revision of the 10 Principles themselves was necessary. The Commission recommended, however, that Friends of the Chair group revise and update the preamble of the Fundamental Principles in order to take into account new developments since the time when the Principles were first formulated. At its forty-fourth sessions in 2013, the Statistical Commission adopted the revised preamble.

On 24 July 2013, the Economic and Social Council endorsed the Fundamental Principles of official Statistics as they had been originally adopted by the Statistical Commission almost 20 years ago in 1994, and recently reaffirmed by the Commission with a new preamble. Endorsement by ECOSOC marks the first time the Fundamental Principles have received such high recognition at the global political level. ECOSOC further recommended that the General Assembly also endorse the Principle.

Principles:

Principle 1: Relevance, impartiality and equal access

. Official statistics provide an indispensable element in the information system of a demographic society serving the Government, the economy and the public with data

about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

Principle 2: Professional standards and ethics

To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

Principle 3: Accountability and transparency

To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

Principle 4: Prevention of misuse

The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

Principle 5: Sources of Official Statistics

Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

Principle 6: Confidentiality

Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

Principle 7: Legislation

The laws, regulations and measures under which the statistical systems operate are to be made public.

Principle 8: National coordination

Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

Principle 9: Use of international standards

The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

Principle 10: International cooperation

Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

Bearing in mind that statistics are essential for sustainable economic, environmental and social development and that public trust in official statistics is anchored in professional independence and impartiality of statisticians, their use of scientific and transparent methods and equal access for all to official statistical information, the Chief Statisticians or coordinators of statistical activities of United Nations agencies and related organizations, agree that implementation of the following principles will enhance the functioning of the international statistical system.

In doing so, they note the endorsement of these principles by the Committee for the Coordination of Statistical Activities on 14 September, 2005; they further recall the adoption by the United *Nations Statistical Commission* of the Fundamental Principles of Official Statistics in its Special Session of 11-15 April 1994, and the endorsement of the *Declaration of Good Practices in Technical Cooperation in Statistics* in its 30th Session of 1-5 March 1999.

1. High quality international statistics, accessible for all, are a fundamental element of global information systems

Good practices include:

- Having regular consultations with key users both inside and outside the relevant organization to ascertain that their needs are met
- Periodic review of statistical programmes to ensure their relevance
- Compiling and disseminating international statistics based on impartiality
- Providing equal access to statistics for all users
- Ensuring free public accessibility of key statistics

2. To maintain the trust in international statistics, their production is to be impartial and strictly based on the highest professional standards

Good practices include:

- Using strictly professional considerations for decisions on methodology, terminology and data presentation
- Developing and using professional codes of conduct
- Making a clear distinction, in statistical publications, between statistical and analytical comments on the one hand and policy-prescriptive and advocacy comments on the other

3. The public has a right to be informed about the mandates for the statistical work of the organizations

Good practices include:

- Making decisions about statistical work programmes publicly available

- Making documents for and reports of statistical meetings publicly available

4. Concepts, definitions, classification, sources, methods and procedures employed in the production of international statistics are chosen to meet professional scientific standards and are made transparent for the users

Good practices include

- Aiming continuously to introduce methodological improvements and systems to manage and improve the quality and transparency of statistics
- Enhancing the professional level of staff by encouraging them to attend training course, to do analytical work, to publish scientific papers and to participate in seminars and conferences.
- Documenting the concepts, definitions and classification, as well as data collection and processing procedures used and the quality assessments carried out and making this information publicly accessible
- Documenting how data are collected, processed and disseminated, including information about editing mechanisms applied to country data
- Giving credit, in the dissemination of international statistics, to the original source and using agreed quotation standards when re-using statistics originally collected by others
- Making officially agreed standards publicly available

5. Sources and methods for data collection are appropriately chosen to ensure timeliness and other aspects of quality, to be cost- efficient and to minimize the reporting burden for data providers

Good practices include:

- Facilitating the provision of data by countries
- Working systematically on the improvement of the timeliness of international statistics
- Periodic review of statistical programmes to minimize the burden on data providers
- Sharing collected data with other organizations and collecting data jointly where appropriate
- Contributing to an integrated presentation of statistical programmes, including data collection plans, thereby making gaps or overlaps clearly visible

Ensuring that national statistical offices and other national organizations for official statistics are duly involved and advocating that the *Fundamental Principles of Official Statistics* are applied when data are collected in countries

6. Individual data collected about natural persons and legal entities, or about small aggregates that are subject to national confidentiality rules, are to be dept strictly confidential and are to be used exclusively for statistical purposes or for purposes mandated legislation

Good practices include:

- Putting measures in place to prevent the direct or indirect disclosure of data on persons, households, businesses and other individual respondents

Developing a framework describing methods and procedures to provide sets of anonymous micro-data for further analysis by bona fide researchers, maintaining the requirements of confidentiality

7. Erroneous interpretation and misuse of statistics are to be immediately appropriately addressed

Good practices include:

- Responding to perceived erroneous interpretation and misuse of statistics
- Enhancing the use of statistics by developing educational material for important user groups

8. Standards for national and international statistics are to be developed on the basis of sound professional criteria, while also meeting the test of practical utility and feasibility

Good practices include:

- Systematically involving national statistical offices and other national organizations for official statistics in the development of international statistical programmes, including the development and promulgation of methods, standards and good practices
- Ensuring that decisions on such standards are free from conflicts of interest, and are perceived to be so
- Advising countries on implementation issues concerning international standards
- Monitoring the implementation of agreed standards

9. Coordination of international statistical programmes is essential to strengthen the quality, coherence and governance of international statistics, and avoiding duplication of work

Good practices include:

- Designating one or more statistical units to implement statistical programmes, including one unit that coordinates the statistical work of the organization and represents the organization in international statistical meetings
- Participating in international statistical meetings and bilateral and multilateral consultations wherever necessary
- Working systematically towards agreements about common concepts, classifications, standards and methods

- Working systematically towards agreement on which series to consider as authoritative for each important set of statistics

Coordinating technical cooperation activities with countries between donors and between different organizations in the national statistical system to avoid duplication of effort and to encourage complementarities and synergy

10. Bilateral and multilateral cooperation in statistics contribute to the professional growth of the statisticians involved and to the improvement of statistics in the organizations and in countries
Good practices include:

- Cooperating and sharing knowledge among international organization and with countries and regions to further develop national and regional statistical systems
- Basing cooperation projects on user requirements, promoting full participation of the main stakeholders, taking account of local circumstances and stage of statistical development
- Empowering recipient national statistical systems and governments to take the lead
- Advocating the implementation of the Fundamental Principles of Official Statistics in countries

Setting cooperation projects within a balanced overall strategic framework for national development of official statistics

STATISTICS ACT

রেজিস্টার্ড নং ডি এ-১

বাংলাদেশ গেজেট

অতিরিক্ত সংখ্যা

কর্তৃপক্ষ কর্তৃক প্রকাশিত

রবিবার, মার্চ ৩, ২০১৩

বাংলাশে জাতীয় সংসদ

ঢাকা, ০৩ মার্চ, ২০১৩/১৯ ফাল্গুন, ১৪১৯

সংসদ কর্তৃক গৃহীত নিম্নলিখিত আইনটি ০২ মার্চ, ২০১৩/১৮ ফাল্গুন, ১৪১৯ তারিখে রাষ্টপতির সম্মতি লাভ করিয়াছে এবং এতদ্বারা এই আইনটি সর্বসাধারণের অবগতির জন্য প্রকাশ করা যাইতেছে ঃ—

২০১৩ সনের ১২ নং আইন

পরিসংখ্যান সম্পর্কিত কার্যক্রম গতিশীল, সমন্বিত, লক্ষ্যভিত্তিক এবং সংরক্ষণ করার লক্ষ্যে বিধান প্রণয়নের উদ্দেশ্যে প্রণীত আইন

যেহেতু বাংলাদেশের জনসংখ্যা, কৃষি, শিল্প, জনমিতি, অর্থনীতি, আর্থ-সামাজিক বিষয়াদি, প্রকৃতিক সম্পদ, পরিবেশ, ইত্যাদি সংক্রান্ত সঠিক ও নির্ভুল পরিসংখ্যান সম্পর্কিত কার্যক্রমকে গতিশীল, সমন্বিত, লক্ষ্যভিত্তিক এবং সংরক্ষণ করার লক্ষ্যে বিধান করা সমীচীন ও প্রয়োজনীয় ;

সেহেতু এতদ্দ্বারা নিম্নরূপ আইন করা হইল ঃ—

১। **সংক্ষিপ্ত শিরোনাম ও প্রবর্তন**।— (১) এই আইন পরিসংখ্যান আইন, ২০১৩ নামে অভিহিত হইবে।

(২) এই আইন অবিলম্বে কার্যকর হইবে।

২০১৩ (১৩৯৫)

মূল্য ঃ টাকা ১২.০০

২। সংজ্ঞা।–বিষয় বা প্রসঙ্গের পরিপন্থি কোন কিছু না থাকিলে, এই আইনে–

(১) "উপ-মহাপরিচালক" অর্থ ব্যুরোর উপ-মহাপরিচালক ;

(২) "জরিপ অর্থ পরিসংখ্যান বিজ্ঞানসম্মত পদ্ধতিতে সমগ্রক হইতে নমুনা চয়নের মাধ্যমে তথ্য সংগ্রহ ;

(৩) "পরিসংখ্যানঃ অর্থ পরিসংখ্যান বিজ্ঞান বা আন্তর্জাতিকভাবে স্বীকৃত পদ্ধতি অনুসরণক্রমে শুমারি বা সেন্সাস ও জরিপের মাধ্যমে সংগৃহীত ও প্রকাশিত তথ্য ;

(৪) "বিধি" অর্থ এই আইনের অধীন প্রণীত বিধি ;

(৫) "ব্যক্তি" অর্থ কোন ব্যক্তি বা ব্যক্তিবর্গ এবং কোম্পানি, সমিতি, অংশীদারী কারবার, সংবিধিবদ্ধ বা অন্যবিধ সংস্থা বা উহাদের প্রতিনিধিও উহার অন্তর্ভুক্ত হইবে ;

(৬) "ব্যুরো" অর্থ বাংলাদেশ পরিসংখ্যান ব্যুরো ;

(৭) "মহাপরিচালক" অর্থ ব্যুরোর মহাপরিচালক ;

(৮) "শুমারি অথবা "সেন্সাস" অর্থ একটি ভূখন্ডের সকল মানুষ ও বিভিন্ন সেক্টর বা ইউনিটকে গণনা করা : এবং

(৯) "সরকারি পরিসংখ্যান" অর্থ ব্যুরো কর্তৃক প্রণীত, সংরক্ষিত, প্রকাশিত ও প্রযোজ্য ক্ষেত্রে, ধারা ১১ এর অধীন অনুমোদিত পরিসংখ্যান।

৩। **আইনের প্রাধান্য**।–আপাততঃ বলবৎ অন্য কোন আইনে ভিন্নতর যাহা কিছুই থাকুক না কেন, এই আইনের বিধানাবলী প্রাধান্য পাইবে।

৪। **ব্যুরো প্রতিষ্ঠা**।–এই আইন বলবৎ হইবার পর, যতশীঘ্র সম্ভব, সরকার, সরকারি গেজেটে প্রজ্ঞাপন দ্বারা, এই আইনের উদ্দেশ্য পূরণকল্পে বাংলাদেশ পরিসংখ্যান ব্যুরো নামে একটি ব্যুরো প্রতিষ্ঠা করিবে।

৫। **ব্যুরোর কার্যালয়, ইত্যাদি**।–(১) ব্যুরোর প্রধান কার্যালয় ঢাকায় অবস্থিত হইবে।

(২) সরকার প্রয়োজনে, ঢাকার বাহিরে যে কোন স্থানে উহার শাখা কার্যালয় স্থাপন ও কর্মপরিধি নির্ধারণ করিতে পারিবে।

৬। **ব্যুরোর কার্যাবলী**।–এই আইনের উদ্দেশ্য পূরণকল্পে ব্যুরোর কার্যাবলী হইবে নিম্নরূপ, যথা :–

(ক) সঠিক, নির্ভুল ও সময়োপযোগী পরিসংখ্যান প্রণয়ন ও সংরক্ষণ ;

(খ) সঠিক, নির্ভুল ও সময়োপযোগী পরিসংখ্যান প্রণয়নের জন্য দেশের আর্থ-সামাজিক বিভিন্ন ক্ষেত্রে জরিপ পরিচালনা ;

(গ) জনশুমারি, কৃষিশুমারি, মৎস্য ও প্রাণিসম্পদ শুমারি, অর্থনৈতিক শুমারিসহ অন্যান্য শুমারি ও জরিপের লক্ষ্যে যাবতীয় কার্যক্রম গ্রহণ ;

(ঘ) সরকারি পর্যায়ে উন্নয়ন পরিকল্পনাবিদ, নীতি-নির্ধারক, গবেষণা ও শিক্ষা প্রতিষ্ঠান, জাতীয় ও আন্তর্জাতিক সংস্থা এবং অন্যান্য ব্যবহারকারীগণের চাহিদা অনুসারে দ্রুততার সহিত নির্ভরযোগ্য এবং ব্যবহারবান্ধব পরিসংখ্যান সরবরাহকরণ ;

(ঙ) পরিসংখ্যান বিষয়ক নীতিমালা ও পদ্ধতি প্রণয়ন ;

(চ) শাখা কার্যালয়ের কার্যাদি সরেজমিনে তদারক এবং প্রযোজ্য ক্ষেত্রে, উহার প্রতিবেদন পর্যালোচনা ও প্রকাশের ব্যবস্থা গ্রহণ ;

(ছ) জাতীয় পরিসংখ্যান উন্নয়ন কৌশলপত্র (National Strategy for Development of statistics) প্রবর্তন এবং সময় সময়, হালনাগাদকরণ ;

(জ) পরিসংখ্যান বিষয়ে দক্ষ জনশক্তি তৈরির লক্ষ্যে প্রয়োজনীয় প্রশিক্ষণ কর্মসূচী গ্রহণ ;

(ঝ) পরিসংখ্যানের ভূমিকা ও কার্যক্রমের গুরুত্ব সম্পর্কে জনসচেতনতা বৃদ্ধিকরণ ;

(ঞ) পরিসংখ্যান কার্যক্রম সম্পাদনে তথ্য-প্রযুক্তির ব্যবহার নিশ্চিতকরণ ;

(ট) যে কোন কর্তৃপক্ষ, পরামর্শ প্রদানকারী প্রতিষ্ঠান, বেসরকারি সংস্থা এবং আন্তর্জাতিক সংস্থার সাথে পরিসংখ্যান বিষয়ে প্রয়োজনীয় সমন্বয় ও সহযোগিতা প্রদান ;

(ঠ) ভোক্তার মূল্য-সূচকসহ অন্যান্য মূল্য-সূচক এবং জাতীয় হিসাব প্রস্তুতকরণ ;

(ড) অর্থনৈতিক, পরিবেশগত, সামাজিক ও জনমিতি সংক্রান্ত নির্দেশক প্রণয়ন ও প্রকাশকরণ ;

(ঢ) ভূমি ব্যবহারসহ বিভিন্নফসলের উৎপাদন, উৎপাদন-ব্যয় এবং ফসলাধীন জমির পরিমান প্রাক্কলন ;

(ণ) জিও-কোড সিস্টেম প্রণয়ন এবং একমাত্র সরকারি জিও-কোড সিস্টেম হিসাবে উহা হালনাগাদকরণ ও সংরক্ষণ এবং অন্যান্য সকল সরকারি সংস্থা বা প্রতিষ্ঠানকে ব্যবহারের জন্য উদ্বুদ্ধকরণ ;

(ত) জাতীয় জনসংখ্যা রেজিস্টার (National Population Register) প্রণয়ন ও সময় সময়, হালনাগাদকরণ ;

(থ) সমন্বিত সেন্ট্রাল জিওগ্রাফিক্যাল ইনফরমেশন সিস্টেম (Geographical Information System) প্রণয়ন ;

(দ) পরিসংখ্যানের প্রধান প্রধান কার্যক্রমসমূহ আন্তর্জাতিক মানে প্রমিতকরণ (standardization) ;

(ধ) সংরক্ষণের বিকল্প ব্যবস্থাসহ জাতীয় তথ্য ভান্ডার প্রণয়ন ও আধুনিক পদ্ধতিতে আর্কাইভে সংরক্ষণ;

(ন) জাতীয় ও আন্তর্জাতিক সংস্থার জন্য প্রণীত সরকারি পরিসংখ্যানের মান সত্যকরণ (Authentication) ;

(প) পরিসংখ্যান সংক্রান্ত পরামর্শ সেবা প্রদান ;

(ফ) সরকার কর্তৃক নির্দেশিত অন্যান্য দায়িত্ব পালন ; এবং

(ব) উপরি-উক্ত দায়িত্ব পালন ও কার্যাবলী সম্পাদানের জন্য প্রয়োজনীয় ব্যবস্থা গ্রহণ।

৭। **মহাপরিচালক ও উপ-মহাপরিচালক**।–(১) ব্যুরোর একজন মহাপরিচালক ও একজন উপ-মহাপরিচালক থাকিবে।

(২) মহাপরিচালক ও উপ-মহাপরিচালক সরকার কর্তৃক নিযুক্ত হইবেন ও তাহাদের যোগ্যতা, অভিজ্ঞতা ও চাকুরীর শর্তাদি সরকার কর্তৃক নির্ধারিত হইবে।

(৩) মহাপরিচালক ব্যুরোর প্রধান নির্বাহী হইবেন।

৮। **মহাপরিচালকের ক্ষমতা ও কার্যাবলী**।–(১) মহাপরিচালক–

(ক) ব্যুরোর সকল প্রশাসনিক ও অর্থ বিষয়ক কার্যাদি পরিচালনা করিবেন ;

(খ) ব্যুরোর কর্মকর্তা ও কর্মচারীদের কার্যাবলী তদারক করিবেন এবং পেশাগত দিক-নির্দেশনা প্রদান করিবেন ;

(গ) এই আইনের বিধানাবলী সাপেক্ষে এবং সময় সময়, সরকার কর্তৃক নির্দেশিত কার্যাবলী সম্পাদন, ক্ষমতা প্রয়োগ ও দায়িত্ব পালন করিবেন ; এবং

(ঘ) তৎকর্তৃক সমীচীন ও প্রয়োজনীয় বলিয়া বিবেচিত কার্যক্রম গ্রহণ করিতে পারিবেন।

(২) মহাপরিচালকের পদ শূন্য হইলে, বা অনুপস্থিতি, অসুস্থতা বা অন্য কোন কারণে মহাপরিচালক তাহার দায়িত্ব পালনে অসমর্থ হইলে, শূন্য পদে নবনিযুক্ত মহাপরিচালক কার্যভার গ্রহণ না করা পর্যন্ত বা মহাপরিচালক পুনরায় স্বীয় দায়িত্ব পালনে সমর্থ না হওয়া পর্যন্ত, উপ-মহাপরিচালক বা সরকার কর্তৃক নিযুক্ত কোন ব্যক্তি অস্থায়ীভাবে মহাপরিচালকের দায়িত্ব পালন করিবেন।

৯। **কমিটি**।–সরকার এই আইনের উদ্দেশ্য পূরণকল্পে, এক বা একাধিক কমিটি গঠন ও উহার কর্মপদ্ধতি নির্ধারণ করিতে পারিবে।

১০। **সরকারি পরিসংখ্যানের বাধ্যতামূলক ব্যবহার**।–যে কোন মন্ত্রণালয়, বিভাগ বা উহাদের অধীনস্থ দপ্তর, অধিদপ্তর বা সংস্থার পরিসংখ্যান সংক্রান্ত কর্মকান্ডে সরকারি পরিসংখ্যান বাধ্যতামূলকভাবে ব্যবহৃত হইবে।

১১। **ব্যুরো ব্যতীত অন্যান্য সংস্থা কর্তৃক পরিসংখ্যান প্রস্তুত**।–ব্যুরো যে সকল বিষয়ে পরিসংখ্যান প্রণয়ন করে না সে সকল বিষয়ে, যে কোন মন্ত্রণালয়, বিভাগ বা উহাদের অধীনস্থ দপ্তর, অধিদপ্তর বা সংস্থা, ব্যুরো কর্তৃক প্রণীত নীতিমালা অনুসরণক্রমে এবং বিধি দ্বারা নির্ধারিত পদ্ধতিতে ও সময়ে ব্যুরোর অনাপত্তি গ্রহণপূর্বক পরিসংখ্যান প্রস্তুত ও প্রকাশ করিতে পারিবে।

১২। **ব্যক্তি, সংস্থা, প্রতিষ্ঠান বা কর্তৃপক্ষের তথ্য প্রদানের দায়বদ্ধতা, ইত্যাদি**।–(১) এই আইনের উদ্দেশ্য পূরণকল্পে, ব্যুরোর চাহিদা অনুযায়ী যে কোন ব্যক্তি, সংস্থা, প্রতিষ্ঠান বা কর্তৃপক্ষ উহাদের নিকট সংরক্ষিত তথ্য, ইত্যাদি ব্যুরোকে প্রদান করিতে বাধ্য থাকিবে।

(২) ব্যুরোর কর্মকর্তা ও কর্মচারী উপ-ধারা (১) এর অধীন প্রাপ্ত তথ্যের গোপনীয়তা নিশ্চিত করিবে ;

তবে শর্ত থাকে যে, সংগৃহীত তথ্য সংশ্লিষ্ট ব্যক্তি, সংস্থা, প্রতিষ্ঠান বা কর্তৃপক্ষের সম্মতি সাপেক্ষে প্রকাশ করা যাইবে।

১৩। **প্রবেশ, ইত্যাদির ক্ষমতা**।–এই আইনের অন্য কোন বিধানে যাহা কিছুই থাকুক না কেন, অন্যান্য আইনের বিধানাবলী ও যথাযথভাবে অবহিতকরণ সাপেক্ষে, মহাপরিচালক বা তৎকর্তৃক সাধারণ বা বিশেষভাবে ক্ষমতাপ্রাপ্ত ব্যুরোর কোন কর্মকর্তা বা কর্মচারী এই আইন বা বিধির অধীন তাহার উপর অর্পিত দায়িত্ব সম্পাদন করিবার উদ্দেশ্যে কোন রেকর্ড, রেজিস্টার, দলিল বা এতদসংশ্লিষ্ট কোন গুরুত্বপূর্ণ তথ্য পরীক্ষা, যাচাই-বাছাই বা সংগ্রহ করিবার জন্য কোন ভবন বা স্থানে প্রবেশ করিবার অধিকারী হইবেন এবং সংশ্লিষ্ট ভবন বা স্থানের মালিক বা কর্তৃপক্ষ চাহিত তথ্য প্রদানে বাধ্য থাকিবে।

১৪। **প্রশিক্ষণ একাডেমী**।–(১) এই আইনের উদ্দেশ্য পূরণকল্পে, সরকার পরিসংখ্যান বিষয়ক এবং উহার সহিত সংশ্লিষ্ট বিষয়ে গবেষণা ও অন্যান্য কার্যক্রম গ্রহণের লক্ষ্যে, প্রয়োজনে, প্রশিক্ষণ একাডেমী প্রতিষ্ঠা করিতে পারিবে।

(২) প্রশিক্ষণ একাডেমীর দায়িত্ব ও কার্যাবলী বিধি দ্বারা নির্ধারিত হইবে।

১৫। **কর্মকর্তা ও কর্মচারী নিয়োগ**।–ব্যুরো উহার কার্যাবলী সুষ্ঠুভাবে সম্পাদনের উদ্দেশ্যে সরকার কর্তৃক অনুমোদিত সাংগঠনিক কাঠামো অনুযায়ী প্রয়োজনীয় সংখ্যক কর্মকর্তা ও কর্মচারী নিয়োগ করিতে পারিবে এবং তাহাদের চাকুরীর শর্তাবলী বিধি দ্বারা নির্ধারিত হইবে।

১৬। **প্রকাশনা**।–(১) ব্যুরো তৎকর্তৃক সংগৃহীত ও প্রস্তুতকৃত পরিসংখ্যান প্রকাশ করিবে।

(২) উপ-ধারা (১) এর অধীন প্রকাশিত প্রকাশনাসমূহ, সময় সময়, হালনাগাদক্রমে আধুনিক প্রযুক্তি ব্যবহার করিয়া লাইব্রেরীতে সংরক্ষণ করিতে হইবে।

১৭। **অবগতিমূলক কর্মসূচী**।–ব্যুরো উহার কার্যাবলী, কার্যপদ্ধতি ও প্রতিবেদন সম্পর্কে জনসাধারণকে সম্যক অবহিত করিবার লক্ষ্যে যথাযথ কর্মসূচী গ্রহণ করিবে।

১৮। **অপরাধ ও শাস্তি**।–কোন ব্যক্তি এই আইনের ধারা ১৩ এর বিধান লংঘন করিলে, তিনি এই আইনের অধীন অপরাধ করিয়াছেন বলিয়া গণ্য হইবে এবং উক্ত অপরাধের জন্য তিনি অনধিক ১ (এক) মাস কারাদন্ড বা অনধিক ১০,০০০ (দশ হাজার) টাকা অর্থদন্ড বা উভয়দন্ডে দন্ডিত হইবেন।

১৯। **অপরাধের আমলযোগ্যতা ও জামিনযোগ্যতা।**—এই আইনের অধীন অপরাধসমূহ অ-আমলযোগ্য (Non-cognizable) জামিনযোগ্য (Bailable) হইবে।

২০। **Act V of 1898 এর প্রয়োগ।**– এই আইনে ভিন্নরূপ কিছু না থাকিলে, কোন অপরাধের অভিযোগ দায়ের, তদন্ত, বিচার ও নিষ্পত্তির ক্ষেত্রে Code of Criminal Procedure, 1898 (Act V of 1898) এর বিধানাবলী প্রযোজ্য হইবে।

২১। **বাজেট।**–ব্যুরো প্রতি বৎসর সরকার কর্তৃক নির্ধারিত সময়ের মধ্যে পরবর্তী অর্থ-বৎসরের বার্ষিক বাজেট বিবরণী সরকার কর্তৃক নিধারিত ফরমে অনুমোদনের জন্য সরকারের নিকট পেশ করিবে এবং উহাতে উক্ত অর্থ-বৎসরের ব্যুরোর কি পরিমাণ অর্থের প্রয়োজন হইবে উহার উল্লেখ থাকিবে।

২২। **ক্ষমতা অর্পণ।**–মহাপরিচালক, প্রয়োজনবোধে, এই আইনের অধীন তাহার উপর অর্পিত যে কোন ক্ষমতা বা দায়িত্ব, লিখিত আদেশ দ্বারা, ব্যুরোর যে কোন কর্মকর্তা বা কর্মচারীকে অর্পণ করিতে পারিবেন এবং সরকারকে উহা যথাশীঘ্র সম্ভব অবহিত করিবেন।

২৩। **জনসেবক।**–মহাপরিচালক, ব্যুরোর কর্মকর্তা ও কর্মচারী এবং ব্যুরোর পক্ষে কাজ করিবার জন্য যথাযথ ক্ষমতাপ্রাপ্ত কোন ব্যক্তি, এই আইনের অধীন দায়িত্ব পালনকালে, Penal Code, 1860 (Act XLV of 1860) এর section 21 এ বর্ণিত অর্থে Public Servant বা জনসেবক বলিয়া গণ্য হইবেন।

২৪। **বার্ষিক প্রতিবেদন।**–(১) মহাপরিচালক প্রতি বৎসর ৩১ মার্চের মধ্যে পূর্ববর্তী ৩১ ডিসেম্বরে সমাপ্ত এক বৎসরের স্বীয় কার্যাবলীর বিবরণ সম্বলিত একটি বার্ষিক প্রতিবেদন সরকারের নিকট পেশ করিবেন।

(২) সরকার ব্যুরোকে যে কোন সময় উহার যে কোন কাজের প্রতিবেদন বা বিবরণী বা পরিসংখ্যান উহার নিকট প্রেরণের নির্দেশ দিতে পারিবেন এবং উক্তরূপ নির্দেশ প্রাপ্তির পর ব্যুরো উহা সরকারের নিকট প্রেরণে বাধ্য থাকিবে।

২৫। **ইংরেজিতে অনুদিত পাঠ প্রকাশ, ইত্যাদি।**–(১) এই আইন কার্যকর হইবার পর সরকার, প্রয়োজনে, সরকারি গেজেটে প্রজ্ঞাপন দ্বারা, এই আইনের ইংরেজিতে অনুদিত একটি নির্ভরযোগ্য পাঠ (Authentic English Text) প্রকাশ করিতে পারিবে।

(২) এই আইনের বাংলা ও ইংরেজি পাঠের মধ্যে বিরোধের ক্ষেত্রে বাংলা পাঠ প্রাধান্য পাইবে।

২৬। **বিধি প্রণয়নের ক্ষমতা।**–এই আইনের উদ্দেশ্য পূরণকল্পে, সরকার, সরকারি গেজেটে প্রজ্ঞাপন দ্বারা, বিধি প্রণয়ন করিতে পারিবে।

২৭। **নীতিমালা প্রণয়নের ক্ষমতা**।–এই আইনের ধারা ৬ এর দফা (ঙ) এর উদ্দেশ্য পূরণকল্পে, ব্যুরো সরকারের পূর্বানুমোদনক্রমে, সরকারি গেজেটে প্রজ্ঞাপন দ্বারা, নীতিমালা প্রণয়ন করিতে পারিবে।

২৮। **রহিতকরণ ও হেফাজত**।–(১) এই আইনের অধীন ব্যুরো প্রতিষ্ঠার সঙ্গে সঙ্গে মন্ত্রিপরিষদ বিভাগের ২৬ আগস্ট, ১৯৭৪ তারিখে জারিকৃত প্রজ্ঞাপন নং ৪/২৫/৭২-বিধি, অতঃপর উক্ত প্রজ্ঞাপন বলিয়া উল্লিখিত, বাতিল হইয়া যাইবে।

(২) **উক্ত প্রজ্ঞাপন বাতিল হইবার সঙ্গে সঙ্গে –**

(ক) উক্ত প্রজ্ঞাপনের অধীন গঠিত বাংলাদেশ পরিসংখ্যান ব্যুরো, অতঃপর বিলুপ্ত ব্যুরো বলিয়া উল্লিখিত, বিলুপ্ত হইবে ;

(খ) বিলুপ্ত ব্যুরোর–

(অ) সকল সম্পদ, অধিকার, ক্ষমতা, কর্তৃত্ব, সুবিধাদি এবং স্থাবর ও অস্থাবর সকল সম্পত্তিনগদ ও ব্যাংকে গচ্ছিত অর্থ এবং অন্য সকল দাবী ও অধিকার ব্যুরোর উপর হস্তান্তরিতহইবে এবং ব্যুরো উহার অধিকারী হইবে ;

(আ) বিরুদ্ধে বা উহা কর্তৃক দায়েরকৃত সকল মামলা-মোকদ্দমা ব্যুরোর বিরুদ্ধে বা ব্যুরো কর্তৃক দায়েরকৃত মামলা-মোকদ্দমা বলিয়া গণ্য হইবে ;

(ই) সকল ঋণ, দায় ও দায়িত্ব ব্যুরোর ঋণ ও দায়-দায়িত্ব হইবে ;

(ঈ) সকল কর্মকর্তা ও কর্মচারী ব্যুরোতে বদলী হইবেন এবং তাহারা ব্যুরো কর্তৃক নিযুক্তকর্মকর্তা ও কর্মচারী বলিয়া গণ্য হইবেন এবং উক্তরূপ বদলীর পূর্বে তাহারা যে শর্তে চাকুরীতে নিয়োজিত ছিলেন, ব্যুরো কর্তৃক পরিবর্তিত বা প্রেষণ প্রদানকারী কর্তৃপক্ষ কর্তৃক প্রত্যাহার না হওয়া পর্যন্ত, সেই একই শর্তে তাহারা ব্যুরোর চাকুরীতে নিয়োজিত থাকিবেন ;

(উ) সকল কমিটি বিলুপ্ত হইবে ও বিলুপ্ত কমিটি কর্তৃক গৃহীত কার্যক্রম, প্রদত্ত সিদ্ধান্ত, ইত্যাদি এই আইনের অধীন গঠিত কমিটি কর্তৃক গৃহীত কার্যক্রম ও প্রদত্ত সিদ্ধান্ত বলিয়া গণ্য হইবে এবং কোন সিদ্ধান্ত অবাস্তবায়িত থাকিলে বা উহার কোন কার্যক্রম অনিষ্পন্ন থাকিলে উক্তরূপ সিদ্ধান্ত বাস্তবায়ন ও নিষ্পন্নের লক্ষ্যে উহা এমনভাবে চলমান ও অব্যাহত থাকিবে যেন কমিটিসমূহ বিলুপ্ত হয় নাই ;

(ঊ) সকল রেকর্ড, নথিপত্র, দলিল-দস্তাবেজ, তথ্য-উপাত্ত ও পরিসংখ্যান ব্যুরোতে স্থানান্তরিত হইবে এবং উক্তরূপে স্থানান্তরিত রেকর্ড, নথিপত্র, দলিল-দস্তাবেজ, তথ্য-উপাত্ত ও পরিসংখ্যান এমনভাবে সংরক্ষণ করিতে হইবে যেন ব্যুরো বিলুপ্ত হয় নাই ;

(ঋ) অধীন প্রতিষ্ঠিত আঞ্চলিক, উপজেলা এবং থানা পরিসংখ্যান অফিসের কার্যক্রম এই আইনের অধীন শাখা কার্যালয় প্রতিষ্ঠিত না হওয়া পর্যন্ত এমনভাবে কার্যকর ও অব্যাহত থাকিবে যেন উহারা এই আইনের অধীন প্রতিষ্ঠিত হইয়াছে ;

(এ) জারিকৃত সকল আদেশ, নীতিমালা, দিক-নির্দেশনা, জাতীয় পরিসংখ্যান পদ্ধতি, ইত্যাদি, এই আইনের সহিত সংগতিপূর্ণ হওয়া সাপেক্ষে, পরবর্তী আদেশ, নীতিমালা, দিক-নির্দেশনা, জাতীয় পরিসংখ্যান পদ্ধতি জারি না হওয়া পর্যন্ত, একইরূপে চলমান, অব্যাহত ও কার্যকর থাকিবে যেন ব্যুরো বিলুপ্ত হয় নাই।

(৩) এই আইন প্রবর্তনের সঙ্গে সঙ্গে ১৩ আগস্ট, ১৯৭৭ তারিখের সরকারি আদেশ নং ১/এনএসসি/৭৭(২০০) মূলে গঠিত জাতীয় পরিসংখ্যান কাউন্সিল বিলুপ্ত হইবে এবং বিলুপ্ত কাউন্সিল কর্তৃক গৃহীত কার্যক্রম ও সিদ্ধান্ত, এই আইনের সহিত সংগতিপূর্ণ হওয়া সাপেক্ষে, এমনভাবে কার্যকর ও বাস্তবায়িত হইবে যেন উক্ত কাউন্সিল বিলুপ্ত হয় নাই।

মোঃ মাহ্‌ফুজুর রহমান
সচিব।

ড. মোঃ আলী আকবর (উপ সচিব), উপ পরিচালক, বাংলাদেশ সরকারি মুদ্রণালয়, তেজগাঁও, ঢাকা কর্তৃক মুদ্রিত।
আবদুর রশিদ (উপ সচিব), উপ পরিচালক, বাংলাদেশ ফরম ও প্রকাশনা অফিস,
তেজগাঁও, ঢাকা কর্তৃক প্রকাশিত। web site : www.bgpress.gov.bd

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Acronyms

BBS	Bangladesh Bureau of Statistics
GDP	Gross Domestic Product
GOB	Government of Bangladesh
HH	Household
Kg	Kilogram
M. Tons	Metric Tons
No.	Number
PASDAC	Productivity Assessment Survey of Different Agricultural Crops
PSU	Primary Sampling Unit
RSE	Relative Standard Error
SE	Standard Error
Tk	Taka
T/ha	Ton per hector
USUs	Ultimate Sampling Units
%	Percentage

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