Report on The Productivity Survey of Pineapple 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)
Ministry of Planning

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. It also 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, has also been putting efforts in conducting surveys on a series of minor crops simultaneously with the regular estimation of major and minor crops.

I am happy to know that the survey on Pineapple is the third in series among the nine minor crops and the report is being brought out timely. It is notable that fruits play an important role in the economy of Bangladesh. Among many other fruits, cultivation of pineapple has a significant role for the socio-economic development of the pineapple growers in many parts of the plain and upland of the country as it offers a source of income generation. Apart from the consumption as a delicious and nutritious fruit it is also referred as a medical diet for certain diseased persons.

I believe that the data presented in the report would be useful for policy formulation and planning process of the development of agriculture sector.

I like to extend my heartfelt thanks to the Director General, BBS and his colleagues for their relentless efforts in undertaking a series of surveys on minor crops and bringing out such report in time.

Dhaka
August, 2014

Md. Nojibur Rahman
Secretary

Director General
Bangladesh Bureau of Statistics (BBS)

Preface

Bangladesh is predominantly an agricultural 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 for 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 been given the responsibility of nine minor crops for obtaining the cost of production of the individual crops by following the scientific survey methods. This report contains the findings of the survey on Pineapple conducted during October-November, 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 minor 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 Pineapple 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 continuous 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 conduct 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	Results
1	2	3
1.	Area under Pineapple in acre (farm holding)	21180.37
2.	Percentage of area growing pineapple by tenancy;	100.00
	a. Owned	79.97
	b. Share crop	2.53
	c. Mortgage	2.15
	d. Lease	12.62
	e. Others	2.83
3.	Percentage of area growing pineapple by cultivation type	
	a. Single	54.69
	b. Mixed	45.31
4.	Number of labourers employed by component for per acre production of pineapple	
	a. Planting	6.77
	b. Weeding	18.45
	c. Harvesting	10.95
	Total	36.17
5.	Per acre production cost (Tk.) by type of input	
	a. Land preparation	2171
	b. Seedling	8635
	c. Plantation	1846
	d. Weeding	4544
	e. Irrigation / Pesticide related	322
	f. Harmon	1164
	g. Fertilizer	12585
	h. Harvesting	2831
	i. Transport	4131
	j. Others	833
	Total	39062
6.	Per acre Production cost (Tk.) by varieties	
	a. Calendula	39417
	b. Ghurashal	52439
	c. Hunny queen	38167
	d. Jaunt queen	39811
	e. Jaldubi	36393
	f. Others	24464
	Total	39062
7.	Per acre leasing value (Tk.)	15,088

SL. No	Items	Results
8.	Per acre Production value by varieties	
	a.Calendula	81678
	b.Ghurashal	99710
	c.Giant kew	55298
	d.Honey queen	65774
	e.Jaldubi	60614
	f.Others	40023
	Total	68776
9.	Per acre yield rate (Kg) by varieties	
	a.Calendula	8370
	b.Ghurashal	11272
	c.Giant kew	5658
	d.Honey queen	7329
	e.Jaldubi	5470
	f.Others	5132
	Total	7256
10.	Per acre productivity by varieties	
	a. Calendula	2.06
	b.Ghurashal	1.90
	c.Giant kew	1.38
	d.Honey queen	1.72
	e.Jaldubi	1.66
	f.Others	1.55
	Total	1.76

Chapter 1

Introduction

Introduction

1.1 Introduction

Bangladesh is an agro based country. The most of the inhabitants directly or indirectly are involved in agricultural activities for their livelihood. Agriculture is the single largest producing sector of the economy, which contributes 17% to the national 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. Agriculture land of the country is mainly used for production of rice, jute, potato, maize, wheat, fruits, seasonal minor crops and vegetables. Pineapple is an important fruit crops among all other minor crops in Bangladesh. It's scientific binomial name is *Ananas comosus*, *ananas*, the original name of the fruit, comes from the word Tupi *nanas*, meaning "excellent fruit", Due its great economic importance as well as nutritional value, it is much popular fruit and grow more in the rainy season. Pineapples abundantly grow in many districts, namely Tangail, Rangamati, Chittagong, Bandarban, Dhaka, Mymensingh, Khagrachari, Sylhet and Moulvibazar. At least ninety varieties of pineapple are cultivated in the world. In Bangladesh, however, three varieties of pineapple are mostly grown. The three varieties are: Giant Kew, Honey Queen and Ghurasal.

Food security and nutritional supports are essential for the welfare of any country**.** Fruits play a vital role in the in both cases. As an important fruit, pineapple provides economic strength to the poor people in some regions of Bangladesh where no other fruits or crops grow well. So that the the production of fruits including pineapple is increasing day by day in Bangladesh. 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 inter related 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 2012. In continuation to that, BBS has also conducted the cost of production survey of Pineapple 2013 under the Productivity Assessment Survey of Different Agricultural Crops (PASDAC) Program.

1.2 Production of the Pineapple:

Among all the fruits produced in the country, pineapple ranks 4th in terms of total cropping area and production. During 2007-08, total production of pineapple in the country was 210.3 thousand metric tons from which was increased to 218.6 thousands metric tons during 2010-11 (BBS, 2011). Generally, the ripen pineapple is consumed by the people of Bangladesh. Green pineapple is also used for making pickles. After extraction of its juice, the left over is used as livestock feed and also the tender leaves are used for the same purpose. Various food items like squash, syrup, jelly, etc. are produced from pineapple. Vinegar, alcohol, citric acid, calcium citrate etc are also produced from it. Pineapple is also recommended as medical diet for certain diseased persons.

Pineapple is a great source of fiber and is high in vitamins B_1 & C. It also has B_2, B_3, B_5, B_6, beta-carotene, folic acid, potassium, magnesium, & copper. Pineapples are highly rich in the enzyme Brome lain which is why pineapples are great to eat as a digestion aid and also why pineapple juice has an anti-inflammatory effect. Two 3" diameters, 3/4" slices of fresh pineapple are 60 calories, 2g fiber, and are fat free.

Pineapple can be propagated by sucker, slip and crown. Growth is best with suckers and slips. Plants from crown bear flowers after 3 to 20 months later than suckers and slips depending on the climatic conditions. Therefore, crowns are not normally used. Suckers

should be planted within 2 weeks after removing from the mother plant. The planting material should be selected from healthy diseased free plant.

In general, pineapple plants should be planted in full sun for best growth and fruit production. Select a part of the landscape away from other trees, buildings and structures, and power lines. We should keep in mind that pineapple plants need full sun for best growth and production. Select the warmest area of the landscape that does not flood (or remain wet) after typical summer rains.

The tropical climate is better for pineapple cultivation. Generally, it is grown almost all over Bangladesh especially in hilly and high land where there is no water stagnation. Long time drought is harmful for the production of pineapple. Drought affects its quality, quantity and size. Although Bangladesh is not a tropical country, the climate and the soils of many parts of Bangladesh are much more suitable for pineapple production. It tolerates neither very high temperature nor frost. Pineapple usually flowers from February to April and the fruits are ready from July to September. Sometimes, off-season flowers appear and they produce fruits in October-December. Pineapple should be grown in well-drained soils and areas of the landscape that do not flood.

The production of pineapple 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 fertilizer, pesticide, irrigation etc. for sufficient production of pineapple. As a result farmers are encouraged in producing huge quantity of pineapple for getting high price in the market.

Pineapple is widely cultivated in the districts of Tangail, Rangamati, Chittagong, Bandarban, Dhaka, Mymensingh, Khagrachari, Sylhet and Moulvibazar. At least ninety varieties of pineapple are cultivated in the world. In Bangladesh, however, three varieties of pineapple are mostly grown. The three varieties are: Giant Kew, Honey Queen and Ghurasal. The total cultivation area and annual production of Pineapple in Bangladesh during last eight years have been shown in the following table:

Table: Acreage, Production & Yield rate of Pineapple during the year 2003-04 to 2011-12

Year	Acreage (in '000')	Production (in '000' M. Tons)	Yield rate (M. Tons) per acre
2003-04	41.5	212.8	5.1
2004-05	45.7	234.9	5.1
2005-06	42.3	253.8	6.0
2006-07	41.9	238.4	5.7
2007-08	39.4	210.3	5.3
2008-09	39.0	229.1	5.9
2009-10	39.6	234.5	5.9
2010-11	37.0	218.6	5.9
2011-12	34.5	180.9	5.2

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

The table shows that Pineapple crop is normally cultivated in an average area of about 40 thousand acres. The figures in the table show that acreage under Pineapple are erratic and follow no pattern. Increase in area under Boro paddy, occupation of agricultural land for new house building and industrialization are responsible for decrease in area under Pineapple.

1.3 Scope and coverage of the survey:

The productivity survey of pineapple 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 pineapple cultivation of all dwelling households of the sample area. The survey covers the whole country; a total of fifty PSUs were taken from the country.

1.4 Objectives of the Survey:

The Pineapple Survey-2013 is designed to provide national estimates for various indicators those 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 pineapple cultivation

Chapter 2

Methodology

Methodology

2.1 Sample Design

The Pineapple Survey has been conducted in the whole country using the Agriculture Census-2008. In this survey, households having at least 5 decimal area of land under pineapple crop cultivation has been considered as ultimate sampling units. A two stage cluster sampling design has been adopted in this survey. In the first stage, a total of 50 (fifty) PSU has been selected in the whole country using the systematic random sampling. In the second stage, all the pineapple producing households were listed from the selected PSUs and then 25 households were selected following the systematic random sampling, where a mouza were treated as the primary sampling unit (PSU) and within the selected mouzas, pineapple crop producing households were chosen as ultimate sampling unit. Form the selected mouzas having more than 300 households, 300 of them were listed from either south west corner or north east corner of a mouza. The south west corner approach was followed if the selected mouzas carry even number and north east corner approach were applied if a selected mouzas were of odd numbers. However, if a selected mouza possesses less than 15 pineapples producing farm households then the remaining households were taken from the adjacent mouza or mouzas.

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 Pineapple. They discussed the matter with the farmers who grow Pineapple. 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 and June 2013 prior to the survey at rural area of Madhupur Upazila under Tangail District and Naniarchar Upazila belonging to Rangamati 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 had 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 was 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 Pineapple crop. Considering the fact, the structure of the questionnaire had been changed. Deleting the aggregate area in a single row, 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

Gazipur 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 October-November, 2013 at the homestead of the household. Usually the respondents are the head of household. The total of 50 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 totals of 11 Supervising Officers 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 Pineapple, 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 Pineapple 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 Year Book of Bangladesh, Yearbook of Agriculture Statistics of Bangladesh, and Monthly Statistical Bulletin etc.

Chapter 3

Area and Households

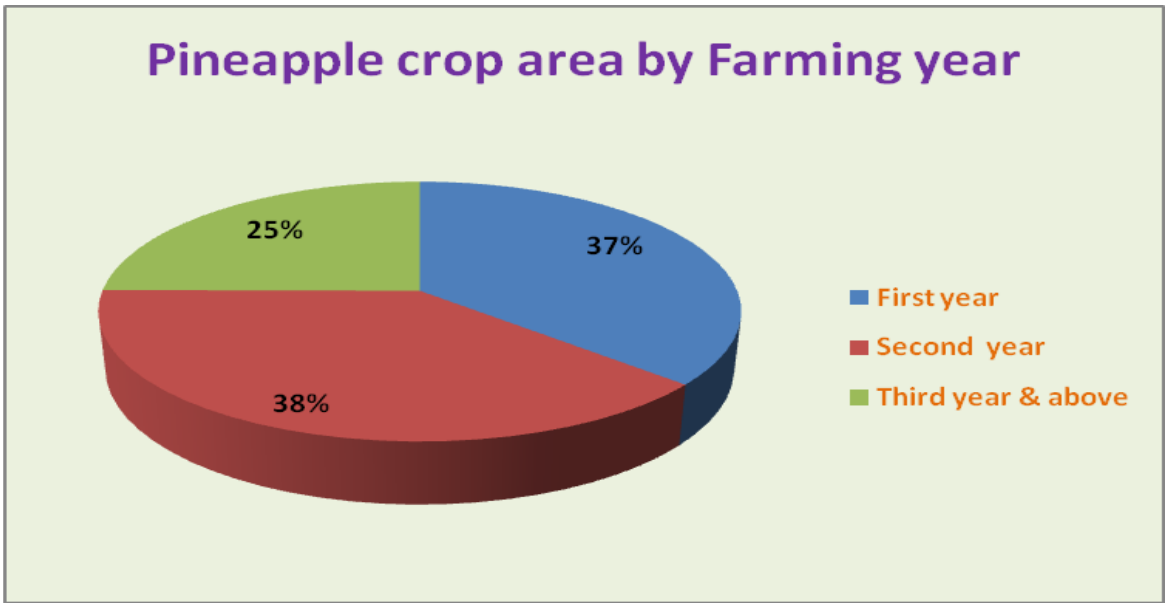
Area and Households

This chapter contains the pineapple cultivation of households and their producing area, single and mixed crop pattern, land tenure of pineapple cultivation. In the cultivation of pineapple, it is general practice that seedling are planted in the first year when the plant does not bear fruit. Fruit starts coming from 14 to 18th month of planting and repeats fruition in the third year and above. Thus a three period of cultivation has been considered in the survey.

Table-3.1: Percentage distribution of pineapple crop area (acres) by farming year and tenancy.

Tenancy	Farming year							
	All		First year		Second year		Third year & above	
	Area	%	Area	%	Area	%	Area	%
Total	21180.37	100.00	7741.77	36.55	8162.23	38.54	5276.37	24.91
Owned	16915.56	79.86	6163.01	29.10	6765.81	31.94	3986.74	18.82
Crop share	536.09	2.53	174.95	0.83	250.81	1.18	110.33	0.52
Mortgage	455.91	2.15	214.72	1.01	233.97	1.10	7.22	0.03
Lease	2672.58	12.62	891.13	4.21	785.77	3.71	995.68	4.70
Other	600.23	2.83	297.95	1.41	125.88	0.59	176.40	0.83

Note: 1 hector=2.47 acres

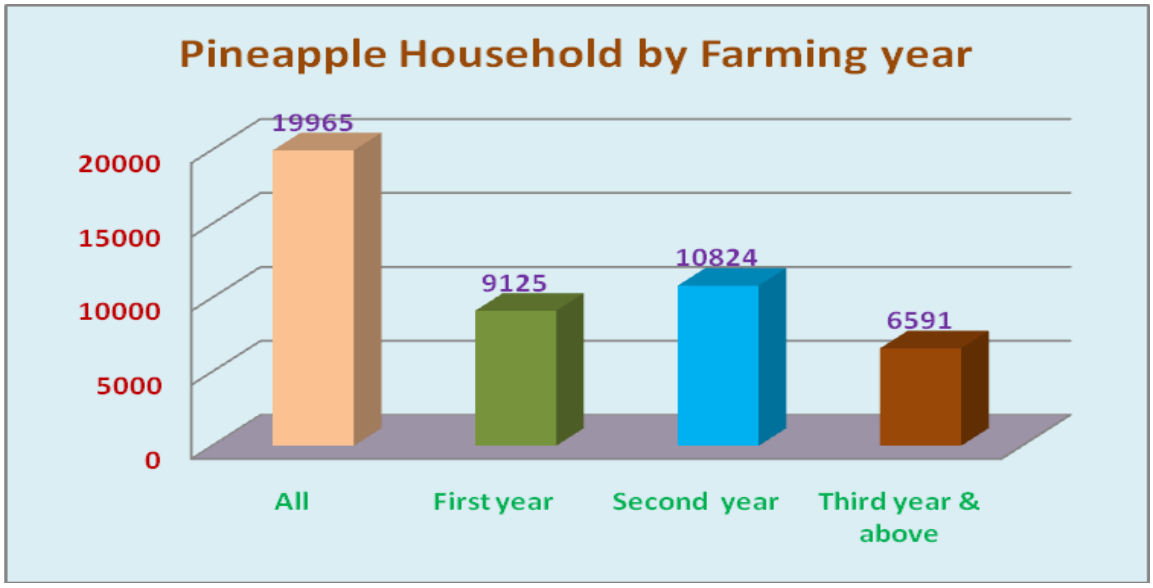


From the above table 3.1 we can see that out of 21180.37 acres of land, 36.55%, 38.54% and 24.91% land have been cultivating for the first, second and third year respectively. The above table indicates that the large majority (79.86%) of pineapples are cropped in owned land and out of this owned land 29.10% are used in the first years, 31.94% are used in the

second year and the rest (18.22%) are used in the third and above year. The remaining tenureship of land is crop share, mortgage, lease etc. Year wise mortgage and crop share pattern are very rare as seen from the above table. Leasing tenureship of pineapple crops is in second position and is 12.62% of total land area of pineapple crops.

Table-3.2: Percentage distribution of pineapple cultivation households by farming year and tenancy.

Tenancy	Farming year							
	All		First Year		Second Year		Third year & above	
	Household	%	Household	%	Household	%	Household	%
Total	19965	100.00	9125	45.70	10824	54.21	6591	33.01
Owned	21761	109.00	7553	37.83	8916	44.66	5292	26.51
Crop share	770	3.86	273	1.37	369	1.84	128	0.64
Mortgage	577	2.89	257	1.29	305	1.52	16	0.08
Lease	3159	15.82	962	4.82	1090	5.46	1106	5.54
Other	273	1.37	80	0.40	144	0.72	48	0.24



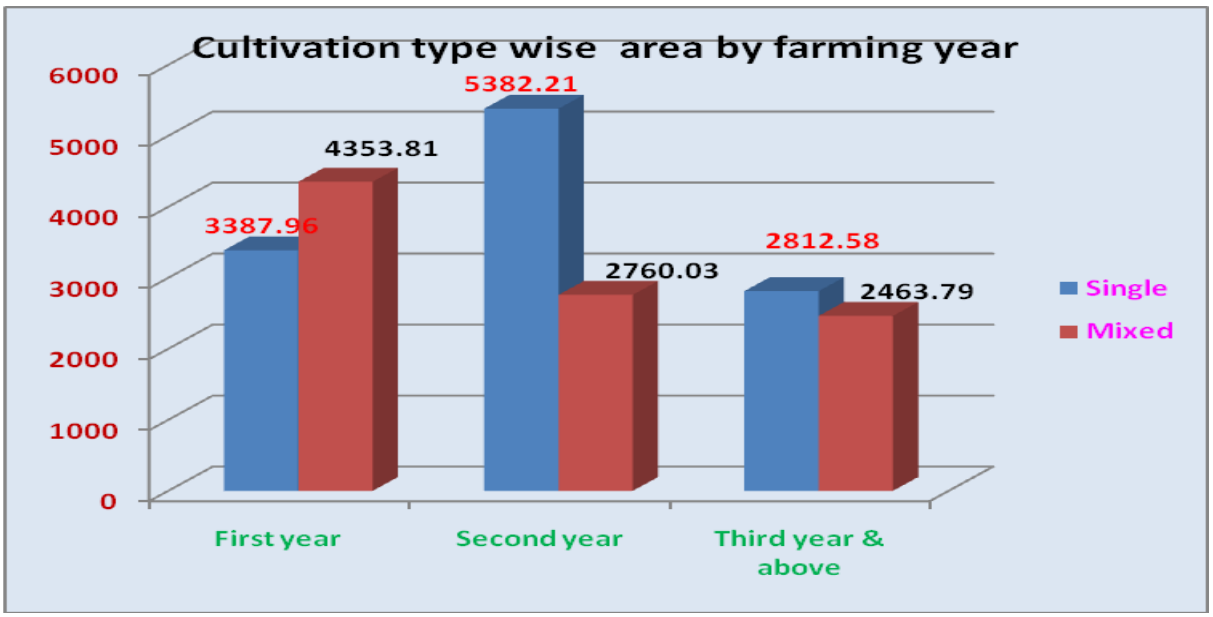
The table-3.2 indicates that out of 19965 households, 45.70% cultivated pineapple in the first farming year, 54.21% cultivated in the second year and 33.01% households cultivated pineapple in the third and above farming year. The table also highlights that nearly 109% households cultivate pineapple in their owned land and the dominant farming year of the pineapple is the second year and in this year 44.66% households engaged themselves for cultivating pineapple (The percentage of cultivators in own land tenureship exceeds 100% as the same cultivator repeats cultivation in different farming year). Cultivating pineapples on

lease basis is the second in position and is significantly high (15.8%). All other tenancies are significant.

3.3: Percentage distribution of pineapple producing area (acres) by farming year and cultivation type.

Farming year	Cultivation type					
	All		Single		Mixed	
	Area	%	Area	%	Area	%
Total	21180.37	100.00	11582.74	54.69	9597.63	45.31
First year	7741.77	36.55	3387.96	16.00	4353.81	20.56
Second year	8162.23	38.54	5382.21	25.41	2760.03	13.03
Third year & above	5276.37	24.91	2812.58	13.28	2463.79	11.63

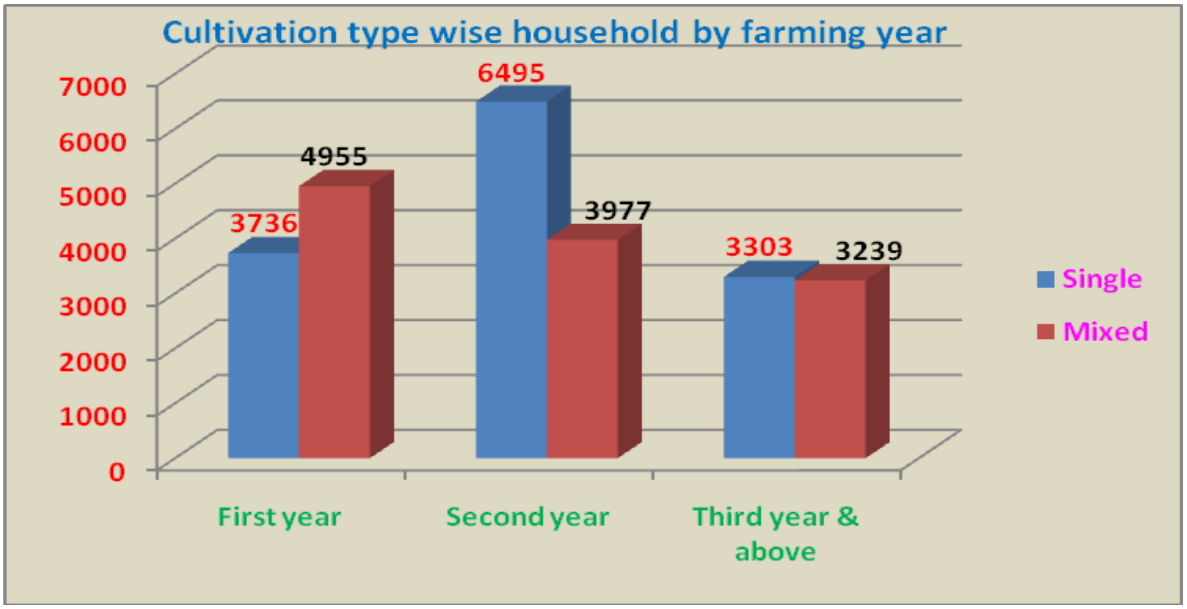
Note: 1 hector=2.47 acres



From the table-3.3, it is observed that out of total area of land, single crop cultivation occupies the maximum area (54.69%). In the second farming year, single crop area (5382.21 acre) is almost double compare to the mixed crop area (2760.03acre). The mixed crop area in the first year is 1.77% higher than that of third and above farming year. It is noted that in the third year, the mixed crop area is 2463.79 acre whereas in the first year it is 4353.81acre.

3.4: Percentage distribution of pineapple producing households by farming year and cultivation type.

Farming year	Cultivation type					
	All		Single		Mixed	
	Household	%	Household	%	Household	%
Total	19965	100.00	13535	67.79	12171	60.96
First year	8692	43.54	3736	18.71	4955	24.82
Second year	10472	52.45	6495	32.53	3977	19.92
Third year & above	6543	32.77	3303	16.54	3239	16.22

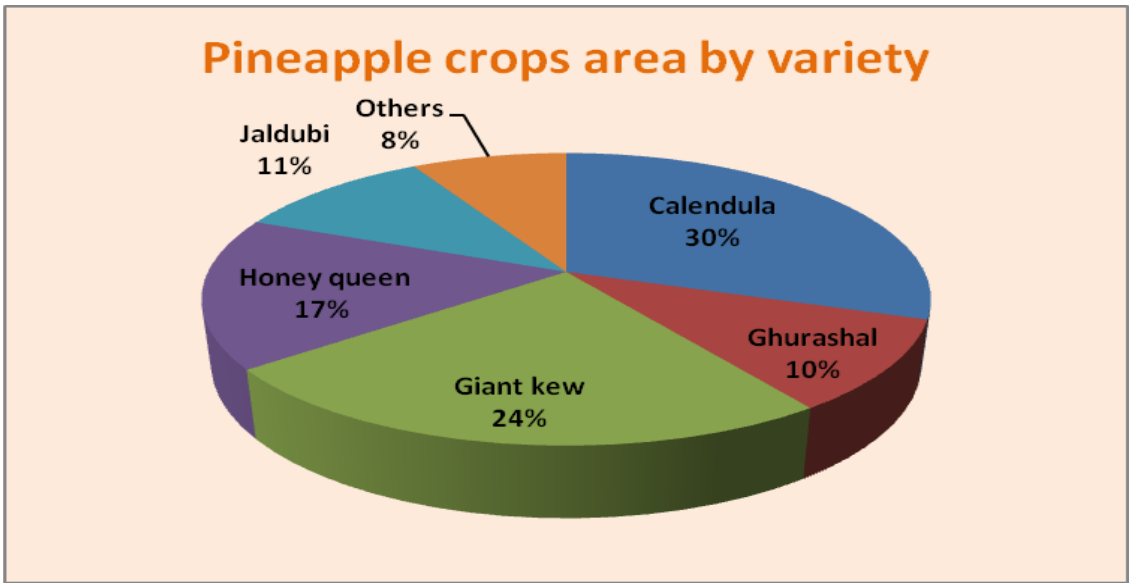


The above table 3.4 clearly indicates that out of 19965 households, 67.79% produce pineapple as a single crop whereas 60.96% households cultivate pineapple as the mixed crop. The highest cultivated households (52.45%) are found in the second year. In the first farming year, 43.54% households produce pineapple and out of them 18.71% produce single crop and 24.82% produce pineapple as a mixed crop. But in the third and above farming year, the total household of pineapple cultivation is decreasing compared to the first and second farming year and is only 32.77%.

3.5: Percentage distribution of pineapple producing area (acres) by farming year and varieties of pineapple.

Varieties of pineapple	Farming year/land type							
	Total	%	First year	%	Second year	%	Third year & above	%
Total	21180.37	100.00	7741.77	36.55	8162.23	38.54	5276.37	24.911
Calendula	6384.47	30.14	1868.21	8.82	2054.87	9.70	2461.39	11.62
Ghurashal	2132.81	10.07	780.48	3.68	1115.47	5.26	236.85	1.12
Giant kew	5137.82	24.26	2353.94	11.11	2027.77	9.57	756.10	3.57
Honey queen	3530.04	16.67	1517.34	7.16	1669.52	7.88	343.17	1.62
Jaldubi	2249.55	10.62	842.22	3.98	964.73	4.55	442.60	2.09
Others	1745.69	8.24	379.58	1.79	329.86	1.56	1036.26	4.89

Note: 1 hector=2.47 acres



The table-3.5 distributes the varieties of pineapples that are cultivated in the first, second, third and above farming year. Out of the total varieties, calendula has the highest cultivation area of pineapple which is 30.14%. The second highest 24.26% land is used for the giant kew variety of pineapple. And the rest land areas have been used for all other varieties of pineapple. It is noteworthy to mention here that the producing area of third and above year, the area of calendula and other varieties is higher than that of the area of first and second farming year. It is further mentioned that in the first and second year, the variety of jaldubi, honey queen, giant kew and ghurashal producing area has been increased compared to the third and above year.

Chapter 4

Production Cost

Production Cost

The key area of this chapter is to discuss the sector wise per acre production cost which includes the cost of land preparation, seedling, plantation, weeding, irrigation/pesticide, fertilizer, harmon, harvesting, transport and so on for pineapple productivity survey.

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

Production Cost	Farming year							
	All		First year		Second year		Third year & above	
	Cost	%	Cost	%	Cost	%	Cost	%
Total	39062	100.00	52451	100.00	36814	100.00	22895	100.00
Land Preparation	2171	5.56	5262	10.03	434	1.18	322	1.41
Seedling	8635	22.11	23625	45.04	-		-	
Plantation	1846	4.73	5052	9.63	-		-	
Weeding	4544	11.63	4314	8.22	4724	12.83	4601	20.10
Irrigation/Pesticide	322	0.82	64	0.12	596	1.62	275	1.20
Fertilizer	12585	32.22	13114	25.00	16229	44.08	6172	26.96
Harmon	1164	2.98	456	0.87	1836	4.99	1162	5.08
Harvesting	2831	7.25	-		4034	10.96	5124	22.38
Transport	4131	10.58	-		7844	21.31	4449	19.43
Others	833	2.13	565	1.08	1115	3.03	789	3.45

Note: 2.47 acres =1 hector

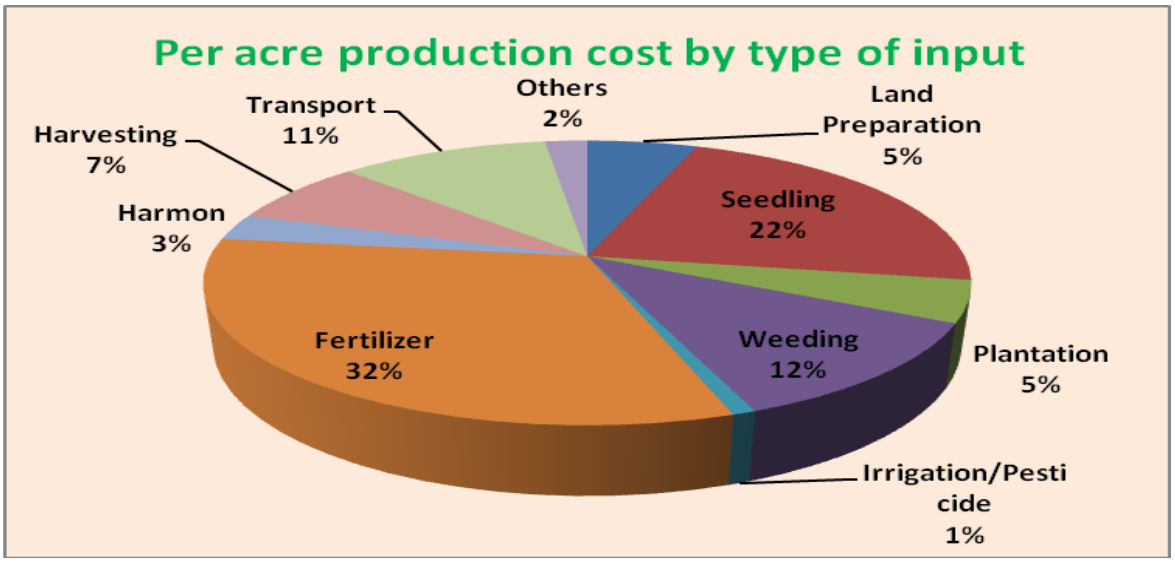


Table-4.1 presents the percentage distribution of per acre production cost (Tk.) by farming year. The table shows that over all, per acre production cost is Tk. 39062 for all framing years which is distributed in the first, second, third and above year is Tk.52451, Tk.36814

and Tk. 22895 respectively. It is also revealed that the production cost per acre is highest in the first year, which is accounts 45.04% cost for seedlings and 25% cost for fertilizers. The fertilizer cost increases in the second year accounting to 44.08% of the production cost per acre of this year. It stands at 26.96% during third year and above.

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

Production Cost	Cultivation type					
	All types		Single		Mixed	
	Cost	%	Cost	%	Cost	%
Total	39062	100.00	36883	100.00	41469	100.00
Land Preparation	2171	5.56	1978	5.36	2346	5.66
Seedling	8635	22.11	6393	17.33	11341	27.35
Plantation	1846	4.73	1427	3.87	2334	5.63
Weeding	4544	11.63	4404	11.94	4713	11.37
Irrigation/Pesticide	322	0.82	218	0.59	447	1.08
Fertilizer	12585	32.22	13141	35.63	11835	28.53
Harmon	1164	2.98	1304	3.54	1016	2.45
Harvesting	2831	7.25	2751	7.46	2928	7.06
Transport	4131	10.58	4354	11.80	3772	9.10
Others	833	2.13	913	2.48	737	1.78

The above table shows that the average per acre production cost in mixed crop area is Tk. 41469 and in single crop area the cost is Tk.36883. In both areas, the highest per acre production cost is in fertilizer followed by seedling. Average per acre production cost is significantly high for weeding and transport in both single and mixed cultivation type. It is mentionable that in both areas, per acre production cost for irrigation/pesticide is very nominal.

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

Production Cost	Tenureship					
	All		Owned		All others	
	Cost	%	Cost	%	Cost	%
Total	39062	100.00	39768	100.00	38255	100.00
Land Preparation	2171	5.56	2161	5.43	2371	6.20
Seedling	8635	22.11	8818	22.17	8848	23.13
Plantation	1846	4.73	1839	4.62	2073	5.41
Weeding	4544	11.63	4553	11.45	4540	11.86
Irrigation/Pesticide	322	0.82	348	0.88	219	0.57
Fertilizer	12585	32.22	13178	33.14	11440	29.90
Harmon	1164	2.98	1127	2.83	1261	3.30
Harvesting	2831	7.25	2804	7.05	2652	6.93
Transport	4131	10.58	4124	10.37	4002	10.46
Others	833	2.13	816	2.05	849	2.21

Note: Other means land taken from others

Table 4.3 presents per acre production cost of pineapples in two groups of tenureship viz, owned and others which include share crop, mortgage, lease and others. As owned land along occupies about 80% of the land, all other minor groups have been taken together in tenureship analysis. The table shows that in owned land tenureship fertilizer shows one third (33.14%) of the total cost followed by seedling (22.17%) weeding (11.45%) and transport (10.37%). By taking all other tenure ships into one group, the per acre cost of production is found to be almost similar for major category of costing like fertilizer, seedling, weeding and transport.

Table-4.4: Per acre production cost (Tk.) by variety.

Production cost	Variety						
	Total	Calendula	Ghurashal	Giant kew	Honey queen	Jaldubi	Others
Total	39062	39619	52439	39811	38167	36393	24464
Land Preparation	2171	1281	1942	2456	3521	2580	1612
Seedling	8635	7318	9442	11234	8913	8567	4344
Plantation	1846	1496	1756	2233	2211	2050	1100
Weeding	4544	6136	4944	3082	3968	4901	3242
Irrigation/Pesticide	322	274	1280	24	200	337	423
Fertilizer	12585	12634	19522	13686	11725	10152	6172
Harmon	1164	1465	2036	942	746	1124	653
Harvesting	2831	3655	2859	2036	2384	2855	3000
Transport	4131	4526	7735	3358	3645	2762	3327
Others	833	833	924	759	858	1066	590

The above table shows that the highest average per acre production cost (Tk.52439) is for ghurashal variety followed by giant kew variety (Tk. 39811) and the lowest per acre production cost is Tk.24464 for other variety. Per acre production cost for all varieties is the highest for fertilizer. And here it is found that the cost is Tk.19522 for ghurashal variety whereas the cost is only Tk. 6172 for other category of variety.

Chapter 5

Labour and Labourer's Cost

Labour and Labourer's Cost

Data related to the number of labourers and their cost and the cost of plantation, weeding and harvesting have been presented in this chapter.

Table-5.1: Per acre number of labour engaged and cost of plantation by farming year.

Farming year	Number of Labour							Per acre cost	Per labour cost
	Family		Hired		Total				
	Male	Female	Male	Female	Male	Female	All		
Total	1.45	0.61	3.95	0.76	5.40	1.37	6.77	1846	272.67
First year	3.97	1.68	10.81	2.07	14.78	3.75	18.53	5052	272.64
Second year	-	-	-	-	-	-	-	-	-
Third year & above	-	-	-	-	-	-	-	-	-

Number of labour engaged and cost for plantation per acre by farming year have been presented in table-5.1. The number of labourer on average, in all years required is 6.77 persons and out of them the percentage of male is 79.26% and female is 20.26% for plantation. And the average per acre plantation cost is Tk. 1846 for farming years. On the other hand, the average number of labourers required is 18.53 persons and their cost is Tk. 5052. It is also seen that for the rest two years there is no required labourers for plantation.

Table-5.2: Per acre number of labour engaged and cost of weeding by farming year.

Farming year	Number of Labour							Per acre cost	Per labour cost
	Family		Hired		Total				
	Male	Female	Male	Female	Male	Female	All		
Total	4.13	1.86	9.61	2.85	13.74	4.71	18.45	4544	246.29
First year	2.86	0.87	9.48	4.25	12.34	5.12	17.46	4314	247.08
Second year	3.46	0.72	11.27	2.29	14.73	3.01	17.74	4724	266.29
Third year & above	7.03	5.06	7.22	1.65	14.25	6.71	20.96	4601	219.51

The table highlights that on the average, the number of required labour is 18.45 persons and their cost is Tk. 4544. The highest per acre number of required labourer is 20.96 persons for third year and above and their cost is Tk. 4601 whereas in the first and second year, the

number of required labour is almost same person (17.46 and 17.76). But in the first year their cost is Tk. 4314 and in the second year it is Tk. 4724.

Table-5.3: Per acre number of labourer engaged and cost of harvesting by farming year.

Farming year	Number of Labour							Per acre cost	Per labour cost
	Family		Hired		Total				
	Male	Female	Male	Female	Male	Female	All		
Total	2.98	1.70	5.12	1.15	8.10	2.85	10.95	2831	258.54
First year	-	-	-	-	-	-		-	
Second year	3.66	0.92	9.20	1.85	12.86	2.77	15.63	4034	258.09
Third year & above	6.32	5.40	6.32	1.75	12.64	7.15	19.79	5124	258.92

Table-5.3 presents the number of labourer engaged and cost of harvesting by farming year. The average number of labourer required is 10.95 persons and their cost is Tk.2831. The average number of required labourer in the second year is 15.63 persons and their cost is Tk. 4034. On the other hand, the average number of required labourers is 19.79 persons and their cost is Tk. 5124. It is mentionable that there is no harvesting cost and number of labourer engaged in the first year.

Chapter 6

Production and Productivity

Production and Productivity

The estimated per acre production (in Kg), per acre production value, per acre number of seedling and their value by tenancy, cultivation type and varieties of pineapple productivity in Bangladesh have been described in this chapter.

Table-6.1: Per acre production quantity (No./Kg) and value (Tk.) of pineapple crops by Tenancy.

Tenancy	Per acre seedling		Per acre production pineapple		Total Value (Tk.)
	Number	Value (Tk.)	Quantity (Kg.)	value (Tk.)	
Total	2628	4088	7256	64689	68776
Owned	2662	4193	7299	65611	69805
All others	2688	3996	6884	57251	61247

Note: 2.47 acres =1 hector

The above table shows per acre number of seedling and their value, category wise per acre quantity (Kg) & value (Tk.) and per acre production value (Tk.) of pineapple crops by tenancy. The average per acre yield rate is 7256 Kg and their value is Tk. 64689. Consequently their total value is Tk. 68776. The highest per acre production value is owned which is Tk. 69805. On the other hand, per acre production value of all other tenure ship is Tk. 61247.

Table-6.2: Per acre production quantity (No./Kg) and value (Tk.) of pineapple crops by cultivation type.

Cultivation type	Per acre seedling		Per acre production pineapple		Total Value (Tk.)
	Number	Value (Tk.)	Quantity (Kg.)	value (Tk.)	
Total	2628	4088	7256	64689	68776
Single	3550	5373	8089	69362	74734
Mixed	1516	2537	6251	59049	61586

Table 6.2 covers per acre number of seedling and their value, category wise per acre yield rate (Kg) & production value (Tk.) and per acre production value (Tk.) of pineapple crops by cultivation type. The average per acre production value is estimated at Tk. 68776. The average per acre production value for single crop cultivation is Tk. 74734 of which per acre seedling value is Tk. 5373 and the per acre pineapple production value is Tk. 69362. On the other hand, in the mixed cultivation type area, per acre production value is Tk. 61586 of which per acre seedling value is Tk. 2537 and per acre pineapple production value is 59049.

It is noted that per acre yield rate and the production value for single crop area is significantly different from mixed crop area.

Table-6.3: Per acre production quantity (No./Kg) and value (Tk.) of pineapple crops by farming year.

Farming year	Per acre seedling		Per acre production pineapple		Total Value (Tk.)
	Number	Value (Tk.)	Quantity (Kg.)	value (Tk.)	
Total	2628	4088	7256	64689	68776
First year	-	-	-	-	-
Second year	5301	8160	13697	121884	130044
Third year & above	2350	3786	7939	71126	74912

Table-6.3 presents per acre number of seedlings & their value (Tk.) and per acre production (kilogram) & their value by farming area in the year 2013. The per acre production number of seedling, per acre kilogram production and per acre production value (Tk.) of pineapple for second are estimated at 5301, 13697 kilograms and Tk 130044.On the other hand, per acre yield rate (Kg.) and per acre production value (Tk.) in third year and above are estimated at 7939 kilogram and Tk 74912. It is seen that the average per acre production (kilogram) and per acre production value (Tk.) in third year and above is significantly lower than that in second year. It is further observed in the table that is 1st year farmer do not get any profit or lose.

Table-6.4: Per acre productivity of pineapple crops by varieties.

Varieties of pineapple	Per acre production cost (Tk.)	Production value (Tk.)	Productivity
Total	39062	68776	1.76
Calendula	39619	81816	2.06
Ghurashal	52439	99710	1.90
Giant kew	39811	55298	1.38
Honey queen	38167	65774	1.72
Jaldubi	36393	60641	1.66
Others	24464	37953	1.55

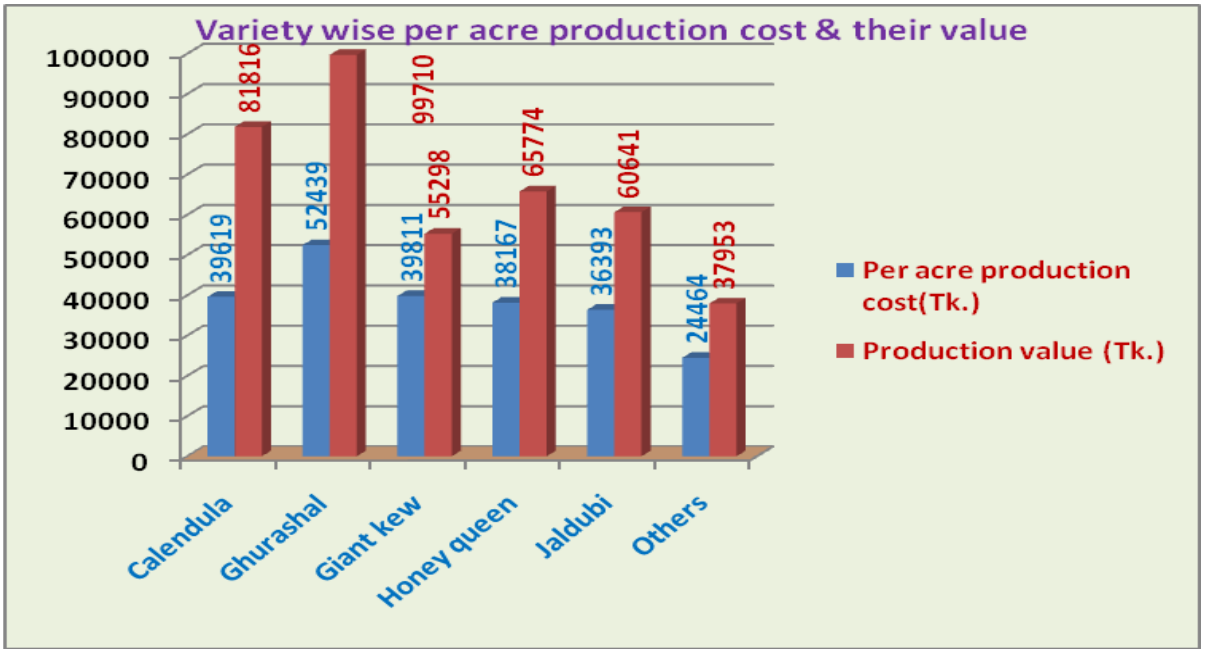


Table 6.4 exposes the productivity of pineapple crops by varieties of pineapple. It is the most significant component of production because it determines whether the producer/ cultivator will continue the production of respective varieties. If the productivity of the pineapple crop is greater than 1, it means that the producer will be benefited. And he/she will be interested to continue the production of the crops and if it is less than one, it means that the producer will be looser and he will quit the production of the crop. It is noticed from the above table that the productivity of pineapple crop in total is 1.76. This means the productivity is greater than 1 at national level and farmer will get significant profit from the production of pineapple. Overall the highest productivity is 2.06 for Calendula and minimum or lowest productivity is 1.55 for other varieties indicating the highest and lowest level of profit in the cultivation of pineapples.

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:

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

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 farming year wise per decimal average production cost (excluding leasing) for the 2013 and their standard errors.

Type of Production Cost	Framing year											
	All			First year			Second year			Third year and above		
	Cost	SE	RSE	Cost	SE	RSE	Cost	SE	RSE	Cost	SE	RSE
All	390.62	4.524	1.16	524.51	2.763	0.53	368.13	4.110	1.12	228.95	8.123	3.55
Land Preparation	21.71	0.724	3.33	52.62	0.625	1.19	4.34	0.035	0.81	3.22	0.076	2.36
Seedling/ Plantation/ Weeding	150.25	2.614	1.74	329.91	3.374	1.02	47.24	1.518	3.21	46.01	1.021	2.22
Irrigation/ Pesticide	3.22	0.252	7.83	0.64	0.034	5.31	5.96	0.451	7.57	2.75	0.187	6.80
Fertilizer	125.85	1.777	1.41	131.14	2.446	0.76	162.29	2.794	1.72	61.72	3.477	5.63
Harvesting and others	89.59	0.816	0.91	10.20	0.123	1.21	148.30	0.799	0.54	115.16	3.113	2.70

Note: Farming year wise SE. have been calculated as there are differences in cost of production in different farming years

The table shows that the average production cost per decimal for first year of Taka 524.51 is significantly different from the 368.13 Taka average production cost second year at 95% confidence interval. The average per decimal production cost for second year of 368.13 Taka is significantly different from the 228.95 Taka third year and above at 95% confidence interval. On the other hand the average production cost for all areas are significantly different from the three farming years at 95% confidence interval.

Although the estimated per decimal production cost for the third year above is subject to the higher standard error for first year farming. Similarly the estimated production cost per decimal for third year and above is also subject to the higher standard error than for first year

farming. Production cost per decimal for all estimates have acceptable reliability in terms of sampling error.

Table-7.2: Estimated farming year wise per decimal average production value (Tk.) for the year 2013 and their standard errors.

Farming year	All		
	Value	SE	RSE
First year	-	-	
2nd year	1300.43	24.095	1.85
3rd year & above	749.11	16.102	2.15
Total	687.76	16.083	2.33

The average per decimal production value for all areas of 687.76 Taka are significantly different from the average production value for farming years second and three & above at 95% confidence interval. However the estimated average per decimal production values for all areas are subject to lower than that of the farming years second, third and above. Production values per decimal for all estimates have acceptable reliability in terms of sampling error.

Annex

Annex-A: Statistical Table

Table-1: Distribution of area (acres) under pineapple cultivation by farming year & tenancy.

Farming year	Tenancy					
	Total	Owned	Share crop	Mortgage	Lease	Other
1	2	3	4	5	6	7
Total	21180.37	16915.56	536.09	455.91	2672.58	600.23
First year	7741.77	6163.01	174.95	214.72	891.13	297.95
Second year	8162.23	6765.81	250.81	233.97	785.77	125.88
Third year & above	5276.37	3986.74	110.33	7.22	995.68	176.40

Table-2: Distribution of household under pineapple cultivation by farming year & tenancy.

Farming year	Tenancy					
	Total	Owned	Share crop	Mortgage	Lease	Other
1	2	3	4	5	6	7
Total	19965	21761	770	577	3159	273
First year	9125	7553	273	257	962	80
Second year	10824	8916	369	305	1090	144
Third year & above	6591	5292	128	16	1106	48

Table-3: Distribution of area (acres) under pineapple cultivation by farming year & variety.

Farming year	Variety						
	Total	Calendula	Ghurashal	Giant kew	Honey queen	Jaldubi	Others
1	2	3	4	5	6	7	8
Total	21180.37	6384.47	2132.81	5137.82	3530.04	2249.55	1745.69
First year	7741.77	1868.21	780.48	2353.94	1517.34	842.22	379.58
Second year	8162.23	2054.87	1115.47	2027.77	1669.52	964.73	329.86
Third year & above	5276.37	2461.39	236.85	756.10	343.17	442.60	1036.26

Table-4: Distribution of households under pineapple cultivation by farming year & variety.

Farming year		Variety					
	Total	Calendula	Ghurashal	Giant kew	Honey queen	Jaldubi	Others
1	2	3	4	5	6	7	8
Total	19965	5565	2774	4763	5629	4763	2213
First year	8692	1732	930	2437	2021	1235	337
Second year	10472	2245	1395	1700	2454	2261	417
Third year & above	6543	1588	449	625	1155	1267	1459

Table-5: Distribution of area (acres) & households under pineapple cultivation by farming year & cultivation type.

Farming year	Type of cultivation					
	All		Single		Mixed	
	Area	No. of H/H	Area	No. of H/H	Area	No. of H/H
1	2	3	4	5	6	7
Total	21180.37	19965	11582.74	13535	9597.63	12171
First year	7741.77	8692	3387.96	3736	4353.81	4955
Second year	8162.23	10472	5382.21	6495	2780.03	3977
Third year & above	5276.37	6543	2812.58	3303	2463.79	3239

Table-6: Per acre land preparation cost (Tk.) by farming year.

Farming year	Land preparation cost (Tk.)					
	Total cost (Tk.)	Plough/kodal		Power tiller		Other cost (Tk.)
		Number	Cost (Tk.)	Number	cost (Tk.)	
1	2	3	4	5	6	7
Total	2171	0.88	692	0.99	990	489
First year	5262	2.42	1893	2.70	2709	660
Second year	434	-	-	-	-	434
Third year & above	322	-	-	-	-	322

Table-7: Per acre number of seedling and their cost (Tk.) by farming year and variety.

Farming year	Per acre number of seedling and their cost (Tk.)									
	Total		Sucker		Slip		Crown		Others	
	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
1	2	3	4	5	6	7	8	9	10	11
Total	5000	8635	2564	3702	1986	4547	451	386	-	-
First year	13680	23625	7013	10129	5432	12441	1235	1055	-	-
Second year	-	-	-	-	-	-	-	-	-	-
Third year & above	-	-	-	-	-	-	-	-	-	-

Table-8: Per acre number of plantation labour and their cost (Tk.) by farming year.

Farming year	Per acre number of plantation labour and their cost (Tk.)						
	Number of labour						Cost (Tk.)
	Family		Hired		Total		
	Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	8
Total	1.45	0.61	3.95	0.76	5.40	1.37	1846
First year	3.97	1.68	10.81	2.07	14.78	3.75	5052
Second year	-	-	-	-	-	-	-
Third year & above	-	-	-	-	-	-	-

Table-9: Per acre irrigation cost and per acre number of weeding labour and their cost (Tk.) by farming year.

Farming year	Irrigation cost (Tk.)	Per acre number of weeding labour and their cost (Tk.)						
		Number of labour						Cost (Tk.)
		Family		Hired		All		
		Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	8	9
Total	9	4.13	1.86	9.61	2.85	13.74	4.71	4544
First year	3	2.86	0.87	9.48	4.25	12.34	5.12	4314
Second year	17	3.46	0.72	11.27	2.29	14.73	3.01	4724
Third year & above	4	7.03	5.06	7.22	1.65	14.25	6.71	4601

Table-10: Per acre production insecticide cost (Tk.) by farming year.

Farming year	Total Cost (TK.)	Per acre insecticide cost (TK.)				
		Karate	Admire	Shobicron	Sevin-85	Others
1	2	3	4	5	6	7
Total	219	69	17	18	30	85
First year	47	3	-	-	29	15
Second year	368	126	35	15	22	170
Third year & above	237	77	11	51	44	54

Table-11: Per acre production pesticide cost (Tk.) by farming year.

Farming year	Total Cost (TK.)	Per acre pesticide cost (TK.)						
		Dithane M-45	Ridomil M Z	Nuben	Bordeaux mixture	Secure	Indofil M-45	Others
1	2	3	4	5	6	7	8	9
Total	94	11	22	6	1	2	3	49
First year	13	1						12
Second year	212	15	54	14	2	7	7	113
Third year & above	33	17	6	1				9

Table-12: Per acre harmon cost (Tk) by farming year.

Farming year	Total Cost (TK.)	Harmon cost (TK.)					
		Crop Care	Ripen	Foliar plus	Harpest	Power plus	Others
1	2	3	4	5	6	7	8
Total	1164	670	216	36	86	127	27
First year	456	143	44	8	52	199	9
Second year	1836	1131	384	46	147	95	31
Third year & above	1162	731	208	62	42	70	49

Table-13: Per acre use of fertilizer quantity (Kg) and their cost (TK.) by farming year.

Farming year	Per acre fertilizer quantity (Kg) and cost (Tk.)							
	Total cost (Tk.)	Urea		TSP/DAP		MOP		Others (Tk.)
		Qty.(Kg)	Cost (Tk.)	Qty.(Kg)	Cost (Tk.)	Qty.(Kg)	Cost (Tk.)	
1	2	3	4	5	6	7	8	9
Total	12585	299	5213	244	4201	171	2535	637
First year	13114	304	5379	378	4649	171	2560	526
Second year	16229	385	6559	224	5324	228	3419	928
Third year & above	6172	159	2887	78	1804	80	1130	351

Table-14: Per acre number of harvesting labour and their cost (Tk.) by farming year.

Farming year	Per acre number of harvesting Labour & their cost (Tk.)							Transport cost (Tk.)	Others cost (Tk.)
	Family		Hired		Total		Cost (Tk.)		
	Male	Female	Male	Female	Male	Female			
1	2	3	4	5	6	7	8	9	10
Total	2.98	1.70	5.12	1.15	8.10	2.85	2831	4131	833
First year	-	-	-	-	-	-	-	-	565
Second year	3.66	0.92	9.20	1.85	12.86	2.77	4034	7844	1115
Third year & above	6.32	5.40	6.32	1.75	12.64	7.15	5124	4449	789

Table-15.a: Per acre production cost (Tk.) by farming year & size of land.

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weed ing	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	39062	2171	8635	1846	4544	9	313	1164	12585	2831	4131	833
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	36867	1935	6642	1518	4697	67	422	1056	11224	3703	4201	1403
0.50-0.99	43457	2755	10566	2169	4791	7	183	1216	14373	2360	4000	1038
1.00-1.49	40607	2213	8931	2028	4666	-	459	1350	13320	2379	4604	657
1.50-2.49	37750	2067	8136	1686	4175	-	354	120	12193	3005	4142	791
2.50-4.99	32614	1321	5659	1135	4430	-	189	953	10450	3685	4237	555
5.00-7.49	44236	3186	16704	3836	4941	-	106	552	12228	1216	1126	342
7.50+												
First Year												
Total	52451	5262	23625	5052	4314	3	61	456	13114	-	-	565
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	52483	5416	22802	5211	4335	37	17	291	13195	-	-	1180
0.50-0.99	54055	5630	23898	4907	4243	-	10	345	14347	-	-	674
1.00-1.49	52259	5435	23713	5385	4190	-	101	538	12344	-	-	553
1.50-2.49	51895	5305	24011	4976	4357	-	115	594	12131	-	-	407
2.50-4.99	50939	4390	23910	4794	3667	-	-	323	13586	-	-	270
5.00-7.49	50720	4111	21557	4951	5680	-	73	523	13442	-	-	383
7.50+												
Second year												
Total	36814	434	-	-	4724	17	579	1836	16229	4034	7844	1115
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	35283	620	-	-	5169	103	553	1617	13015	5397	7106	1702
0.50-0.99	37986	490	-	-	5236	16	391	1944	16529	4151	7926	1302
1.00-1.49	37935	275	-	-	4800	-	771	1922	17285	3542	8547	793
1.50-2.49	36800	444	-	-	4098	-	641	1946	16748	4042	7742	1138
2.50-4.99	33767	438	-	-	4403	-	459	1440	15682	3390	7208	748
5.00-7.49												
7.50+												
Third year and above												
Total	22895	322	-	-	4601	4	271	1162	6172	5124	4449	789
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	21601	293	-	-	4255	37	654	917	5652	4909	3771	1114
0.50-0.99	26817	437	-	-	5191	-	120	1796	8382	4450	5042	1399
1.00-1.49	23550	249	-	-	5307	-	457	1654	6166	4445	4721	551
1.50-2.49	22123	358	-	-	4061	-	257	934	6211	5213	4301	787
2.50-4.99	21986	321	-	-	4858	-	95	938	4987	5869	4351	567
5.00-7.49	21920	-	-	-	2400	-	220	650	8050	5400	5000	200
7.50+												

Table-15.b: Per acre production value (Tk.) for seedling & pineapple by farming year and size of land.

Size of land (acre)	Per acre production seedling and pine apple value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
All					
Total	68776	2628	4088	7256	64689
0.01-0.04	-	-	-	-	-
0.05-0.49	73315	2404	3595	7887	69720
0.50-0.99	65848	2204	3827	6676	62021
1.00-1.49	71395	2616	3930	8186	67465
1.50-2.49	68867	2653	4523	7586	64344
2.50-4.99	76660	3754	4723	6983	71936
5.00-7.49	21995	1193	2296	1666	19698
7.50+	-	-	-	-	-
First year					
Total	-	-	-	-	-
0.01-0.04	-	-	-	-	-
0.05-0.49	-	-	-	-	-
0.50-0.99	-	-	-	-	-
1.00-1.49	-	-	-	-	-
1.50-2.49	-	-	-	-	-
2.50-4.99	-	-	-	-	-
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Second year					
Total	130044	5301	8160	13697	121884
0.01-0.04	-	-	-	-	-
0.05-0.49	122440	3922	5783	12862	116657
0.50-0.99	132306	4339	7095	13510	125211
1.00-1.49	133385	4779	7728	14738	125657
1.50-2.49	130784	5255	9193	13477	121590
2.50-4.99	124926	9820	11461	13251	113465
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Third year and above					
Total	74912	2350	3786	7939	71126
0.01-0.04	-	-	-	-	-
0.05-0.49	68684	2424	3770	7958	64914
0.50-0.99	77862	2858	6197	7623	71665
1.00-1.49	71281	2862	3039	9449	68243
1.50-2.49	68769	2360	3716	8810	65054
2.50-4.99	82700	1370	2372	6179	80328
5.00-7.49	97700	5300	10200	7400	87500
7.50+	-	-	-	-	-

Table-16.a: Per acre production cost (Tk.) by variety and size of land.

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	39062	2171	8635	1846	4544	9	313	1164	12585	2831	4131	833
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	36867	1935	6642	1518	4697	67	422	1056	11224	3703	4201	1403
0.50-0.99	43457	2755	10566	2169	4791	7	183	1216	14373	2360	4000	1038
1.00-1.49	40607	2213	8931	2028	4666	-	459	1350	13320	2379	4604	657
1.50-2.49	37750	2067	8136	1686	4175	-	354	120	12193	3005	4142	791
2.50-4.99	32614	1321	5659	1135	4430	-	189	953	10450	3685	4237	555
5.00-7.49	44236	3186	16704	3836	4941	-	106	552	12228	1216	1126	342
7.50+												
Calendula												
Total	39417	1281	7318	1496	6136	-	274	1435	12469	3655	4521	831
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	41056	1227	6004	1331	6853	-	402	2015	12968	3018	5851	1388
0.50-0.99	44906	1668	9938	1594	5833	-	132	1681	15963	2490	4505	1102
1.00-1.49	42908	1200	7530	1981	6672	-	493	1685	14234	2986	5561	565
1.50-2.49	40215	1297	6851	1438	6378	-	241	1610	12335	4285	4573	1206
2.50-4.99	30246	664	3826	587	5571	-	296	931	8426	5194	4282	471
5.00-7.49	41406	2410	13172	3238	6259	-	76	845	11441	1862	1724	379
7.50+												
Ghurashal												
Total	52439	1942	9442	1756	4944	-	1280	2036	19522	2859	7735	924
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	53308	2646	11198	2213	5151	-	892	2519	15963	3759	6137	2830
0.50-0.99	46867	2123	10503	2591	5402	-	785	1903	20940	2841	8667	1114
1.00-1.49	49039	1061	5241	883	4724	-	1722	2735	18964	3393	9595	721
1.50-2.49	51025	2224	10455	1721	4558	-	2186	1279	18849	2691	6744	319
2.50-4.99	49723	1236	6071	514	5621	-	200	2711	22816	2125	7929	500
5.00-7.49	56230	4240	26000	3600	3000	-	500	-	18850	-	-	40
7.50+												
Giant kew												
Total	39811	2456	11234	2233	3082	-	24	942	13686	2036	3358	759
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	43472	3829	14682	3539	4098	-	-	678	12243	1429	1678	1298
0.50-0.99	48660	3704	17504	3450	3848	-	-	995	15101	1147	2239	673
1.00-1.49	44115	2595	13515	2320	3471	-	-	1095	15898	1508	3013	698
1.50-2.49	35533	1757	7492	1438	2881	-	53	1044	12765	2799	4501	804
2.50-4.99	34036	2106	8822	2072	2196	-	16	631	12394	2157	2889	753
5.00-7.49	46358	4837	22073	5614	2207	-	-		11243	-	-	384
7.50+												

Continued

Table-16.a: Per acre production cost (Tk.) by variety and size of land.

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Honey queen												
Total	38167	3521	8913	2211	3965	8	192	746	11725	2384	3645	858
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	35151	2243	6639	1591	3988	41	289	506	11712	3174	3883	1086
0.50-0.99	38756	4012	9592	2154	3825	-	64	640	12562	2148	2662	1097
1.00-1.49	38067	3279	7989	2039	4245	-	352	744	11698	2321	4684	715
1.50-2.49	40816	4811	12311	3396	3824	-	108	1107	9727	2122	2932	478
2.50-4.99	37991	2183	6774	1935	3710	-	38	1269	13509	1897	6301	376
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Jaldubi												
Total	36393	2580	8567	2050	4901	68	269	1124	10152	2855	2762	1066
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	32940	1274	4028	938	5218	196	342	1023	9640	5155	3732	1394
0.50-0.99	36370	2425	8004	1763	5126	39	203	1236	10817	2772	2891	1092
1.00-1.49	38018	3800	11579	3496	4654	-	264	1151	8416	1275	2498	884
1.50-2.49	43073	4247	15585	3157	3984	-	401	1164	12454	769	602	709
2.50-4.99	33440	1800	10000	1400	4400	-	20	480	11100	1800	2000	440
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	24464	1612	4344	1100	3242	-	423	653	6172	3000	3327	590
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	24466	1159	2542	565	3034	-	950	508	5961	4055	4725	967
0.50-0.99	33939	2459	5996	1820	3971	-	101	372	8478	3848	5711	1181
1.00-1.49	22208	1219	3693	955	2924	-	577	991	5906	3231	2389	323
1.50-2.49	19349	1345	3960	739	2901	-	414	619	5126	2281	1660	304
2.50-4.99	27282	2084	5492	1557	3660	-	175	602	6439	2531	4098	643
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Table-16.b: Per acre production value (Tk.) for seedling & pineapple by variety and size of land.

Size of land (acre)	Per acre production value (Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
All					
Total	68776	2628	4088	7256	64689
0.01-0.04	-	-	-	-	-
0.05-0.49	73315	2404	3595	7887	69720
0.50-0.99	65848	2204	3827	6676	62021
1.00-1.49	71395	2616	3930	8186	67465
1.50-2.49	68867	2653	4523	7586	64344
2.50-4.99	76660	3754	4723	6983	71936
5.00-7.49	21995	1193	2296	1666	19698
7.50+	-	-	-	-	-
Calendula					
Total	81678	2996	4889	8370	76789
0.01-0.04	-	-	-	-	-
0.05-0.49	102930	2763	5617	9654	97313
0.50-0.99	80439	3074	6460	8047	73980
1.00-1.49	92255	3794	5491	11325	86764
1.50-2.49	78747	2575	4550	8794	74197
2.50-4.99	88327	3118	3701	7411	84626
5.00-7.49	33690	1828	3517	2552	30172
7.50+	-	-	-	-	-
Ghurashal					
Total	99710	2021	3451	11272	96260
0.01-0.04	-	-	-	-	-
0.05-0.49	85710	802	1621	9063	84089
0.50-0.99	98230	1812	3428	12171	94802
1.00-1.49	123359	2240	4257	14488	119102
1.50-2.49	91688	1469	2944	8797	88744
2.50-4.99	119321	5357	6071	13786	113250
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Giant kew					
Total	55298	3420	5627	5658	49671
0.01-0.04	-	-	-	-	-
0.05-0.49	34041	2016	3245	3439	30796
0.50-0.99	32064	1920	3175	3426	28886
1.00-1.49	50638	3067	5224	5435	45414
1.50-2.49	71317	4232	7015	7461	64302
2.50-4.99	57560	4284	6616	4861	50944
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Continued

Table-16.b: Per acre production value (Tk.) for seedling & pineapple by variety and size of land.

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
Honey queen					
Total	65771	1796	2569	7329	63206
0.01-0.04	-	-	-	-	-
0.05-0.49	70203	1527	2783	8098	67420
0.50-0.99	60544	1735	2069	6208	58476
1.00-1.49	71836	1691	2548	7816	69288
1.50-2.49	56603	1176	2143	7223	54459
2.50-4.99	83032	6667	7204	9613	75828
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Jaldubi					
Total	60641	2054	2852	5470	57789
0.01-0.04	-	-	-	-	-
0.05-0.49	81105	3332	4899	8196	76206
0.50-0.99	62272	1870	2880	4871	59392
1.00-1.49	43464	1592	1523	4039	41941
1.50-2.49	39866	134	134	3545	39732
2.50-4.99	53000	2600	3000	5000	50000
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Others					
Total	40023	2118	2071	5132	37953
0.01-0.04	-	-	-	-	-
0.05-0.49	48413	4294	2683	6969	45730
0.50-0.99	50850	2581	3839	4535	47012
1.00-1.49	35511	1644	1262	4570	34249
1.50-2.49	31443	191	116	5399	31327
2.50-4.99	43893	3484	3893	4713	40000
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Table-17.a: Per acre production cost (Tk.) in first year by variety and size of land.

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
First year												
Total	52451	5262	23625	5052	4314	3	61	456	13114	-	-	565
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	52483	5416	22802	5211	4335	37	17	291	13195	-	-	1180
0.50-0.99	54055	5630	23898	4907	4243	-	10	345	14347	-	-	674
1.00-1.49	52259	5435	23713	5385	4190	-	101	538	12344	-	-	553
1.50-2.49	51895	5305	24011	4976	4357	-	115	594	12131	-	-	407
2.50-4.99	50939	4390	23910	4794	3667	-	-	323	13586	-	-	270
5.00-7.49	50720	4111	21557	4951	5680	-	73	523	13442	-	-	383
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Calendula												
Total	56320	3654	25009	5113	6167	-	3	523	15328	-	-	524
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	60873	3448	25305	5610	8064	-	80	40	17690	-	-	637
0.50-0.99	55070	3735	26205	4204	4623	-	-	207	15467	-	-	628
1.00-1.49	58681	3830	26077	6862	6467	-	-	678	14234	-	-	533
1.50-2.49	56990	3738	24031	5045	6705	-	-	761	16209	-	-	500
2.50-4.99	59529	2969	29733	4563	4482	-	-	-	17442	-	-	340
5.00-7.49	51662	3679	20105	4942	8289	-	-	947	13225	-	-	474
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Ghurashal												
Total	56617	4534	25802	4798	4092	-	379	-	16384	-	-	629
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	55249	5156	25333	5007	3963	-	-	-	12841	-	-	2948
0.50-0.99	60562	4474	27126	6691	4071	-	33	-	17856	-	-	312
1.00-1.49	56230	4483	27500	4633	4867	-	333	-	14130	-	-	283
1.50-2.49	53515	4427	23409	3854	3967	-	955	-	16584	-	-	318
2.50-4.99	57610	4500	28333	2400	5333	-	-	-	17043	-	-	-
5.00-7.49	56230	4240	26000	3600	3000	-	500	-	18850	-	-	40
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Giant kew												
Total	50821	4825	24520	4875	3053	-	-	502	12501	-	-	546
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	50730	5460	22067	5319	3583	-	-	356	12466	-	-	1479
0.50-0.99	55278	5282	25715	5068	3734	-	-	499	14352	-	-	628
1.00-1.49	52621	4612	25983	4460	2900	-	-	499	13633	-	-	535
1.50-2.49	48055	4689	24573	4717	2858	-	-	623	10205	-	-	391
2.50-4.99	48179	4481	21813	5124	2868	-	-	593	12848	-	-	451
5.00-7.49	46358	4837	22073	5614	2207	-	-	-	11243	-	-	384
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Honey queen												
Total	52226	7654	20737	5144	4171	-	78	322	13427	-	-	693
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	54258	6430	21764	5217	4256	-	-	366	15555	-	-	669
0.50-0.99	52611	7875	20174	4531	4023	-	-	250	14803	-	-	955
1.00-1.49	49418	7454	19094	4874	4127	-	301	162	12669	-	-	737
1.50-2.49	53740	8586	23005	6346	4586	-	-	581	10324	-	-	313
2.50-4.99	51867	6100	21000	6000	3100	-	-	533	15133	-	-	-
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Jaldubi												
Total	48595	6082	22882	5475	4062	29	-	1049	8430	-	-	585
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	45765	4646	22374	5208	3687	215	-	560	8537	-	-	538
0.50-0.99	50131	6091	22744	5011	4593	-	-	853	10107	-	-	731
1.00-1.49	47965	6877	22022	6650	4125	-	-	1371	6318	-	-	602
1.50-2.49	51198	6667	25889	5244	3311	-	-	1267	8353	-	-	467
2.50-4.99	40160	2800	20000	2800	3600	-	-	960	10000	-	-	-
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	44412	6004	19979	5061	4601	-	131	-	8442	-	-	194
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	44876	5765	20647	4588	4412	-	241	-	8635	-	-	588
0.50-0.99	45775	6071	18303	5556	5818	-	182	-	9704	-	-	141
1.00-1.49	43810	5203	19746	5106	3464	-	377	-	9913	-	-	-
1.50-2.49	44904	6082	21818	4073	5455	-	-	-	6949	-	-	527
2.50-4.99	43324	6507	19706	5588	3860	-	-	-	7662	-	-	-
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Table-18.a: Per acre production cost (Tk.) in second year by variety and size of land.

Size of land (acre)	per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Second year												
Total	36814	434	-	-	4724	17	579	1836	16229	4034	7844	1115
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	35283	620	-	-	5169	103	553	1617	13015	5397	7106	1702
0.50-0.99	37986	490	-	-	5236	16	391	1944	16529	4151	7926	1302
1.00-1.49	37935	275	-	-	4800	-	771	1922	17285	3542	8547	793
1.50-2.49	36800	444	-	-	4098	-	641	1946	16748	4042	7742	1138
2.50-4.99	33767	438	-	-	4403	-	459	1440	15682	3390	7208	748
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Calendula												
Total	42188	304	-	-	6000	-	624	2580	18305	4030	9064	1281
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	38391	538	-	-	6586	-	318	2966	12925	3908	9289	1861
0.50-0.99	42990	375	-	-	6171	-	249	2791	19662	3815	8523	1404
1.00-1.49	39966	119	-	-	5400	-	988	2182	18388	3390	8921	578
1.50-2.49	45906	347	-	-	6074	-	422	3203	18417	4834	10462	2147
2.50-4.99	40310	337	-	-	6427	-	1138	1649	18099	4326	7753	581
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Ghurashal												
Total	53731	441	-	-	5718	-	2046	3184	23362	4689	13283	1007
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	56161	674	-	-	6772	-	1818	4763	19817	6844	12905	2568
0.50-0.99	57182	591	-	-	6574	-	1477	2967	24541	4691	14909	1431
1.00-1.49	52205	251	-	-	5075	-	2189	3452	23059	4469	12828	882
1.50-2.49	50893	437	-	-	4944	-	3477	2122	21773	5069	12765	306
2.50-4.99	53074	375	-	-	5963	-	350	3769	27649	2594	12000	375
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Giant kew												
Total	31864	445	-	-	3390	-	62	1445	16651	3110	5811	950
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	30172	561	-	-	4673	-	-	1526	13677	3349	5436	950
0.50-0.99	36363	318	-	-	4553	-	-	2213	18422	3191	6914	750
1.00-1.49	35588	389	-	-	4329	-	-	1818	19375	2788	6036	853
1.50-2.49	31226	470	-	-	3091	-	114	1353	16026	3378	5805	989
2.50-4.99	24907	517	-	-	1792	-	39	590	13444	2632	4775	1118
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Size of land (acre)	per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Honey queen												
Total	30079	484	-	-	3833	5	287	1168	11932	4311	7070	989
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	33348	583	-	-	4051	25	407	807	13670	4873	7409	1523
0.50-0.99	27819	603	-	-	3730	-	143	986	11761	4328	5120	1148
1.00-1.49	31510	312	-	-	4223	-	422	1140	11976	4028	8638	771
1.50-2.49	27111	510	-	-	2943	-	255	1876	9611	4694	6656	567
2.50-4.99	31384	317	-	-	4000	-	56	1619	12735	2800	9302	556
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Jaldubi												
Total	30593	554	-	-	5482	135	430	1054	12732	4372	4431	1404
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	31135	653	-	-	5412	283	342	982	10843	6533	4403	1684
0.50-0.99	30157	506	-	-	5670	90	335	1353	12656	3638	4611	1299
1.00-1.49	30267	374	-	-	5475	-	790	896	13020	2615	5752	1345
1.50-2.49	33000	562	-	-	5056	-	787	831	21966	1685	1124	989
2.50-4.99	26720	800	-	-	5200	-	40	-	12200	3600	4000	880
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	28833	557	-	-	3916	-	442	722	8568	5139	8243	1247
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	25111	842	-	-	3387	-	1502	294	7581	4050	6111	1344
0.50-0.99	35873	520	-	-	3456	-	106	675	9614	7273	11997	2232
1.00-1.49	29363	472	-	-	4363	-	-	377	8160	5566	9906	519
1.50-2.49	-	-	-	-	-	-	-	-	-	-	-	-
2.50-4.99	25462	515	-	-	4253	-	441	948	8299	4046	6186	773
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Table-18.b: Per acre production value (Tk.) for seedling & pineapple in second year by variety & size of land.

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
Second year					
Total	130044	5301	8160	13697	121884
0.01-0.04	-	-	-	-	-
0.05-0.49	122440	3922	5783	12862	116657
0.50-0.99	132306	4339	7095	13510	125211
1.00-1.49	133385	4779	7728	14738	125657
1.50-2.49	130784	5255	9193	13477	121590
2.50-4.99	124926	9820	11461	13251	113465
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Calendula					
Total	152677	7068	11481	16034	141196
0.01-0.04	-	-	-	-	-
0.05-0.49	151747	3776	7547	14746	144200
0.50-0.99	152315	5375	10790	14580	141525
1.00-1.49	146504	6120	9926	16483	136578
1.50-2.49	158885	6839	12492	16985	146393
2.50-4.99	154888	14270	16067	16868	138820
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Ghurashal					
Total	171899	3368	5671	19624	166229
0.01-0.04	-	-	-	-	-
0.05-0.49	167603	1614	3264	17752	164339
0.50-0.99	171169	2687	5105	21858	166064
1.00-1.49	172211	3282	6338	20344	165873
1.50-2.49	172900	2653	5318	16604	167581
2.50-4.99	174563	8125	8125	20313	166438
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Giant kew					
Total	107167	6533	10696	10675	96471
0.01-0.04	-	-	-	-	-
0.05-0.49	105218	7072	11449	11308	93769
0.50-0.99	106874	5932	10626	11606	96248
1.00-1.49	108184	6355	10975	11657	97209
1.50-2.49	108119	6077	10159	10285	97960
2.50-4.99	102596	8753	12006	9593	90590
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
Honey queen					
Total	126925	3704	5226	14507	121699
0.01-0.04	-	-	-	-	-
0.05-0.49	123006	3221	5846	15148	117161
0.50-0.99	125072	3761	4291	13133	120781
1.00-1.49	132651	3173	4748	14390	127904
1.50-2.49	126516	2771	5051	16793	121465
2.50-4.99	122571	9841	10635	14190	111937
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Jaldubi					
Total	104511	3590	4116	8949	100394
0.01-0.04	-	-	-	-	-
0.05-0.49	105490	4247	4951	9076	100539
0.50-0.99	104528	3654	4708	8311	99820
1.00-1.49	99050	2988	2028	9338	97022
1.50-2.49	110337	449	449	10112	109888
2.50-4.99	106000	5200	6000	10000	100000
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Others					
Total	78602	6344	6983	7460	71619
0.01-0.04	-	-	-	-	-
0.05-0.49	60771	9140	5789	8862	54982
0.50-0.99	89480	6040	8977	6535	80503
1.00-1.49	81604	4245	4245	6969	77358
1.50-2.49	-	-	-	-	-
2.50-4.99	76392	6186	6701	7732	69691
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Table-19.a: Per acre production cost (Tk.) in third year and above by variety and size of land

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Third year and above												
Total	22895	322	-	-	4601	4	271	1162	6172	5124	4449	789
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	21601	293	-	-	4255	37	654	917	5652	4909	3771	1114
0.50-0.99	26817	437	-	-	5191	-	120	1796	8382	4450	5042	1399
1.00-1.49	23550	249	-	-	5307	-	457	1654	6166	4445	4721	551
1.50-2.49	22123	358	-	-	4061	-	257	934	6211	5213	4301	787
2.50-4.99	21986	321	-	-	4858	-	95	938	4987	5869	4351	567
5.00-7.49	21920	-	-	-	2400	-	220	650	8050	5400	5000	200
7.50+												
Calendula												
Total	24275	296	-	-	6227	-	189	1173	5426	6116	4160	688
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	24302	532	-	-	6146	-	1056	1611	7182	4103	2774	897
0.50-0.99	30259	465	-	-	7361	-	139	2168	9592	4399	4769	1367
1.00-1.49	30124	157	-	-	9254	-	152	1930	6577	5688	5786	579
1.50-2.49	23135	304	-	-	6393	-	267	896	4389	6967	2984	933
2.50-4.99	22036	320	-	-	5544	-	124	911	4123	6402	4147	465
5.00-7.49	21920	-	-	-	2400	-	220	650	8050	5400	5000	200
7.50+												
Ghurashal												
Total	32588	467	-	-	4110	-	640	3336	11777	3663	7093	1504
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	32026	581	-	-	3032	-	613	3400	12226	6258	2426	3490
0.50-0.99	39125	906	-	-	4313	-	-	3906	13281	4313	9688	2719
1.00-1.49	29772	272	-	-	3297	-	1540	3116	9409	3188	8333	616
1.50-2.49	28967	533	-	-	6000	-	-	4333	8967	2667	6000	467
2.50-4.99	32900	267	-	-	5000	-	-	2600	15700	3000	5000	1333
5.00-7.49												
7.50+												
Giant kew												
Total	26847	474	-	-	2348	-	-	966	9424	5493	7230	912
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	24972	674	-	-	6742	-	-	562	5028	7584	3483	899
0.50-0.99	27391	417	-	-	2267	-	-	1417	9875	5183	7400	833
1.00-1.49	28568	585	-	-	1930	-	-	1053	9065	6374	8480	1082
1.50-2.49	27637	470	-	-	2484	-	-	976	9553	5340	7834	979
2.50-4.99	23489	444	-	-	1633	-	-	789	9400	5578	5000	644
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
Honey queen												
Total	15361	21	-	-	3692	61	233	570	3192	3547	3096	950
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	13439	45	-	-	3503	129	435	79	2647	3948	1900	753
0.50-0.99	17197	-	-	-	3175	-	-	1035	3702	2807	4825	1654
1.00-1.49	18136	-	-	-	5121	-	146	1335	3864	3714	3786	170
1.50-2.49	13667	-	-	-	3000	-	-	-	3067	3200	2667	1733
2.50-4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Jaldubi												
Total	25819	330	-	-	5229	-	433	1420	7805	4980	4379	1244
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	27978	281	-	-	5856	-	577	1427	7841	5763	4867	1366
0.50-0.99	26297	288	-	-	4889	-	269	1634	8201	5599	4150	1267
1.00-1.49	21049	416	-	-	4816	-	135	928	6610	2824	4391	928
1.50-2.49	24207	667	-	-	4840	-	1657	1533	8833	2667	2667	1333
2.50-4.99	-	-	-	-	-	-	-	-	-	-	-	-
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Total	15766	340	-	-	2529	-	524	871	4578	3418	2981	526
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	20550	413	-	-	2677	-	914	665	4989	4796	5172	924
0.50-0.99	17243	952	-	-	2524	-	-	381	5421	3524	3524	917
1.00-1.49	15842	283	-	-	2620	-	695	1317	4619	3791	2136	383
1.50-2.49	13681	294	-	-	2335	-	506	756	4722	2786	2028	254
2.50-4.99	15709	203	-	-	2759	-	-	696	3101	2848	5063	1038
5.00-7.49	-	-	-	-	-	-	-	-	-	-	-	-
7.50+	-	-	-	-	-	-	-	-	-	-	-	-

Table-19.b: Per acre production value (Tk.) for seedling & pineapple in third year and above by variety & size of land.

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
Third year					
Total	74912	2350	3786	7939	71126
0.01-0.04	-	-	-	-	-
0.05-0.49	68684	2424	3770	7958	64914
0.50-0.99	77862	2858	6197	7623	71665
1.00-1.49	71281	2862	3039	9449	68243
1.50-2.49	68769	2360	3715	8810	65054
2.50-4.99	82700	1370	2372	6179	80328
5.00-7.49	97700	5300	10200	7400	87500
7.50+	-	-	-	-	-
Calendula					
Total	84399	1871	3097	8325	81302
0.01-0.04	-	-	-	-	-
0.05-0.49	84100	3156	6811	6335	77289
0.50-0.99	84901	4118	9652	9784	75250
1.00-1.49	98755	3885	3654	14892	95101
1.50-2.49	69241	883	1221	8369	68020
2.50-4.99	86914	691	1054	6247	85860
5.00-7.49	97700	5300	10200	7400	87500
7.50+	-	-	-	-	-
Ghurashal					
Total	88298	2336	4367	9076	83931
0.01-0.04	-	-	-	-	-
0.05-0.49	80710	645	1290	9458	89419
0.50-0.99	97052	4531	8437	8247	88614
1.00-1.49	80797	906	1359	9058	79438
1.50-2.49	88667	2667	5333	8333	83333
2.50-4.99	91333	3333	6667	10167	84667
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Giant kew					
Total	88346	5716	9549	9822	78796
0.01-0.04	-	-	-	-	-
0.05-0.49	89045	2247	3371	6545	85674
0.50-0.99	74918	6333	7251	7267	67667
1.00-1.49	81433	6725	10088	8333	71345
1.50-2.49	91407	6112	9955	11641	81453
2.50-4.99	84889	4111	9333	5333	75556
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
Honey queen					
Total	59101	457	996	4810	58105
0.01-0.04	-	-	-	-	-
0.05-0.49	56524	127	280	4578	56244
0.50-0.99	61930	789	2018	4637	59912
1.00-1.49	56796	971	1699	6493	55097
1.50-2.49	72000	-	-	2400	72000
2.50-4.99	-	-	-	-	-
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Jaldubi					
Total	80411	2612	5525	8297	74887
0.01-0.04	-	-	-	-	-
0.05-0.49	84926	3671	8148	11948	76779
0.50-0.99	78644	1300	3900	5874	74745
1.00-1.49	78240	4023	5358	7031	72882
1.50-2.49	70000	-	-	5333	70000
2.50-4.99	-	-	-	-	-
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-
Others					
Total	42403	1549	1265	6271	41138
0.01-0.04	-	-	-	-	-
0.05-0.49	53544	3627	2242	7673	51302
0.50-0.99	55964	714	1071	7040	54893
1.00-1.49	39309	1766	1242	5465	38067
1.50-2.49	38416	234	141	6597	38275
2.50-4.99	41772	3165	3797	5063	37975
5.00-7.49	-	-	-	-	-
7.50+	-	-	-	-	-

Table-20: Per acre production cost (Tk.) by cultivation type and size of land.

Size of land (acre)	Per acre production cost (Tk.)											
	Total	Land Preparation	Seedling	Plantation	Weeding	Irrigation	Pesticide/insecticide	Harmon	Fertilizer	Harvesting	Transport	Others
1	2	3	4	5	6	7	8	9	10	11	12	13
All												
Total	39062	2171	8635	1846	4544	9	313	1164	12585	2831	4131	833
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	36867	1935	6642	1518	4697	67	422	1056	11224	3703	4201	1403
0.50-0.99	43457	2755	10566	2169	4791	7	183	1216	14373	2360	4000	1038
1.00-1.49	40607	2213	8931	2028	4666	-	459	1350	13320	2379	4604	657
1.50-2.49	37750	2067	8136	1686	4175	-	354	1201	12193	3005	4142	791
2.50-4.99	32614	1321	5659	1135	4430	-	189	953	10450	3685	4237	555
5.00-7.49	44236	3186	16704	3836	4941	-	106	552	12228	1216	1126	342
7.50+												
Single												
Total	37034	2021	6393	1442	4404	2	216	1288	13199	2751	4407	912
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	37335	1943	5527	1358	4851	21	356	1144	13249	3137	4455	1294
0.50-0.99	42321	2651	7907	1664	5079	-	88	1405	15367	2520	4514	1125
1.00-1.49	36255	1886	5444	1317	4622	-	261	1571	12863	2598	4864	830
1.50-2.49	33388	1834	5179	1246	3526	-	328	1202	11967	3102	4150	853
2.50-4.99	32387	1143	4763	953	3672	-	89	1033	12056	2975	5053	652
5.00-7.49	47473	3141	17655	3859	6293	-	86	845	13484	931	862	317
7.50+												
Mixed												
Total	41509	2353	11341	2334	4713	17	430	1014	11844	2928	3798	737
0.01-0.04	-	-	-	-	-	-	-	-	-	-	-	-
0.05-0.49	36375	1926	7813	1686	4535	116	492	963	9095	4298	3933	1517
0.50-0.99	45122	2907	14465	2910	4367	16	321	937	12915	2124	3247	911
1.00-1.49	45220	2560	12628	2782	4713	-	670	1116	13804	2146	4328	473
1.50-2.49	43420	2369	11980	2258	5019	-	388	1198	12486	2879	4132	710
2.50-4.99	32832	1492	6518	1309	5157	-	285	877	8912	4366	3455	461
5.00-7.49	38149	3268	14916	3794	2399	-	143	-	9867	1751	1562	389
7.50+												

Table-21: Per acre production value (Tk.), per acre production quantity/value for seedling & pineapple by cultivated type and size of land.

Size of land (acre)	Per acre production value(Tk.)				
	Total Value (Tk.)	Seedling		Pineapple	
		Number	Value (Tk.)	Number	Value (Tk.)
1	2	3	4	5	6
All					
Total	68776	2628	4088	7256	64689
0.01-0.04	-	-	-	-	-
0.05-0.49	73315	2404	3595	7887	69720
0.50-0.99	65848	2204	3827	6676	62021
1.00-1.49	71395	2616	3930	8186	67465
1.50-2.49	68867	2653	4523	7586	64344
2.50-4.99	76660	3754	4723	6983	71936
5.00-7.49	21995	1193	2296	1666	19698
7.50+	-	-	-	-	-
Single					
Total	74734	3550	5373	8089	69362
0.01-0.04	-	-	-	-	-
0.05-0.49	80672	3618	4948	9251	75725
0.50-0.99	75361	2744	4678	7644	70684
1.00-1.49	76674	3600	4924	9698	71750
1.50-2.49	75456	3607	5965	7547	69491
2.50-4.99	81711	5388	7096	8507	74615
5.00-7.49	18448	1724	3448	1862	15000
7.50+	-	-	-	-	-
Mixed					
Total	61586	1516	2537	6025	59049
0.01-0.04	-	-	-	-	-
0.05-0.49	65581	1129	2173	6455	63409
0.50-0.99	51896	1412	2579	5256	49317
1.00-1.49	65801	1574	2877	6585	62924
1.50-2.49	60301	1413	2649	7637	57652
2.50-4.99	71820	2188	2450	5523	69370
5.00-7.49	28664	195	130	1297	28534
7.50+	-	-	-	-	-

Table-22: Distribution of number household, amount of loan, realization of loan and money used for Pineapple farming by farming year and source of loan.

Items	Farming year and Source of loan						
	Total	Bank	NGO	Mahajon	Foria/ Pikar	Relative/ Neighbor	Others
1	2	3	4	5	6	7	8
All							
No. of HH loaner	3560	1203	641	625	641	401	48
Amount (Tk.) of loan	97796400	54675219	11145117	13053418	12091250	4618408	2212987
Loan (Tk.) realization	91616905	50994155	4430785	12043141	12524225	7294840	4329758
Money (Tk.) used for pineapple farming	72456091	36281767	6748008	11121063	11129081	5813101	1363072
First year							
No. of HH loaner	1187	465	80	160	305	144	32
Amount (Tk.) of loan	45173806	28079281	1924337	5372107	7488877	2020554	288651
Loan (Tk.) realization	39840218	22795405	881988	2052626	8386901	3317877	2405421
Money (Tk.) used for pineapple farming	35632303	19989049	1058385	2998758	7120046	3295427	1170638
Second year							
No. of HH loaner	1395	401	369	225	225	176	-
Amount (Tk.) of loan	31430834	14673068	6638962	4538228	3479842	2100734	-
Loan (Tk.) realization	36087729	20130167	2278735	6590854	3447770	3640204	-
Money (Tk.) used for pineapple farming	23140150	9004293	3576059	5460306	3046867	2052626	-
Third year and above							
No. of HH loaner	978	337	192	241	112	80	16
Amount (Tk.) of loan	21191759	11922870	2581819	3143083	1122530	497120	1924337
Loan (Tk.) realization	15688958	8068584	1270062	3399662	689554	336759	1924337
Money (Tk.) used for pineapple farming	13683638	7288426	2113563	2661999	962168	465048	192434

Table-23: Distribution of type of problem wise household by level of problem.

Sl.No	Type of problem	Problem		
		Principal	Medium	Minimum
1	2	3	4	5
Total		19965	19965	19965
01.	Shortest of high quality seedling	1443	529	593
02.	Excess cost of high quality seedling	321	176	577
03.	Shortest of fertilizer	529	754	497
04.	High cost of fertilizer	1636	1908	1459
05.	Serious insecticide affected	48	48	449
06.	Diseases affected	-	369	96
07.	Shortest of accurate insecticide	-	80	112
08.	Shortest of accurate pesticide	-	96	64
09.	High cost of insecticide	64	80	96
10.	High cost of pesticide	48	48	96
11.	Shortest of exact growth regulator & high price	722	225	144
12	Lack of marketing	3223	2566	1844
13	Produced pine apple low value	2133	3929	2037
14	Produced seedling low value	48	289	449
15	Rabbit/Fox/Monkey and others trouble	3255	1652	1700
16	Lack of capital	4506	1459	3111
17	Lack of adequate government support	1395	4346	4169
18	Lack of technical knowledge	433	850	1523
19	Shortest of technical cooperation	160	561	946

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 pineapple 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.

Ultimate Sampling Units (USUs):

All the households having at least 5 decimal area of land under pineapple cultivation were listed from the selected PSUs and then 25 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, Pineapple crop producing households were the ultimate sampling unit.

Household (HH):

A household means a group of persons normally living together under the same house/shed and eating 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.

Loan:

Loan taken in survey year for pineapple crops purposes from any bank, cooperatives, NGOs, and other institution as well as from non-institutional sources like friends, relatives, money lenders, and others have been considered in the survey.

Others:

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

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.

Pineapple farm holding:

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

Annex-C: Questionnaire (Bangla)

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ পরিসংখ্যান ব্যুরো
এগ্রিকালচার উইং
প্রোডাক্টিভিটি এ্যাসেসমেন্ট সার্ভে অব ডিফারেন্ট এগ্রিকালচারাল ক্রপস্ কর্মসূচি
ই-২৭/এ, আগারগাঁও, ঢাকা-১২০৭

গোপনীয়

আনারস ফসলের উৎপাদনশীলতা জরিপ-২০১৩

প্রথম অংশ

১। খানার পরিচিতি

খানার ক্রমিক নং | | | | পিএসইউ নম্বর | | | নমুনা খানা নম্বর | | |

খানা প্রধানের নামঃ				পিতা/স্বামীর নামঃ				
অঞ্চলের নামঃ ----------				চাষীর মোবাইল নম্বরঃ				
জেলার নাম:	কোড			উপজেলার নাম:	কোড			
ইউনিয়নের নাম:	কোড			মৌজা/গ্রামের নাম:	কোড			

দ্বিতীয় অংশ

২। আনারস ফসলের অধীন জমির পরিমাণ, মালিকানা, চাষের প্রকার, চাষের ধরন এবং খরচ (টাকায়)

চাষের বছর	ফসলের অধীন জমির পরিমাণ		জমির মালিকানা					আনারসের জাতের প্রকার	চাষের প্রকার কোড	চাষের ধরন (নিজস্ব হলে বাজার দরে লিখতে হবে) এবং তার খরচ(টাকায়)					
			নিজস্ব		অন্যের থেকে নেয়া					লাঙ্গল/কোদাল		যান্ত্রিক		অন্যান্য খরচ (টাকা)	মোট খরচ (টাকা) (১২+১৪+১৫=১৬)
	একর	শতক	একর	শতক	কোড	একর	শতক			সংখ্যা	খরচ (টাকা)	সংখ্যা	খরচ (টাকা)		
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩	১৪	১৫	১৬
১ম															
২য়										x	x	x	x		
৩য় বা ততোধিক										x	x	x	x		

*** চাষের প্রকার কোডঃ** *একক-১, মিশ্র-২* *** *অন্য থেকে নেয়া কোডঃ*** *বর্গা-১, বন্ধক-২, লীজ-৩ এবং অন্যান্য-৪*

*** *জাতের প্রকার কোডঃ*** *জলডুবি-১, হানি কুইন-২, জায়েন্টকিউ-৩, ঘোড়াশাল-৪, ক্যালেনডুলা-৫ এবং অন্যান্য-৬*

৩। আনারস ফসলের চারা রোপণ, নালা প্রস্তুতকরণ/নিড়ানি খরচ(টাকায়)

চাষের বছর	চারার প্রকার (কোড)	চারা		চারা রোপণের জন্য শ্রমিকের সংখ্যা এবং খরচ					নালা প্রস্তুতকরণ/নিড়ানি					অন্যান্য খরচ (টাকা)	মোট খরচ (টাকা) (৪+৯+১৪+১৫=১৬)
		পরিমাণ (সংখ্যা)	খরচ (টাকা)	পারিবারিক (সংখ্যা)		ভাড়া (সংখ্যা)		খরচ (টাকা)	পারিবারিক (সংখ্যা)		ভাড়া (সংখ্যা)		খরচ (টাকা)		
				পুরুষ	মহিলা	পুরুষ	মহিলা		পুরুষ	মহিলা	পুরুষ	মহিলা			
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩	১৪	১৫	১৬
১ম															
২য়															
৩য় বা ততোধিক															

* **চারার প্রকার কোডঃ** সাকার-১, স্লিপ-২, ক্রাউন-৩ এবং অন্যান্য-৪

৪। আনারস ফসলের সেচ, কীটনাশক এবং বালাইনাশক (পোকা মাকড় ও রোগ দমন) খরচ(টাকায়)

চাষের বছর	সেচ খরচ (টাকা)	কীটনাশকের নামের কোড, পরিমাণ ও খরচ							বালাইনাশকের নামের কোড,পরিমাণ ও খরচ							মোট খরচ(টাকা) ২+৫+৮+৯+ ১২+১৫+১৬=১৭)
		১ম কীটনাশক			২য় কীটনাশক			অন্যান্য খরচ (টাকা)	১ম বালাইনাশক			২য় বালাইনাশক			অন্যান্য খরচ (টাকা)	
		কোড	পরিমাণ	খরচ (টাকা)	কোড	পরিমাণ	খরচ (টাকা)		কোড	পরিমাণ	খরচ (টাকা)	কোড	পরিমাণ	খরচ (টাকা)		
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২	১৩	১৪	১৫	১৬	১৭
১ম																
২য়																
৩য় বা ততোধিক																

ছত্রাকনাশকের নাম ও কোডঃ ডাইথেন-এম-৪৫-১, রিডোমিল এম জেড-২, নিউবেন-৩, বর্দ্দো মিকচার-৪, সিকিউর-৫, ইনডোফিল-এম ৪৫-৬ এবং অন্যান্য-৭

কীটনাশকের নাম ও কোডঃ ক্যারাট-১, এডমায়ার-২, সবিক্রন-৩, সেভিন-৮৫-৪ এবং অন্যান্য-৬

৫। আনারস ফসলের হরমোন ব্যবহারের পরিমাণ ও খরচ (টাকায়) এবং ঋণ সংক্রান্ত তথ্য

চাষের বছর	হরমোনের কোড, পরিমাণ ও খরচ					ঋণ সংক্রান্ত তথ্য				
	কোড	পরিমাণ	খরচ (টাকা)	অন্যান্য খরচ (টাকা)	মোট খরচ (টাকা) (৪+৫)	কোন ঋণ নিয়েছেন কি?	হ্যাঁ হলে উৎস	টাকার পরিমাণ	উক্ত ঋণের জন্য কত টাকা পরিশোধ করেছেন/করতে হবে	ঋণকৃত টাকার মধ্যে কত টাকা আনারস চাষের জন্য ব্যয় করেছেন
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১
১ম						হ্যাঁ-১, না-২				
২য়						হ্যাঁ-১, না-২				
৩য় বা ততোধিক						হ্যাঁ-১, না-২				

হরমোনের কোডঃ ক্রপ কেয়ার-১, রাইফেন-২, ফলিয়ার প্লাস-৩, হারপেষ্ট-৪ পাওয়ার প্লাস-৫ এবং অন্যান্য-৬।

উৎস কোডঃ ব্যাংক-১, এনজিও-২, মহাজন-৩, ফঁড়িয়া/পাইকার-৪, আত্মীয়/প্রতিবেশী-৫ ও অন্যান্য-৬

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

চাষের বছর	ইউরিয়া		টিএসপি/ডিএপি		এমওপি		অন্যান্য	মোট মূল্য (টাকা) (৩+৫+৭+৮)
	পরিমাণ (কেজি)	মূল্য (টাকা)	পরিমাণ (কেজি)	মূল্য (টাকা)	পরিমাণ (কেজি)	মূল্য (টাকা)	মূল্য (টাকা)	
১	**২**	**৩**	**৪**	**৫**	**৬**	**৭**	**৮**	**৯**
১ম								
২য়								
৩য় বা ততোধিক								

৭। আনারস ফসলের কর্তন ও পরিবহন খরচ(টাকায়)

চাষের বছর	আনারস কর্তন					পরিবহন খরচ (টাকা)	অন্যান্য খরচ (টাকায়)	মোট খরচ (টাকায়) (৬+৭+৮)	আনারস কর্তনের পরে বিনষ্টের পরিমাণ (টাকা)
	শ্রমিকের সংখ্যা (পারিবারিক)		শ্রমিকের সংখ্যা (ভাড়া)		খরচ (টাকা)				
	পুরুষ	মহিলা	পুরুষ	মহিলা					
১	**২**	**৩**	**৪**	**৫**	**৬**	**৭**	**৮**	**৯**	**১০**
১ম	X	X	X	X	X	X	X	X	X
২য়									
৩য় বা ততোধিক									

৮। আনারস ফসলের চারা এবং উৎপাদন মূল্য (টাকা)

চাষের বছর	আনারসের চারা বিক্রয়		মোট উৎপাদিত আনারস			মোট মূল্য (টাকা) (৩+৬)
	সংখ্যা	মূল্য (টাকা)	সংখ্যা	পরিমাণ (কেজি)	মূল্য (টাকা)	
১	২	৩	৪	৫	৬	৭
১ম	X	X	X	X	X	X
২য়						
৩য় বা ততোধিক						

৯। আনারস ফসল চাষের জন্য এক একর জমি 'এক বছরের জন্য' লীজ নিতে জমির মালিককে কত টাকা দিতে হয়। টাকাঃ

১০। আনারস চাষে প্রধান তিনটি সমস্যা আপনি কি মাত্রায় অনুভব করেন তা নির্দ্দিষ্ট স্থানে কোড দিন।

অতি সমস্যা ☐ **মধ্যম সমস্যা** ☐ **স্বল্প সমস্যা** ☐

- **সমস্যার নাম ও কোড ঃ** উন্নত চারার অভাব-১, উন্নত চারার উচ্চ মূল্য-২, সারের অভাব-৩, সারের উচ্চ মূল্য-৪, তীব্র পোকার আক্রমন-৫, রোগের আক্রমন-৬, সঠিক কীট নাশকের অভাব-৭, সঠিক বালাই নাশকের অভাব-৮, কীট নাশকের উচ্চ মূল্য-৯, বালাই নাশকের উচ্চ মূল্য-১০, সঠিক গ্রোথ রেগুলেটরের অভাব ও উচ্চ মূল্য-১১,বাজারজাতকরণের অভাব-১২, উৎপাদিত আনারসের নিম্ন মূল্য-১৩, উৎপাদিত চারার নিম্ন মূল্য-১৪, শৃগাল/বানর/খরগোশ/সজারুর উপদ্রব-১৫, প্রয়োজনীয় মূলধনের অভাব-১৬, সরকারী সহযোগিতার অভাব-১৭, কারিগরি জ্ঞানের অভাব-১৮, কারিগরি সহযোগিতার অভাব-১৯।

তথ্য সংগ্রহকারীর নামঃ .....

পদবীঃ .....

তারিখঃ.....

সুপারভাইজারের নামঃ .....

পদবীঃ .....

তারিখঃ.....

Government of the People's Republic of Bangladesh
Bangladesh Bureau of Statistics
Agriculture Wing
Productivity Assessment Survey Different Agricultural Crops Program
E-27/A, Agargoan,Dhaka-1207
Pineapple Crops Productivity Survey-2013

Confidencial

First Part

1.Identification of Household

Household Sl No. | | | PSU NO. | | Selected Sample Household No. | |

Name of Head of Household: ..... Name of Region : ----------				Father/Husband Name: ..... Farmer Mobile No.			
District Name:	Code			Upazila Name:	Code		
Union Name:	Code			MouzaVillage Name:	Code		

Second Part

2. Area under Pineapple Crop Ownership of land, cultivation type, Variety and land preparation cost (Tk.)

Farming Year	Land area		Ownership of land					Variety of pineapple	Cultivation type (code)	Land preparation and cost (Tk.) (Market price is shown when cultivated is own)					
			Owned		Land taken from others					Plough/ Hoe		Mechanized		Others Cost (Tk.)	Total Cost (Tk.) (12+14+15=16)
	Acre	Decimal	Acre	Decimal	Code	Acre	Decimal			No.	Cost (Tk.)	No.	Cost (Tk.)		
1	**2**	**3**	4	5	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
1- Year															
2-year										x	x	x	x		
3 or more										x	x	x	x		

*****Cultivation type code: Single-1, Mixed-2*****Land taken from others: Share crop-1, Mortgage-2, lease-3 and others-4
*****Variety of pineapple **code:** Jaldubi-1, Honey queen-2, Giant kew-3, Ghurashal-4, Calendula-5 and others-6

3. Costs (Tk.) regarding seedling, Plantation, Drain preparation/Weeding

Farming Year	Type of seedling (code)	Seedling		No. of labour and cost for Plantation					Drain preparation/Weeding					Other cost (Tk.)	Total Cost (Tk.) (4+9+14+15=16)
		Qty. (No.)	Price (Tk.)	Family (No.)			Hired (No.)	Cost (Tk.)	Family (No.)		Hired (No.)		Cost (Tk.)		
				Male	Female	Male	Female		Male	Female	Male	Female			
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
1- Year															
2-year															
3 or more															

***Type of Seedling :** Sucker-1, Slip-2, Crown-3 and others-4

4. Cost (Tk) regarding Irrigation, Insecticide and pesticide

Farming Year	Irrigation Cost (Tk.)	Insecticide name code, quantity and cost							Pesticide name code, quantity and cost							Total Cost (Tk.) (2+5+8+9+12+ 15+16 =17)
		1st Insecticide			2nd Insecticide			Other Cost (Tk.)	1st Pesticide			2nd Pesticide			Others Cost (Tk.)	
		Code	Qty.	Cost (Tk.)	Code	Qty.	Code		Code	Qty.	Cost (Tk.)	Code	Qty.	Code		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
1- Year																
2-year																
3 or more																

Pesticide Name & Code: Dithane M-45-1, Ridomil MZ-2, Nuben-3, Bordeaux mixture-4, Secure-5, Indofil M-45 and Other-7

Name of Insecticide code: Karate-1, Ad**mire-2, Shobicron-3, Sevin-85 -4 & Others-5**

5. Use of harmon quantity & cost and loan related information

Farming Year	Harmon code, quantity and cost					Loan related infor				
	Code	Quantity	Cost (Tk.)	Other cost (Tk.)	Total cost (Tk.)(4+5)	Loan taken?	If yes Source	Amount of loan	Amount of loan to be realized	Money used for pineapple farming
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1- Year						Yes-1, No-2				
2-year						Yes-1, No-2				
3 or more						Yes-1, No-2				

Harmon Code: Crop Care-1, Ripen-2, Foliar plus-3, Harpest-4, Power plus-5 and others-6
Source code: Bank-1, NGO-2, Mahajan-3, Foria/Paikar-4, Relative/Neghbour-5 and others-6

6. Use of fertilizer quantity (Kg.) and Price (Tk.)

Farming Year	Urea		TSP/DAP		MOP		Othes	Total Price (Tk.) (3+5+7+8)
	Qty. (Kg.)	Price (Tk.)	Qty. (Kg.)	Price (Tk.)	Qty. (Kg.)	Price (Tk.)	Price (Tk.)	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1- Year								
2-year								
3 or more								

7. Harvesting and transport cost

Farming Year	Pineapple harvesting					Transport Cost (Tk).	Other Cost (Tk.)	Total Cost (Tk.) (6+7+8)	Quantity of damages Pineapple after harvesting (Tk.)
	No. of labour (Family)		No. of labour (Hired)		Cost (Tk.)				
	Male	Female	Male	Female					
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1- Year	x	X	X	X	X	X	X	x	X
2-year									
3 or more									

8. Quantity and value of Produced Pineapple

Farming Year	Seedling sell value		Total Production of Pineapple			Total (Tk.) (3+6)
	Number	Value (Tk.)	Number	Quantity (Kg.)	Value (Tk.)	
1	**2**	**3**	**4**	**5**	**6**	**7**
1- Year	x	X	X	X	X	X
2-year						
3 or more						

9. Per acre yearly leasing value for pineapple crops Taka: ____

10. Mention three main problem for pineapple cultivation.

Principal ____ **Medium** ____ **Minimum** ____

- Problem name & code: Shortest of high quality seedling-1, Excess cost of high quality seedling-2, Shortest of fertilizer-3, High price of fertilizer-4, Serious insecticide affected-5, Diseases affected-6, Shortest of accurate insecticide-7, Shortest of accurate pesticide-8,High price of insecticide-9, High price of pesticide-10, Shortest of exact growth regulator and high price-11, Lack of marketing-12, Produced pineapple low value-13, Produced seedling low value-14, Rabbit/Fox/monkey and trouble-15, Lack of capital-16, Lack of adequate government support-17, Lack of technical knowledge-18 and Shortest of technical cooperation-19.

Collector Name: .....

Designation: .....

Date.....

Supervisor Name: .....

Designation:.....

Date.....

United Nations Statistics Division

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.

PRINCIPLES GOVERNING INTERNATIONAL STATISTICAL ACTIVITIES

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

বাংলাদেশ জাতীয় সংসদ

ঢাকা, ০৩ মার্চ, ২০১৩/১৯ ফাল্গুন, ১৪১৯

সংসদ কর্তৃক গৃহীত নিম্নলিখিত আইনটি ০২ মার্চ, ২০১৩/১৮ ফাল্গুন, ১৪১৯ তারিখে রাষ্ট্রপতির 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, প্রাকৃতিক 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।

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
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আবদুর রশিদ (উপ সচিব), উপ পরিচালক, বাংলাদেশ ফরম ও প্রকাশনা অফিস,
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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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