Report on the Cost of Production of Oil-Seeds 2009

Updating and Extension of Agriculture Cluster Plots and Survey of Cost of Production Project (UCPSCP)
BANGLADESH BUREAU OF STATISTICS
Statistics Division
Ministry of Planning

Secretary
Statistics Division
Ministry of Planning

Foreword

Bangladesh is predominantly an agricultural country. The agriculture sector has been dominating the economy of Bangladesh. Food security of the country is critically dependent on the domestic production of crops.

Crop Production has a significant relation to production cost. Every year government declares procurement prices before harvesting time for different crops. UCPSCP Project of Bangladesh Bureau of Statistics has undertaken the survey of 10 crops (6 major crops and 4 minor crops) with an aim to estimate the cost of production.

I am happy to know that the UCPSCP Project performed successfully to conduct these surveys for the first time. I hope that the data presented in the publication would be helpful for the policy formulation and planning process of the country.

I extend my thanks to the Director General, BBS, the Project Director and other officials who worked hard to prepare the report.

Dhaka,
December,2010

Riti Ibrahim

Director General
Bangladesh Bureau of Statistics
Ministry of Planning

Preface

Agriculture is the basic culture of Bangladesh. From the time immemorial, the main source of livelihood of the population of this land is agriculture. It plays an important role in the economic development of the country and has a great contribution to the Gross Domestic Product (GDP).

Crop production largely depends on weather variables such as rainfall, temperature, humidity etc. Moreover, Bangladesh is known as a country of natural calamity in the world. Government is fully aware of natural disaster. Government has been allocating considerable annual budget for the development of agriculture and launching different programmes one after another in order to boost up crop production.

In order to formulate proper policy and planning for the development of agriculture sector reliable and realistic data regarding production cost of crops by different phases such as leasing value of the land, land preparation, seeds/ seedlings, weeding, insecticides, fertilizers, harvesting, drying etc. are needed. Keeping these issues in active consideration, the UCPSCP Project under the control of the Bangladesh Bureau of Statistics (BBS) has been given the responsibility of surveying 10 crops (Aus, Aman, Boro, Jute, Wheat, Potato, Maize, Oil Seeds, Onion and Pulses) for the first time for deriving the cost of production of crops by interviewing farmers in field.

I express my deep gratitude to the members of the Technical Committee who rendered technical guidance for the selection of sampling units and finalization of questionnaire for the survey purpose and other survey matters.

I would like to thank all those who are associated in different works of the survey. I take opportunity to convey thanks to Mrs. Salima Sultana, Project Director and other officers and staff members of BBS who worked very sincerely to finalize the report.

Dhaka,
December, 2010.

Md. Shahjahan Ali Mollah

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Chapter-I

Introduction

Introduction

Bangladesh is an agricultural country. The most of her inhabitants directly or indirectly are involved in agricultural activities for their livelihood. Agriculture has a great contribution to the Gross Domestic Product (GDP) of the country. Earlier more than 50% of GDP came from this sector. When industrialization starts happening the activities of the population starts diversification towards different sectors. As a result, the contribution of the agriculture sector is slowly reducing and now reached 19% share of GDP. Still agriculture plays vital role and is known as the most important sector of the economy.

Bangladesh by birth possesses very fertile land in which diversified crops grow very easily. Various types of crops are produced in this country. These crops might have been categorized into two-food crops and cash crops. Three types of paddy namely aus, aman and Boro and another cereal crop, wheat are produced in this country, which are called major cereal crops. Other than major crops more than 100 mainor crops are also grown. Oil seeds crops are treated as mainor crops. Due to increase of area under cereal crops for meeting the increasing demand of food-stuff land under Oil seeds crops has declined and price of oil has gone up. Mostly supply of oil in the market is maintained through import from abroad. The government of Bangladesh has , therefore, provided priority to the agriculture sector to increase the production of Oil seeds by giving subsidy to the farmers on different inputs such as fertilizer, irrigation etc. to achieve self sufficiency in Oil seeds.

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

Bangladesh government is remarkably concerned about this agriculture sector. Notable portion of annual budget has been consistently been allocating for the last couple of years for the development of the sector. Government has also been launching many programmes one after another in order to boost up the agriculture production.

Production of crops, cost of production of crops and market price of crops are directly interrelated. Government has to give proper attention on these three factors as stated so that the farmer get fair price of the crop produced during the harvest time. Generally, Government has to declare procurement price at the harvesting time of the crop so that producer get proper price. Procurement price of the crop has to be fixed considering all these matters. If procurement price is lower than the production cost, producers get looser and discouraged to produce more crops and if procurement price is higher than the production cost, producers get profit and encouragement. This type of loss and profit influences positively or negatively on the cultivation of next year's crops. So, an objective survey is necessary to know the cost of production of crops at farmer's level. And as such this project has been given the responsibility of conducting a survey on the cost of production of Oil seeds.

Oil seeds : Rape, Mustard and Linseed/Sesame.

Rape and Mustard seeds are sown in the month of mid October to November. Its harvesting time is late January to late February.

Two types of **Sesame** are grown in our country; One is summer sesame and another is winter sesame. Summer sesame is sown during February to mid March and reaped in the month of early May to mid June. Winter sesame is sown in the month of September to October and harvested during the month of December.

Linseed is sown in the month of mid October to mid December and reaped during mid March to mid May.

Acreage and production

Acreage and production of Oil seeds crops are shown below.

Table- Acreages and production of Rape, Mustard and Linseed/Sesame for last 10 years.

Year	Acreages in '000'		Production in '000' M. tons	
	Rape & Mustard	Linseed & Sesame	Rape & Mustard	Linseed & Sesame
1998-99	850	248	253	67
1999-00	812	103	249	25
2000-01	785	102	238	25
2001-02	749	102	233	25
2002-03	735	97	218	24
2003-04	690	97	211	25
2004-05	597	108	191	40
2005-06	536	110	183	47
2006-07	520	124	189	37
2007-08	577	113	228	35

Source: Statistical Year Book of Bangladesh 2008.

The figures in the table show that acreages under Oil seeds are declining gradually. Increase in area under Boro paddy is responsible for decrease in area under Oil seeds.

1.1 Scope and coverage of the survey:

Survey on the production cost of Oil seeds 2008-09 is a household based survey. Under the purview of this survey the target population was all dwelling households of the sample area. Ten separate surveys for 10 crops like Aus, Aman, Boro, Potato, Jute, Wheat, Maize, Onion, Oilseeds and pulses are conducted following the same sampling design. A target sample of 100 upazilas are selected from 64 districts to capture the rare crops like onion, oilseeds and pulses, where the rest seven crops are believed to be available.

1.2 Objectives of the survey:

The specific objectives of the survey are:

- ►to estimate per acre production cost of Rape, Mustard and Linseed/Sesame
- ►to estimate per kilogram production cost of Rape, Mustard and Linseed/Sesame.

The other objectives of the survey are as follows:

- ► to know the area under Rape, Mustard and Linseed/Sesame by land tenure
- ► to assess the cost of production of Rape, Mustard and Linseed/Sesame by different phase
- ► to produce benchmark data on the production cost of Rape, Mustard and Linseed/Sesame.
- ► to assist the policy maker by supplying data on the cost of production of Rape, Mustard and Linseed/Sesame in order to formulate appropriate policies for increasing the production of Oil seeds crop.

Chapter- II

Methodology

Methodology

2.1. Sample Design:

Sample design is the most important aspect of a survey, which strongly affects survey results. An integrated sample design for conducting survey on the cost of production of 10 crops has been developed. Oil-seeds is one of the 10 crops. Sample design has been discussed in detail below:

2.1.1 Universe:

Bangladesh as a whole is taken as the universe of the survey.

2.1.2 Sampling Technique:

Multi-stage sampling technique has been followed.

2.1.3 Sampling Frame:

The list of Districts, Upazilas, and the Mauzas, having the particular crop Oil-seeds, are used as the sampling frame.

2.1.4 Detailed Sample Design:

As this survey is a part of the sample survey on cost of production of 10 crops such as Aman, Aus, Boro, Wheat, Jute, Potato, Maize, Oil Seeds, Pulses and Onion, the sample design for Oil-seeds crop has been followed the same design as the integrated sample design for the said 10 crops. The sample design has been explained below:

A national sample survey on cost of production of 10 major and minor corps already conducted by the BBS was a complex survey. If the survey had been conducted separately for each crop, it would be very simple and straight forward. But as it had been conducted by a single survey, it became complex. The crops have different acreages ranging from below 1 percent (O.72%) for maize to 35% for Aman crop and they are grown at different times of the crop year. While Aman, Boro and Aus are grown throughout the country, other crops are not grown so widely. Furthermore, cultivation of some minor crops is rare and localized. They grow heavily in some places and do not grow at all in other places of the country. Estimates at sub-national level, say at divisional level, for such minor crops became difficult.

2.1.5 Sample Size Determination

The total acreages and the percentages of acreages of these crops obtained from Sample Survey of Agriculture, 2005 are shown in Statement-I (See Annex- B). The gross cropped area in the country is 299, 90,170 acres as per the Sample Survey of Agriculture, 2005. Using these percentages of acreage of these crops in the country, the minimum sample size for each of these crops is determined in statement-1 applying the following equation which is popularly used for determination of sample size with error and confidence level 95%:

$$n = \frac{pq(1.96)^2}{e^2}$$

Where,

P= Proportion of a crop to total gross cropped area

q=1-p

e= Error level (5% error level is used in this case)

If the survey was conducted for each crop separately drawing the sample from the national frame of the crop all over the country, the sample size (n) as shown in statement-1 would be sufficient to provide cost estimate of the crop with 95% confidence level for the country as a whole. But if divisional estimate is necessary for the crops, n should be 6 times more than the national estimate as given in the statement to conduct the survey for the crop at divisional level. If the samples are drawn independently for each crop then they are likely to be distributed in many Upazilas all over the country resulting higher cost for both increasing man power and traveling distance. With the objective of reducing cost of the survey, the sample is drawn for one crop namely, oil seeds which is distributed almost throughout the country, where n=103. The minimum sample number required for all divisions is (103 X 6) 618 farms growing oil seeds.

2.1.6 Selection Procedure

If divisional estimates are required for all crops, it is pre-determined that primary sampling units (PSUs) i.e. Upazilas should be selected from 64 districts. It is also decided that at least 100 Mouzas/Eas (Enumeration Area) as Secondary Sampling Units should be selected from 64 districts. The selected Mouzas/EAs will consist of about 250 households. The farm households growing the particular crop are the ultimate sampling unit in the survey. All farm

households growing the particular crop in the selected Mouzas/EAs have been interviewed in the survey.

A total of 100 Upazilas have been selected randomly from 64 districts. At first 64 Upazilas having minor crop oil seeds are selected from 64 districts and then the remaining 36 Upazilas have been selected from the districts having higher number of Upazilas growing the particular crops excluding Chittagong hill districts. One Mouza/EA have been selected from each of the 100 selected Upazilas having the highest acreage of the particular crop (oil seeds) and the selection has been made at the Upazila headquarter since the sampling frame of Mouza having a particular crop is available at the Upazila level. These 100 upazilas have been used for all other 9 crops and the same Mouzas/EAs selected for minor crops such as oil seeds are taken as the sample Mouza/EAs. All the farm households with 0.05 acres of land growing these crops in the selected mouza/EA have been interviewed in the survey. The expected number of farm households that might have been interviewed for each of these crops is shown in Statement-I (see annexure- B).

2.2. Data Collection: its whole process

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

- Brain-storming activity has been carried out by the members responsible for developing the questionnaire going to the field again and again in order to design a good questionnaire. They have thoroughly discussed most of the issues relating to the production and the cost of production of Oil-seeds with the farmer.
- 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 has been conducted;
- Required number of enumerator in order to ensure smooth data collection has been set up;
- To take extra-care to the data collection activity, sufficient number of supervisors has been occupied.

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 have been tried to address to the extent possible in case of developing the questionnaire for this survey.

2.2.2 Process of questionnaire design

A sub-committee comprising of eight members- all from the different Wings of Bangladesh Bureau of Statistics (BBS) – have been formed in order to facilitate the questionnaire development activity. Project Director, Advisor and some other members of the sub-committee have paid several visits to the field with a view to being acknowledged what are the factors of production and the pros and cons of the whole process of the production of Oil-seeds as well. They discuss the matter with the farmers who grow Oil-seeds. After having the knowledge on the issue, they have placed the feedback to the meeting of the sub-committee. Sub-committee have thoroughly examined the feedback and selected the topics of the survey. Project Director and Advisor have been assigned to form a questionnaire on the selected topics and eventually, they have developed a questionnaire with seven questions. Subsequently the questionnaire has been brought forward to the Technical Committee, the highest statistical body, which has finally approved the questionnaire.

2.2.3 Pre-testing the questionnaire

The questionnaire has been pre-tested to examine the time necessitated to complete the interview, test the reliability i.e. whether it capture the information desired, and also investigate the consistency whether the information gathered by it is related to the whole purpose of the survey. The test has also been 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 has been carried out almost two months before the survey at rural area of Tangail District and Savar- an Upzila belonging to Dhaka district. A group including Project Director, Advisor, some members of the sub-committee had gone to the mentioned two places to take part in testing the questionnaire. They have chosen some of

the farmer at random as the respondent. The farmers have helped the team cordially and wanted to know whether they would be benefited in any way. However it was a very successful programme.

2.2.4 Findings of the Pre-test

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

After pre-testing some significant suggestions from the respective team have been made, which had been eventually adopted properly in the final questionnaire. During the pre-test, it has been found that farmers, the respondents do not feel comfortable to respond to the questions relating to the total area of the land under Oil-seeds crop as they have cultivated it in many plots. Considering the fact, the structure of the questionnaire significantly changed. Deleting the aggregate area in a single row, the new concept, area by plot in seven rows has been incorporated.

2.2.5 Finalization of the Questionnaire

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

2.2.6 Data collection:

Training of the Master Trainers (Division and Regional Coordinator) and Enumerators: Training has been arranged in two phases in order to make the master trainers 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. At the first stage, two days training programme conducted by the Project Director and Advisor has been arranged at the head office of BBS in Dhaka. At the first day the participants receive rigorous training on the concepts, definitions and the questionnaire and in the next day they have gone to the rural area of Savar Upzila with a view to having hands-on exercise on the

questionnaire. In the second phase, enumerators have 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 receive training on the questionnaire and in the next day they also visit field at remote area of the respective region in order to have experience on hand. However, most of the trainees- both master trainers 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 has been carried out following Paper and Pencil (PAPI) method.

2.2.8 Data Collection and Supervision:

Data collection has been taken place during May 2009 at the homestead of the household. Usually the respondents are the head of household. The total of 100 enumerators, who are the employees of BBS and have proven experience in this field, have been engaged in data collection from the household and the total of 28 supervising officer named Regional Coordinators are responsible for supervising the data collection task. All supervising officers have been directed to stay at the respective region during the period of data collection so that they can extensively supervise data collection task and address instantly any untoward problem arising during data collection. Three divisional coordinators including Project Director are also responsible to oversee all activities at field level relating to data collection. Furthermore, all possible measures have been taken to have a good quality of data.

2.2.9 Data Editing and Coding:

Data editing and coding are another vital phases of the survey, which is indispensable for data processing. It should be completed before data processing. In case of this survey coding has been done along with questionnaire development so that the enumerator can easily and accurately mark the right answers.Data editing refers the activity of checking and cleaning data that have already been collected from the field. A group of experienced staff from Agriculture Wing under the supervision of two officers from the same wing have carried out the work of data editing with careful attention.

2.3 Data Processing:

Data processing involves many steps that are very important because it affects survey results very badly. During data processing following steps have been followed.

- Data entry
- Appending and Merging files
- Data validation (further 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

Data Entry:

1. Software Used:

Five software named CSPro, Foxpro, Oracle (SQL), SPSS and Excel have been used for processing the survey data. CSPro have 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 has consisted of ID items, records, items of the records, and also values of the items. Logic check has also maintained to avoid errors of inconsistency. After finishing the data dictionary, the data entry forms have been developed depending on data dictionary. After that, the data entry form are tested and, therefore, readily available for use.

3. Data capturing and Preliminary Validation

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

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

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

- **Inconsistency checking:**

It has been done during designing the data entry program to avoid errors and inconsistency.

- **Treatment of Missing values:**

The data entry program has been designed not to allow blanks that ensure not having missing values in the data.

- **Incomplete records and dropped cases.**

The data entry program has designed to accept the complete data case; otherwise, it would not be saved. This has been set to avoid incomplete records and dropped cases.

- **Duplication of entries.**

The data entry program has been designed in view of rejecting duplication of entries based on the identifiers.

4. Appending and Merging files:
After data entry, files have properly been appended and merged in order to bring all data in a single file.

5. Data Validation:
Validation has been accomplished after appending and merging files by checking the number of variables, the cases, wild codes, missing value and consistency. It has also done to make sure that the number of variables generated matched with the number of variables in the data set.

6. Final decision on errors:
If there has been found any error during data validation, it is checked and rechecked; and sometimes it has 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 have been completed and generated a data file which contains micro data.

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

2.4 Tabulation:

Table focusing on the vital components such as total number of labours engaged in production of Oil-seeds, cost of land preparation, seeds used and their price, fertilizer used and their price, cost of insecticides, cost of production by phases etc. have been generated. All these tables have been given at the part of analysis and annexure.

2.5 Data Analysis and Dissemination:

Survey results have been analysed in tabular form. Major variable is explained vertically (columns) and cross tabulation by another related variable(s) horizontally. In the analysis, it has been described the variation of the magnitude of the major variables by division. Many aspects of production and the cost of production of Oil-seeds have also been explained nationally.

The final report has 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, Year Book of Agriculture Statistics of Bangladesh, and Monthly Statistical Bulletin etc.

Chapter-III

Statistical Findings

Statistical Findings

Various components are used in different stages of a crop growing from sowing to harvesting. This chapter deals with the cost related components of production of Oil seeds crop. The components involved are i) land tenureship such as own, share cropping, mortgage, lease and others, ii) labourers employed by phase such as land preparation, sowing, weeding, harvesting etc iii) use of seeds , fertilizers, pesticides, irrigation etc. iv) Production cost and v) productivity etc.

3.1. Oil seeds crops producing households (HHs) in the sample area:

24625 sample households (HHs) were under the survey purview across the country, of which only 2592 HHs were involved in oil seeds cultivation. The table reveals that only 10.53% of HHs at national level cultivated oil seeds crop indicating that a significant number of farmers grow the crop in the country.

Table 3.1 Total number of PSU,SSU,USU(HH) & number of household having Oil seeds crops.

Division	Total Number				
	PSU	SSU	USU(HHs)	HHs Producing Oil Seeds crops	% of HHs Producing Oil Seeds crops
Barisal	9	9	2250	45	2.00
Chittagang	16	16	3625	213	5.88
Dhaka	25	25	6250	978	15.65
Khulna	16	16	4000	520	13.00
Rajshahi	28	28	7000	821	11.73
Sylhet	6	6	1500	15	1.00
Bangladesh	100	100	24625	2592	10.53

It is seen from the table that the highest 15.65% HHs produced oil seeds crops in Dhaka division followed by Khulna (13%), Rajshahi (11.7%), Chittagang (5.9%), Barisal (2%) and the lowest percentage (1%) is in Sylhet division.

3.2 Area under oil seeds crops in the sample area :

Table 3.2(a). Area (acres) under oilseeds crops as recorded in the sample area by variety and division.

Variety of oil seeds crops	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
Mustard	3.05 (0.26)	40.25 (3.38)	436.04 (36.57)	84.19 (7.06)	335.10 (28.10)	10.97 (0.92)	909.60 (76.28)
Rape	1.14 (0.10)	1.17 (0.10)	76.84 (6.44)	54.43 (4.56)	15.77 (1.32)	0.30 (0.03)	149.65 (12.55)
Linseed/ Sesame	7.53 (0.63)	36.59 (3.07)	30.84 (2.59)	30.16 (2.53)	26.55 (2.23)	1.50 (0.12)	133.17 (11.16)
Total	11.72 (0.98)	78.01 (6.55)	543.72 (45.60)	168.78 (14.15)	377.42 (31.65)	12.77 (1.07)	1192.42 (100.00)

Figures in parenthesis are the percentage of the total area.

It is noticed from the above table that the cultivation of oilseeds in the sample area is found maximum (45.60%) in Dhaka division followed with significant percentages by Rajshahi (31.7%), Khulna (14.2%) and Chittagang(6.6%) divisions. Mustard covers the highest area (76%) of the total area of 1192.42 acres. While the others two crops Rape and Linseed are far low at 12.6 % and 11.26% respectively and minimum in Barisal (0.98%) and Sylhet (1.07%) divisions. Mustard and rape combined covers 89% and linseed 11% of the total area of 1192.42 acres. It is observed that cultivation of Mustard is almost 76% of the total area under oil seeds. Total sample area under Oil-seeds by type are shown in the bar-diagram below:

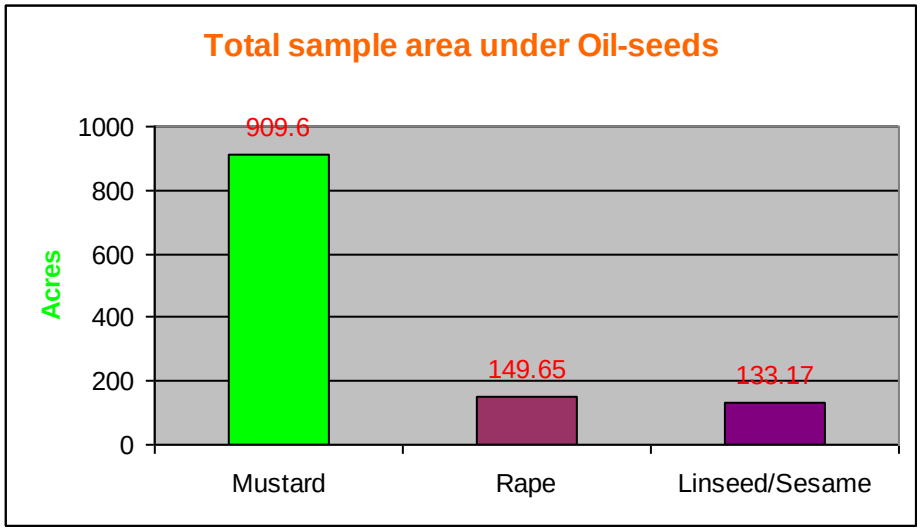
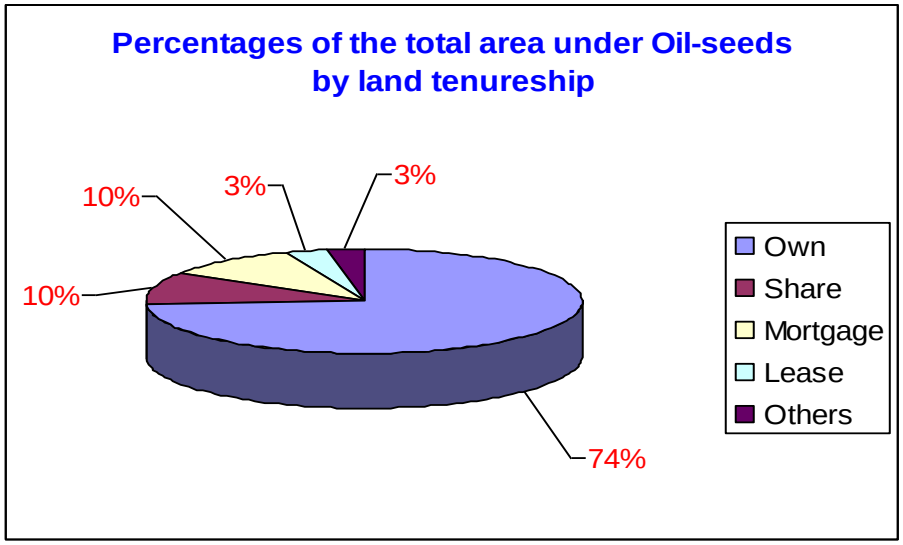


Table 3.2(b). Area (acres) under oilseeds crops as recorded in the sample area by variety and tenureship

Variety of oil seed	Tenure ship					Total
	Own	Share	Mortgage	Lease	Others	
Mustard	692.00 (58.03)	100.65 (8.44)	85.52 (7.17)	28.05 (2.35)	3.38 (0.28)	909.60 (76.28)
Rape	110.19 (9.24)	10.80 (0.91)	13.56 (1.14)	4.13 (0.35)	10.97 (0.92)	149.65 (12.55)
Linseed/Sesame	78.66 (6.60)	12.87 (1.08)	17.86 (1.50)	4.98 (0.42)	18.80 (1.58)	133.17 (11.17)
Total	880.85 (73.87)	124.32 (10.43)	116.94 (9.81)	37.16 (3.12)	33.15 (2.78)	1192.42 (100.00)

Figures in parenthesis are the percentage of the total area.

By tenureship point of view, about 74% belongs to own types of land followed remotely by share cropping (10.43%), mortgage(9.8%), lease(3.1%) and others(2.8%). Percentages of the total area under Oil-seeds by land tenureship are depicted in the Pi-chart below:



Land preparation:

Land is prepared first for the sowing of the crops by tilling either by power tiller or by country plough. Per acre land preparation cost of oilseeds crops are shown in the table below by size of land planted.

Table-3.3: Per acre land preparation cost of Oil-Seeds crops by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenureship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	1756	1794	1429	1833	1727	1821
0.05 - 0.49	1728	1815	1428	1604	1731	1718
0.50 - 0.99	1646	1701	1310	1726	1659	1615
1.00 - 1.49	1599	1624	1150	1680	1559	1732
1.50 - 2.49	1576	1611	1207	1660	1487	1872
2.50 - 4.99	1591	1597	1235	1667	1462	1924
5.00 - 7.49	0	0	0	0	0	0
7.50 +	0	0	0	0	0	0
Average	1655	1706	1337	1664	1635	1712

Note: Others include share cropping, mortgage, lease & others

The table reveals per acre land preparation cost by type of oilseeds and by type of land tenure. It shows that per acre land preparation costs are Tk 1706, Tk 1337 and Tk 1664 for mustard , rape and linseed respectively. For the 3 varieties combined it stands at Tk1655 and by tenurship it is Tk 1635 for own type and Tk 1712 for others.

Seeds:

After the preparation of lands, seeds are sown. Per acre cost of seeds used and sowing of seeds are furnished in the table below by size of land planted.

Table-3.4: Per acre seed and seed related cost of Oil-Seeds by size of land planted

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	354	377	271	250	365	326
0.05 - 0.49	295	317	249	219	297	289
0.50 - 0.99	301	329	211	228	299	304
1.00 - 1.49	320	342	197	237	326	301
1.50 - 2.49	322	337	209	244	330	294
2.50 - 4.99	360	383	214	270	377	322
5.00 - 7.49	0	0	0	0	0	0
7.50 +	0	0	0	0	0	0
Average	308	332	227	230	311	299

Note: Others include share cropping, mortgage, lease & others

Per acre cost of seeds of mustard, rape and linseed are Tk 332, Tk 227 and Tk 230 respectively. It is Tk 308 for the 3 varieties combined and by tenureship it stands at Tk 311 for own type and Tk 299 for others.

Irrigation, pesticides:

Application of irrigation is needed for well growth of the crop. Plants are sometimes attacked by pests when pesticides are applied. Per acre cost of irrigation and pesticides combined are given in the table below.

Table-3.5: Per acre irrigation, insecticide & others cost of Oil-Seeds crops by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	289	248	429	483	300	263
0.05 - 0.49	329	288	475	385	345	281
0.50 - 0.99	322	292	464	337	370	214
1.00 - 1.49	267	253	320	328	292	186
1.50 - 2.49	254	229	431	382	242	293
2.50 - 4.99	287	279	309	330	314	220
5.00 - 7.49	0	0	0	0	0	0
7.50 +	0	0	0	0	0	0
Average	305	275	449	356	329	240

Note: Others include share cropping, mortgage, lease & others

It is seen from the table that per acre total cost for 3 varieties combined is Tk 305 and by tenurship it is Tk 329 for own type of land and Tk 240 for others. For mustared, rape and linseeds, these values are Tk 275, Tk 449 and Tk 356 respectively.

Fertilizer:

To harvest a good crop both organic and inorganic fertilizer are used. Naturaly farmers have to invest a good amount of money for the said inputs, which is shown below by size of land planted with by variety and land tenurship.

Table-3.6: Per acre fertilizer cost of Oil-Seeds by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	2600	2786	1850	1700	1685	4189
0.05 - 0.49	2419	2584	1889	1799	2409	2452
0.50 - 0.99	2785	3057	1889	1412	2733	2897
1.00 - 1.49	3051	3250	1577	1434	3065	3004
1.50 - 2.49	3328	3528	1986	1441	3401	3077
2.50 - 4.99	3416	3583	0	1225	3956	1961
5.00 - 7.49	0	0	0	0	0	0
7.50 +	0	0	0	0	0	0
Total	2806	3033	1868	1544	2830	2740

Note: Others include share cropping, mortgage, lease & others

It is noticed from the table that per acre total cost of all size of land planted under the crops for the utilization of fertilizer are mustard Tk 3033, rape Tk1868 and linseed Tk 1544 and combined average of these three varieties is Tk 2806. The table reveals that farmers spends more money for fertilizer for mustard than for rape and linseed. It is further observed in the table that per acre expenditure of this input is somewhat more in case of larger size of land planted(0.50 acres and above). By tenurship of land per acre total cost of this input is Tk 2830 for own type of land and Tk 2740 for others type.

Harvesting:

When seeds are matured the crops are harvested. Costs are involved in harvesting. Per acre harvesting cost is furnished in the table below:

Table-3.7: Per acre harvesting cost of oil seeds by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	1311	1396	786	1250	1452	1000
0.05 - 0.49	1274	1331	892	1442	1243	1371
0.50 - 0.99	1215	1277	795	1363	1196	1260
1.00 - 1.49	1254	1308	651	1228	1250	1267
1.50 - 2.49	1297	1355	645	1357	1282	1351
2.50 - 4.99	1440	1503	735	1359	1420	1491
5.00 - 7.49	0	0	0	0	0	0
7.50 +	0	0	0	0	0	0
Average	1265	1324	812	1365	1245	1321

Note: Others include share cropping, mortgage, lease & others

It is observed from the above table that per acre harvesting costs of mustard, rape and linseed are Tk 1324,Tk 812 and Tk 1365 respectively. and for the 3 varieties combined Tk 1265. The figures in the table show that per acre harvesting cost of rape seeds is lower than those of mustard and linseed. Harvesting cost of mustard and linseed is almost the same.

Thrashing:

After thrashing oil seeds are taken out. Some labourer are needed for this purpose. Per acre thrashing cost of oilseeds by size of land planted and by variety and tenurship are presented below.

Table-3.8: Per acre thrashing cost of Oil-Seeds by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	980	1017	600	1133	1014	1905
0.05 - 0.49	1009	1058	705	1082	1020	2440
0.50 - 0.99	958	1001	837	1103	1000	2197
1.00 - 1.49	966	971	553	1162	965	2397
1.50 - 2.49	909	937	527	1041	876	2528
2.50 - 4.99	843	789	547	1173	851	2345
5.00 - 7.49	0	0	0	0	0	0
Average	964	993	649	1110	978	2357

Note: Others include share cropping, mortgage, lease & others

The above table focuses that per acre cost of thrashing of linseed is as high as Tk 1110. For mustard and rape the costs are Tk 993 and Tk 649 respectively. For the 3 varieties combined the cost is Tk 964. By land tenureship consideration, the cost is much lower (Tk 978) for own type of lands and is much higher (Tk 2357) for 'others' type of lands.

Per acre production:

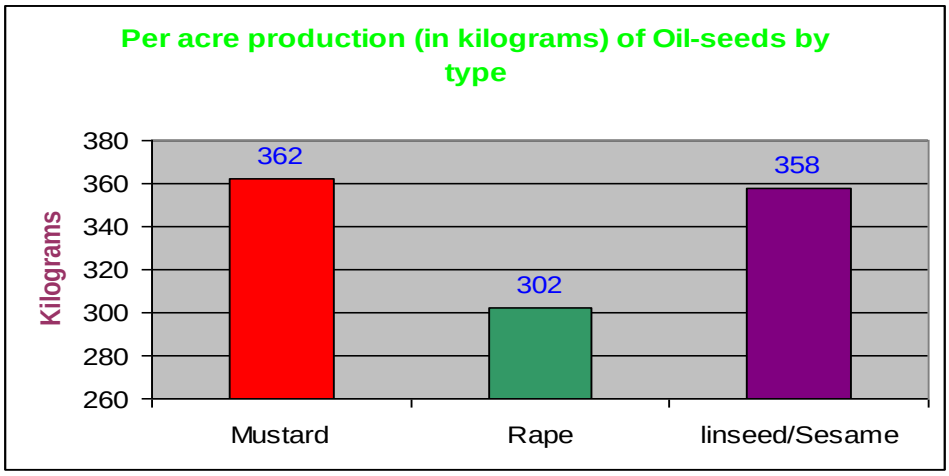
Table-3.9: Per acre production (in Kilograms) of oil seeds by size of land planted

Size of land planted (acres)	Total	Variety of oil seeds crops			Tenure ship	
		Mustard	Rape	linseed/Sesame	Own	Others
<= 0.04	383	396	329	333	380	389
0.05 - 0.49	370	380	328	372	369	374
0.50 - 0.99	349	359	295	361	361	324
1.00 - 1.49	342	349	246	344	346	329
1.50 - 2.49	351	369	258	364	340	388
2.50 - 4.99	318	321	276	319	304	361
5.00 - 7.49						
Average	354	362	302	358	355	350

Note: Others include share cropping, mortgage, lease & others

Per acre production of the 3 varieties combined has been derived as 354 kilograms. Yield rates recorded ranged from 318 kilogram to 383 kilograms. Yield rates are found higher for the crops of smaller land size. Per acre production of mustard, rape and linseed are 362 kg, 302 kg and 358 kg respectively. It is revealed from the table that per acre production of own

type of lands and others are almost equal. Per acre production (in kilograms) of Oil-seeds are shown in the bar-diagram below:



Per acre production cost:

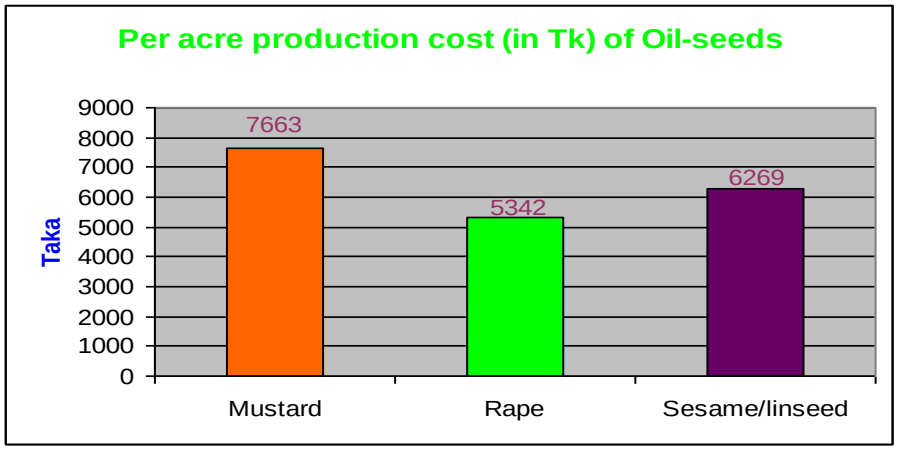
Costs of all components which are needed at different stages of the cultivation of the crop are added for getting per acre total costs. The table computed is as under.

Table-3.10: Per acre production cost of oil seeds by size of land planted.

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	7350	7818	5364	6649	6543	9504
0.05 - 0.49	7054	7393	5638	6531	7045	8551
0.50 - 0.99	7227	7656	5506	6169	7257	8487
1.00 - 1.49	7457	7750	4448	6069	7457	8827
1.50 - 2.49	7686	7997	5005	6125	7616	9415
2.50 - 4.99	8037	8134	4809	6024	7390	8263
5.00 - 7.49	0	0	0	0	0	0
Average	7303	7663	5342	6269	7228	8667

Note: Others include share cropping, mortgage, lease & others

It is seen from the table that per acre production costs of mustard, rape and linseed are Tk 7663, Tk 5342 and Tk 6269 respectively and combined per acre production cost of these three varieties is Tk 7303. In terms of size of land planted 0.05-0.49 acre the cost is found minimum (Tk 7054) and for the size of land planted 2.50-4.99 acres the cost is maximum (Tk 8037). Per acre production cost (in Tk) of Oil-seeds are displayed in the bar-diagram below:



By tenurship consideration, per acre production cost of own type of land is less (Tk 6543) for the size of land planted <=0.04 acre the cost is high (Tk 7390) for the size of land planted 2.50-4.99 acres. Per acre production cost of 'others' type of land is higher (Tk 8667) than that of own type (Tk 7228)

Per acre production value:

Per acre production value of the three varieties mustard, rape and linseed by size of land planted are displayed below.

Table-3.11: Per acre production value of oil seeds by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	11958	12462	8757	11333	12635	10321
0.05 - 0.49	11726	12115	9265	12683	11708	11778
0.50 - 0.99	10977	11313	8238	12372	11282	10267
1.00 - 1.49	10767	10954	6943	11609	10754	10810
1.50 - 2.49	11051	11381	6985	12682	10599	12584
2.50 - 4.99	10100	10028	7218	11248	9180	12862
5.00 - 7.49	0	0	0	0	0	0
Average	11161	11447	8443	12259	11136	11231

Note: Others include share cropping, mortgage, lease & others

It is observed from the table that per acre production value of the three oilseeds crop combined is Tk 11161. Per acre production values of the three crops respectively are Tk 11447, Tk 8443 and Tk 12259 for mustard, rape and linseed. Per acre production value of linseed is registered as the highest focused in the table. By analysing the figures of tenureship, per acre production value of own type of lands is Tk 11136 and for others type of lands it is Tk 11231.

Per kilogram (kg) production cost:

Table-3.12: Per Kilogram production cost and production value.

Variety	Per Kg. production cost (in Tk)	Per kg production value (in Tk)
Mustard	21.17	31.62
Rape	17.69	27.96
Linseed/ Sesame	17.51	34.24
Average	20.63	31.53

Table-3.13: Number of plots in tenure ship of oil seeds crops by size of land planted and by land tenureship

Size of land planted (acres)	Land tenure ship					Total
	Own	Share	Mortgage	Lease	Others	
<= 0.04	13	0	4	0	1	18
0.05 - 0.49	1368	174	149	48	30	1769
0.50 - 0.99	389	65	65	19	13	551
1.00 - 1.49	143	16	18	4	6	187
1.50 - 2.49	56	8	5	2	3	74
2.50 - 4.99	16	1	3	1	1	22
5.00 - 7.49	0	0	0	0	0	0
Total	1985	264	244	74	54	2621

From the above table, it is seen that number of plots is found maximum(1769) in the size of land planted 0.05-0.49 acres, of which own type of land shares the highest(1368). Total number of plots over the country under the sample area is 2621 and own type of lands is registered as1985, which represent 76% of the total. No cultivation of oilseeds over 5 acres of land is seen from the table.

Area covered by tenureship:

Table-3.14: Area (acres) covered in sample of oil seeds by type of land tenureship by size of land planted.

(Fig in acres)

Size of land planted (acres)	Land tenure ship					Total
	Own	Share	Mortgage	Lease	Others	
<= 0.04	0.42	0.00	0.15	0.00	0.04	0.61
0.05 - 0.49	310.57	44.63	36.28	13.41	7.10	411.99
0.50 - 0.99	252.35	43.94	43.37	12.53	9.91	362.10
1.00 - 1.49	162.77	18.07	20.32	4.61	6.60	212.37
1.50 - 2.49	105.89	14.18	8.05	4.07	5.50	137.69
2.50 - 4.99	48.85	3.50	8.77	2.54	4.00	67.66
5.00 - 7.49	0.00	0.00	0.00	0.00	0.00	0.00
Total	880.85	124.32	116.94	37.16	33.15	1192.42

It is depicted from the table that total area of 1192.42 acres are covered under the crops-mustard, rape and linseed. Of the total, own type of land shares 880.85 acres which represents 74%. On the other hand, 65% of the land are cultivated under the crops in the size of land 0.05-0.99 acres.

Number of plots by division:

Table-3.15: Number of plots by division and by size of land planted of oil seeds, 2008-09

Size of land planted(acres)	Division						Total
	Brisal	Chittgong	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0	1	5	5	7	0	18
0.05 - 0.49	41	170	573	402	576	7	1769
0.50 - 0.99	5	35	259	93	155	4	551
1.00 - 1.49	0	7	98	17	63	2	187
1.50 - 2.49	0	2	44	4	22	2	74
2.50 - 4.99	0	1	10	0	10	1	22
5.00 - 7.49	0	0	0	0	0	0	0
Total	46	216	989	521	833	16	2621

It is noticed from the table that total number of plots are recorded 2621 in all size of lands planted; Dhaka shares the maximum (989) followed by Rajshahi (833). Of the total plots planted, 1769 plots are found in the class interval of 0.05-0.49 acres planted and it represents 67% and the numbers of plots are more in all the divisions under these crops in this class interval.

Division wise area (acres) of oilseeds:

Table-3.16: Division wise area in acres of oil seeds by size of land planted.

(Fig in acres)

Size of land planted (acres)	Division						Total
	Brisal	Chittgong	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0.00	0.04	0.16	0.15	0.26	0.00	0.61
0.05 - 0.49	8.72	38.34	146.45	84.45	131.96	2.07	411.99
0.50 - 0.99	3.00	23.94	173.42	58.97	100.22	2.55	362.10
1.00 - 1.49	0.00	7.80	112.61	18.42	71.54	2.00	212.37
1.50 - 2.49	0.00	3.89	80.40	6.79	43.46	3.15	137.69
2.50 - 4.99	0.00	4.00	30.68	0.00	29.98	3.00	67.66
5.00 - 7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	11.72	78.01	543.72	168.78	377.42	12.77	1192.42

Table shows that out of total land planted (1192.42 acres) under the crops, Dhaka division shares the maximum area of 543.72 acres followed by Rajshahi division 377.42 acres. Minimum areas of about12 acres and 13 acres are found in Barisal and Sylhet divisions. Class interval of 0.05-0.49 acres holds the highest areas in all the divisions. No cultivation of these crops are seen in the class interval of 5.00-7.49 acres anywhere in the country.

Number of labourer engaged in harvesting:

Table-3.17: Per acre number of labourer engaged in harvesting oil-Seeds by size of land planted

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	11	11	9	12	11	12
0.05 - 0.49	11	11	9	12	11	12
0.50 - 0.99	10	10	8	11	10	9
1.00 - 1.49	10	10	8	11	10	9
1.50 - 2.49	9	10	8	10	9	10
2.50 - 4.99	10	10	8	10	9	10
5.00 - 7.49						
Average	10	10	8	11	10	9

Note: Others include share cropping, mortgage, lease & others

The above table reveals that per acre number of labourer engaged in harvesting of the crops is 10. Number of labourers is found almost the same for all the crops which ranged from 8 to 12.

Thrashing

Table-3.18: Per acre number of labourer engaged in thrashing work of Oil-Seeds by size of land planted

Size of land planted (acres)	Total	Variety of oil seeds			Tenure ship	
		Mustard	Rape	Sesame/linseed	Own	Others
<= 0.04	8	7	7	9	9	7
0.05 - 0.49	8	7	6	9	9	7
0.50 - 0.99	6	6	4	8	7	6
1.00 - 1.49	6	6	4	7	6	5
1.50 - 2.49	6	5	4	7	6	5
2.50 - 4.99	6	6	3	7	7	4
5.00 - 7.49						
Average	6	6	5	8	7	6

Note: Others included share cropping, mortgage, lease & others

Per acre number of labourer engaged in thrashing work for the three varieties combined is 6. It is clearly seen from the table that plants of smaller land size needs more labourers for thrashing purpose. For Mustard, rape and linseed crops separately the figures are 6,5 and 8 respectively. By tenure ship point of view, per acre no of labourer for this work under own type of lands holds 7 and for others type of lands it is 6. It is revealed from the table that farmers engaged more labourer for the size of land planted <=0.04 and 0.05-0.49 acres for all the varieties.

Productivity:

Table-3.19: Per acre productivity of Oil seeds crops by variety

Variety	Production cost (in Tk)	Production value (in Tk)	Productivity
Mustard	7663	11447	1.49
Rape	5342	8443	1.58
Linseed/ Sesame	6269	12259	1.68
Average	7303	11161	1.53

Per acre productivity of oil seeds combined is 1.53 and it shows that cultivation of the crop is profitable. Cultivation of linseed is more profitable than that of Mustard and Rape, as noticed in the table.

Table-3.20: Per acre productivity of oil seeds crops by tenureship

Tenure ship	Production cost (in Tk)	Production value (in Tk)	Productivity
Own land	7228	11136	1.54
Other's land	8679	11231	1.29
Average	7303	11161	1.53

By tenure ship point of view per acre productivity of own type of lands is higher than that of others type of lands.

Major head wise per acre production cost of Oil-seeds.

Per acre production costs of mustard, rape and linseed/sesame by major heads are displayed in the tables 3.21, 3.22 and 3.23. It is to be mentioned here that non response of the information from the most farmers about the leasing value (land rental value) of the land for the cultivation of Oilseeds, it has not been possible to show per acre leasing value.

Table -3.21: Major head wise per acre production cost of mustard by size of land planted.

Size of land planted (Mustard)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticid, Irrigation & others	Fertilizer	Harvesting	Thrashing & others	Total
<= 0.04	1794	377	248	2786	1396	1017	7618
0.05 – 0.49	1815	317	288	2584	1331	1058	7393
0.50 – 0.99	1701	329	292	3057	1277	1001	7656
1.00 – 1.49	1624	342	253	3250	1308	971	7750
1.50 – 2.49	1611	337	229	3528	1355	937	7997
2.50 – 4.99	1597	383	279	3583	1503	789	8134
5.00 – 7.49	0	0	0	0	0	0	0
Average	1706	332	275	3033	1324	993	7663
Percentage(%)	22.26	4.33	3.59	39.58	17.28	12.96	100

It reveals from the table that about 40% of the per acre total production cost of mustard is spent for fertilizers. Per acre land preparation costs of mustard for land preparation, harvesting and Thrashing are 22.26%, 17.28% and 12.96% respectively. Percentages of the major head wise per acre production cost of mustard is shown in pi-chart below:

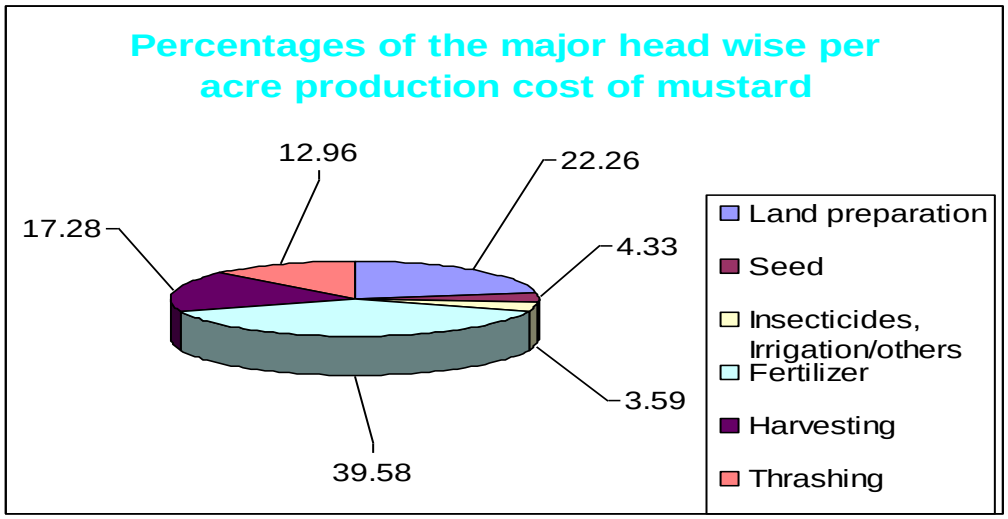


Table -3.22: Major head wise production cost of rape by size of land planted.

Size of land planted (Rape)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing &others	Total
<= 0.04	1429	271	429	1850	786	600	5365
0.05 – 0.49	1428	249	475	1889	892	705	5638
0.50 – 0.99	1310	211	464	1889	795	837	5506
1.00 – 1.49	1150	197	320	1577	651	553	4448
1.50 – 2.49	1207	209	431	1986	645	527	5005
2.50 – 4.99	1235	214	309	1779	735	547	4809
5.00 – 7.49	0	0	0	0	0	0	0
Average	1337	227	449	1868	812	649	5342
Percentage(%)	25.09	4.25	8.41	34.97	15.20	12.15	100

The table exposes that maximum expenditure (about 35%) is incurred for fertilizer for one acre rape cultivation. About 25% of the total per acre production cost is needed for land preparation work. About 15% and 12% of the total per acre production cost are required for harvesting and thrashing work respectively. Percentages of major head wise per acre production cost of rape is displayed in the pi-chart below:

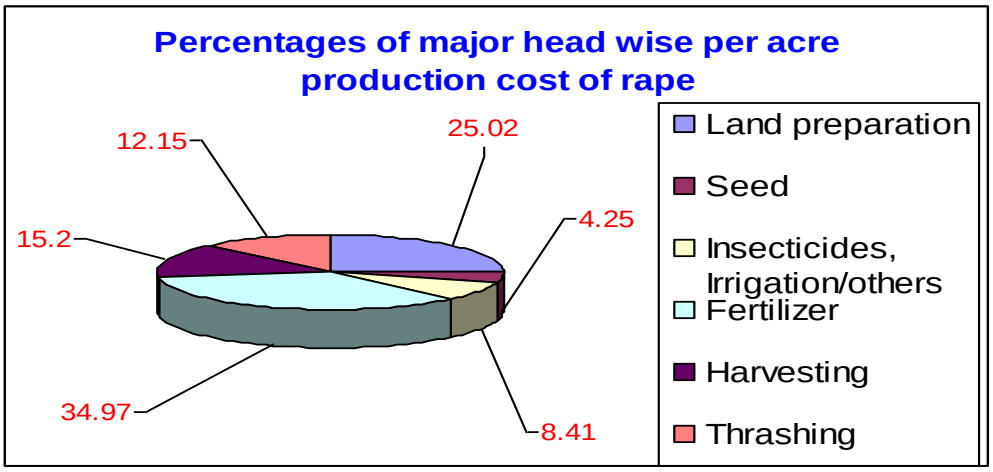
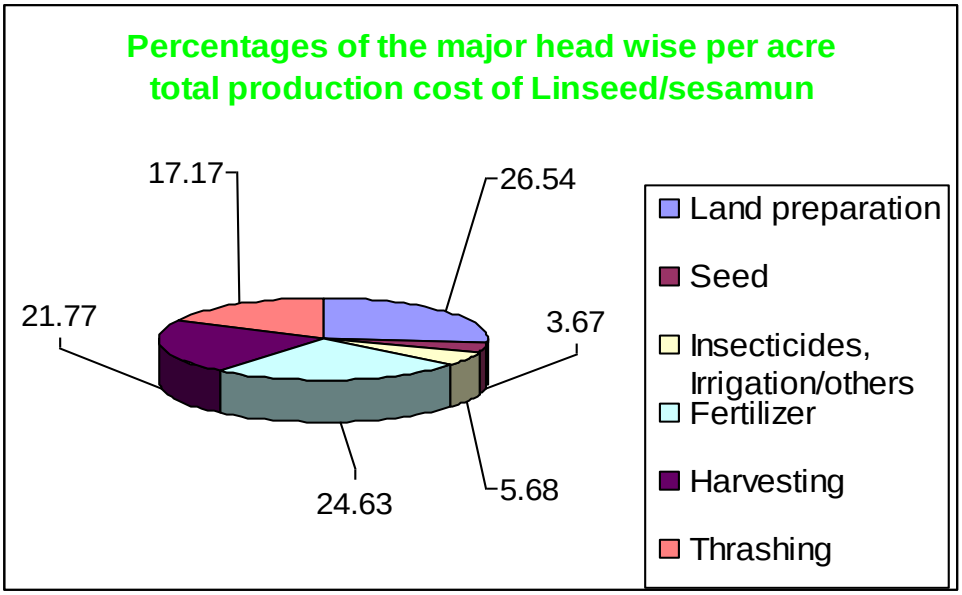


Table -3.23: Major head wise per acre production cost of Linseed/sesame by size of land planted.

Size of land planted(sesame/linseed)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing & others	Total
<= 0.04	1833	250	483	1700	1250	1133	6649
0.05 – 0.49	1604	219	385	1799	1442	1082	6531
0.50 – 0.99	1726	228	337	1412	1363	1103	6169
1.00 – 1.49	1680	237	328	1434	1228	1162	6069
1.50 – 2.49	1660	244	382	1441	1357	1041	6125
2.50 – 4.99	1667	270	330	1225	1359	1173	6024
5.00 – 7.49	0	0					0
Average	1664	230	356	1544	1365	1110	6269
Percentage(%)	26.54	3.67	5.68	24.63	21.77	17.71	100

It is seen from the table that about 27% of the total per acre production cost of Linseed/sesame is spent for land preparation work. Percentages of the per acre total production costs for the work of fertilizer, harvesting and thrashing are 24.63%, 21.77%, and 17.71% respectively. Percentages of the major head wise per acre total production cost of linseed/sesame is demonstrated in the pi-chart below:



3.24 Sampling error and data reliability

Using the random group method the estimated variance of R has the following form

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

Where: R= the estimated average cost (land preparation /Seed, pesticide & irrigation / fertilizer/harvesting & others)

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

K = the number of random group

Table-3.21(a): Estimated average production cost (excluding leasing) per kg for the 2008-09 variety wise oil seeds and their standard errors(S.E)

Variety of oil seeds	Total		Land preparation		Seed, pesticide & irrigation		Fertilizer		Harvesting & others	
	Cost	S.E	Cost	S.E	Cost	S.E	Cost	S.E	Cost	S.E
Mustard	21.17	0.00511	4.71	0.00109	1.68	0.00092	8.38	0.00509	6.40	0.00080
Rape	17.69	0.00560	4.43	0.00277	2.24	0.00195	6.19	0.00481	4.83	0.00300
Linseed/ Sesame	17.51	0.00589	4.73	0.00324	1.64	0.00101	4.31	0.00400	6.91	0.00206
Combined	20.63	0.00145	4.68	0.00150	1.73	0.00075	7.93	0.00101	6.30	0.00037

From the above table- 1 the average production cost per kg for mustard of 21.17 taka is significantly different from the 17.69 taka average production cost for rape at 95% confidence level. Similarly the average production cost per kg for mustard of 21.17 taka is significantly different from the 17.51 taka average production cost for sesame at 95% confidence level. Rape and sesame average per Kg production cost is almost same. Production cost for all estimates have acceptable reliability in terms of sampling error.

Table-3.21(b): Estimated average production cost (excluding leasing) per acre for the 2008-09 variety wise oil seeds and their standard errors (S.E)

Variety of oil seeds	Total		Land preparation		Seed, pesticide & irrigation		Fertilizer		Harvesting & others	
	Cost	S.E	Cost	S.E	Cost	S.E	Cost	S.E	Cost	S.E
Mustard	7663	0.55189	1706	0.06098	607	0.06228	3033	0.51015	2317	0.08752
Rape	5342	0.31124	1337	0.13842	676	0.06105	1868	0.40801	1461	0.16103
Linseed/ Sesame	6269	1.83830	1664	1.74020	586	0.09038	1544	0.41173	2475	0.14901
Combined	7303	0.20342	1655	0.12790	613	0.04261	2806	0.13911	2229	0.07239

The above table shows that the average per acre production cost for mustard of 7883 taka is significantly different from the 5342 taka average production cost for rape at 95% confidence level. Similarly the average per acre production cost of mustard, 7663 taka is significantly different from the 6269 taka average production cost for sesame at 95% confidence level. The standard error of sesame per acre is 1.83 due to low representation in the sample. Estimated production cost per acre for rape & sesame production cost were subject to higher standard errors than for rape. However production cost for all estimates have acceptable reliability in terms of sampling error.

Chapter-IV

Statistical Table

Statistical Table

Table 4.1A. Per acre land preparation cost of oil-seeds (combined) by size of land planted.

(Fig in Tk)

Size of land planted (acres)	Plough	Power tiller	Others	Total
<= 0.04	295	1125	336	1756
0.05 - 0.49	230	1214	284	1728
0.50 - 0.99	171	1200	274	1646
1.00 - 1.49	136	1189	274	1599
1.50 - 2.49	102	1242	233	1576
2.50 - 4.99	0	1389	202	1591
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	168	1218	269	1655

Table 4.1B. Per acre land preparation cost by size of land planted.

(Fig in Tk)

Size of land planted (Mustard)	Plough	Power tiller	Others	Total
<= 0.04	188	1283	323	1794
0.05 - 0.49	202	1319	294	1815
0.50 - 0.99	131	1303	267	1701
1.00 - 1.49	113	1283	228	1624
1.50 - 2.49	81	1296	234	1611
2.50 - 4.99	0	1432	164	1597
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	137	1311	258	1706

Table 4.1C. Per acre land preparation cost by size of land planted.

(Fig in Tk)

Size of land planted (Rape)	Plough	Power tiller	Others	Total
<= 0.04	1143	0	286	1429
0.05 - 0.49	404	792	232	1428
0.50 - 0.99	389	769	152	1310
1.00 - 1.49	385	617	148	1150
1.50 - 2.49	356	746	106	1207
2.50 - 4.99	0	1088	147	1235
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	384	770	183	1337

Table-4.1D Per acre land preparation cost by size of land planted.

(Fig in Tk)

Size of land planted (Sesame/ linseed)	Plough	Power tiller	Others	Total
<= 0.04	167	1167	500	1833
0.05 – 0.49	168	1139	297	1604
0.50 – 0.99	150	1094	482	1726
1.00 – 1.49	158	863	659	1680
1.50 – 2.49	0	1226	434	1660
2.50 – 4.99	0	1282	385	1667
5.00 – 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	160	1067	437	1664

Table-4.1E Per acre land preparation cost by size of land planted.

(Fig in Tk)

Size of land planted (Own)	Plough	Power tiller	Others	Total
<= 0.04	429	929	369	1727
0.05 – 0.49	258	1185	288	1731
0.50 – 0.99	223	1176	260	1659
1.00 – 1.49	122	1196	240	1559
1.50 – 2.49	61	1233	193	1487
2.50 – 4.99	0	1281	181	1462
5.00 – 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	185	1195	254	1635

Table-4.1F. Per acre land preparation cost by size of land planted.

(Fig in Tk

Size of land planted (Others)	Plough	Power tiller	Others	Total
<= 0.04	0	1558	263	1821
0.05 - 0.49	143	1302	274	1718
0.50 - 0.99	52	1257	306	1615
1.00 - 1.49	182	1165	385	1732
1.50 - 2.49	236	1271	365	1872
2.50 - 4.99	0	1669	255	1924
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	118	1283	311	1712

Table-4.2A. Per acre seed and seed sowing cost by land size of Oil-Seeds.

Size of land planted (Combined)	Seed		Seed sowing Tk.	Total Tk.
	Quantity(Kg.)	Tk.		
<= 0.04	4	272	82	354
0.05 - 0.49	4	227	68	295
0.50 - 0.99	4	237	63	301
1.00 - 1.49	4	256	64	320
1.50 - 2.49	4	262	60	322
2.50 - 4.99	5	288	72	360
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	4	243	65	308

Table-4.2B: Per acre seed and seed sowing cost by land size of Oil-Seeds

Size of land planted (Mustard)	Seed		Seed sowing Tk.	Total Tk.
	Quantity(Kg.)	Tk.		
<= 0.04	4	294	83	377
0.05 – 0.49	4	248	69	317
0.50 – 0.99	4	265	64	329
1.00 – 1.49	4	280	62	342
1.50 – 2.49	4	275	62	337
2.50 – 4.99	5	309	74	383
5.00 – 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	4	266	66	332

Table-4. 2C. Per acre seed and seed sowing cost by land size of Oil-Seeds

Size of land planted (Rape)	Seed		Seed sowing Tk.	Total Tk.
	Quantity(Kg.)	Tk.		
<= 0.04	3	200	71	271
0.05 - 0.49	3	190	59	249
0.50 - 0.99	3	164	47	211
1.00 - 1.49	3	164	33	197
1.50 - 2.49	3	183	26	209
2.50 - 4.99	3	194	20	214
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	3	178	49	227

Table-4.2D: Per acre seed and seed sowing cost by land size of Oil-Seeds

Size of land planted (Sesame/ linseed)	Seed		Seed sowing	Total
	Quantity(Kg.)	Tk.	Tk.	Tk.
<= 0.04	4	167	83	250
0.05 – 0.49	4	149	70	219
0.50 – 0.99	5	145	83	228
1.00 – 1.49	5	143	94	237
1.50 – 2.49	5	171	73	244
2.50 – 4.99	5	190	80	270
5.00 – 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	5	150	79	230

Table-4.2E. Per acre seed and seed sowing cost by land size of Oil-Seeds

Size of land planted (Own)	Seed		Seed sowing	Total
	Quantity(Kg.)	Tk.	Tk.	Tk.
<= 0.04	4	287	78	365
0.05 - 0.49	4	229	67	297
0.50 - 0.99	4	236	64	299
1.00 - 1.49	4	261	65	326
1.50 - 2.49	4	270	61	330
2.50 - 4.99	5	300	76	377
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	4	246	65	311

Table-4.2F. Per acre seed and seed sowing cost by land size of Oil-Seeds

Size of land planted (Others)	Seed		Seed sowing	Total
	Quantity(Kg.)	Cost (Tk)	Tk.	Tk.
<= 0.04	4	237	89	326
0.05 - 0.49	4	220	70	289
0.50 - 0.99	4	241	63	304
1.00 - 1.49	4	240	61	301
1.50 - 2.49	4	237	57	294
2.50 - 4.99	5	260	62	322
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	4	235	64	299

Table-4.3A. Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (Combined)	Insecticide	Irrigation	Others	Total
<= 0.04	54	223	12	289
0.05 - 0.49	66	246	17	329
0.50 - 0.99	60	247	15	322
1.00 - 1.49	60	194	13	267
1.50 - 2.49	69	173	12	254
2.50 - 4.99	86	193	10	287
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	65	226	15	305

Table-4.3B. Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (Mustard)	Insecticide	Irrigation	Others	Total
<= 0.04	52	187	10	248
0.05 - 0.49	73	199	15	288
0.50 - 0.99	67	214	11	292
1.00 - 1.49	64	179	10	253
1.50 - 2.49	73	1147	9	229
2.50 - 4.99	87	186	6	279
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	71	192	12	275

Table-4.3C. Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (Rape)	Insecticide	Irrigation	Others	Total
<= 0.04	57	343	29	429
0.05 - 0.49	27	419	28	475
0.50 - 0.99	24	409	31	464
1.00 - 1.49	14	273	33	320
1.50 - 2.49	0	389	42	431
2.50 - 4.99	0	265	44	309
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	22	395	31	449

Table-4.3D: Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (Sesame/linseed)	Insecticide	Irrigation	Others	Total
<= 0.04	67	400	17	483
0.05 - 0.49	71	298	15	385
0.50 - 0.99	63	253	22	337
1.00 - 1.49	58	247	22	328
1.50 - 2.49	103	262	17	382
2.50 - 4.99	117	190	23	330
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	70	266	19	356

Table-4.3E: Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (Own)	Insecticide	Irrigation	Others	Total
<= 0.04	54	228	17	300
0.05 - 0.49	67	260	18	345
0.50 - 0.99	63	291	17	370
1.00 - 1.49	63	215	15	292
1.50 - 2.49	83	146	12	242
2.50 - 4.99	92	212	10	314
5.00 - 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	68	244	16	329

Table-4.3F: Per acre insecticide, irrigation and other cost by land size of Oil-Seeds

(Fig in Tk)

Size of land planted (others)	Insecticide	Irrigation	Others	Total
<= 0.04	53	211	0	263
0.05 – 0.49	63	203	14	281
0.50 – 0.99	55	147	12	214
1.00 – 1.49	50	128	7	186
1.50 – 2.49	22	260	12	293
2.50 – 4.99	70	141	9	220
5.00 – 7.49	0	0	0	0
7.50 +	0	0	0	0
Average	55	173	12	240

Table-4.4A . Per acre quantity of fertilizer used (K.G.) and price by land size of oil-Seeds

Size of land planted (combined)	Urea		TSP		Organic		Others Tk	Total
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	62	692	29	1512	12	346	50	2600
0.05 - 0.49	62	731	24	1301	11	333	54	2419
0.50 - 0.99	64	762	29	1638	11	327	58	2785
1.00 - 1.49	67	800	32	1832	12	358	61	3051
1.50 - 2.49	71	842	35	2052	13	389	45	3328
2.50 - 4.99	70	815	36	2130	14	422	50	3416
5.00 +	0	0	0	0	0	0	0	0
Average	65	771	29	1633	12	347	55	2806

Table-4.4B . Per acre quantity of fertilizer used (K.G.) and price (Tk) by land size of oil-Seeds

Size of land planted (Mustard)	Urea		TSP		Organic		Others (Tk)	Total (Tk)
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	67	743	31	1638	12	357	48	2786
0.05 - 0.49	66	776	26	1381	13	372	55	2584
0.50 - 0.99	70	832	32	1798	13	371	55	3057
1.00 - 1.49	71	844	34	1959	13	386	61	3250
1.50 - 2.49	75	903	37	2159	14	421	46	3528
2.50 - 4.99	72	843	38	2244	15	442	53	3583
5.00 +	0	0	0	0	0	0	0	0
Average	69	826	31	1767	13	385	55	3033

Table-4.4C . Per acre quantity of fertilizer used (K.G.) and price (Tk) by land size of oil-Seeds

Size of land planted(Rape)	Urea		TSP		Organic		Others (Tk)	Total (Tk)
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	50	600	25	1250	0	0	0	1850
0.05 - 0.49	51	597	21	1048	6	179	65	1889
0.50 - 0.99	41	475	23	1152	7	177	86	1889
1.00 - 1.49	35	389	18	971	4	122	94	1577
1.50 - 2.49	31	325	27	1539	2	72	51	1986
2.50 - 4.99	32	440	22	1145	3	130	54	1779
5.00 +	0	0	0	0	0	0	0	0
Average	44	512	22	1117	6	165	74	1868

Table-4.4D:Per acre quantity of fertilizer used (K.G.) and price (Tk) by land size of oil-Seeds

Size of land planted (Sesame/ Linseed)	Urea		TSP		Organic		Others (Tk)	Total (Tk)
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	33	400	17	800	17	500	100	1700
0.05 - 0.49	40	479	17	890	8	239	24	1799
0.50 - 0.99	43	506	11	584	3	79	23	1412
1.00 - 1.49	48	531	11	625	5	152	22	1434
1.50 - 2.49	36	425	12	661	9	268	9	1441
2.50 - 4.99	35	450	10	625	5	150	8	1225
5.00 +	0	0	0	0	0	0	0	0
Average	42	488	13	711	6	172	21	1544

Table-4.4E: Per acre quantity of fertilizer used (K.G.) and price (Tk) by land size of oil-Seeds

Size of land planted(Own)	Urea		TSP		Organic		Others (Tk)	Total (Tk)
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	58	618	18	806	6	182	79	1685
0.05 - 0.49	60	702	24	1297	12	352	58	2409
0.50 - 0.99	62	736	29	1612	11	327	59	2733
1.00 - 1.49	68	815	32	1828	12	355	67	3065
1.50 - 2.49	68	813	37	2124	14	415	50	3401
2.50 - 4.99	73	847	24	1604	15	450	56	3069
5.00 +	0	0	0	0	0	0	0	0
Average	64	754	30	1453	12	359	59	2731

Table-4.4F . Per acre quantity of fertilizer used (K.G.) and price (Tk) by size of land planted.

Size of land planted(Others)	Urea		TSP		Organic		Others (Tk)	Total (Tk)
	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk	Qty (Kg)	Price Tk		
<= 0.04	68	821	47	2737	21	632	0	4189
0.05 - 0.49	69	821	24	1312	9	276	43	2452
0.50 - 0.99	69	818	29	1696	11	327	55	2897
1.00 - 1.49	64	750	31	1846	12	367	40	3004
1.50 - 2.49	80	944	31	1806	10	300	27	3077
2.50 - 4.99	60	729	24	1853	11	345	35	3057
5.00+	0	0	0	0	0	0	0	0
Average	69	818	27	1453	11	315	45	2738

Table-4.5A. Per acre harvesting cost and number of labour engaged by size of land planted.

Size of land planted (combined)	Number of labour			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	11	0	11	1311
0.05 - 0.49	6	5	11	1274
0.50 - 0.99	4	6	10	1215
1.00 - 1.49	2	8	10	1254
1.50 - 2.49	1	8	9	1297
2.50 - 4.99	1	9	10	1440
5.00 - 7.49				
7.50 +				0
Average	4	6	10	1265

Table-4.5B. Per acre harvesting cost and number of labour engaged by size of land planted.

Size of land planted (Mustrad)	Number of labour			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	11	0	11	1396
0.05 - 0.49	6	5	11	1331
0.50 - 0.99	4	6	10	1277
1.00 - 1.49	2	8	10	1308
1.50 - 2.49	1	9	10	1355
2.50 - 4.99	1	9	10	1503
5.00 - 7.49				0
7.50 +				0
Average	4	6	10	1324

Table-4.5C. Per acre harvesting cost and number of labour engaged by size of land planted.

Size of land planted(Rape)	Number of labour			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	9	0	9	786
0.05 - 0.49	5	4	9	892
0.50 - 0.99	4	4	8	795
1.00 - 1.49	2	6	8	651
1.50 - 2.49	1	7	8	645
2.50 - 4.99	1	7	8	735
5.00 - 7.49				0
7.50 +				0
Average	4	4	8	812

Table-4.5D. Per acre harvesting cost and number of labourers engaged by size of land planted.

Size of land planted (sesame/linseed)	Number of labourers			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	12	0	12	1250
0.05 – 0.49	6	6	12	1442
0.50 – 0.99	4	7	11	1363
1.00 – 1.49	2	9	11	1228
1.50 – 2.49	2	8	10	1357
2.50 – 4.99	1	9	10	1359
5.00 – 7.49				0
7.50 +				0
Average	4	7	11	1365

Table-4.5E. Per acre harvesting cost and number of labour engaged by size of land planted.

Size of land planted (own)	Number of labour			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	11	0	11	1452
0.05 – 0.49	6	5	11	1243
0.50 – 0.99	4	6	10	1196
1.00 – 1.49	2	8	10	1250
1.50 – 2.49	1	8	9	1282
2.50 – 4.99	1	8	9	1420
5.00 – 7.49				0
7.50 +				0
Average	4	6	10	1245

Table-4.5F. Per acre harvesting cost and number of labour engaged by size of land planted.

Size of land planted(others)	Number of labour			Total cost (Tk)
	Family	Hired	Total	
<= 0.04	12	0	12	1000
0.05 – 0.49	7	5	12	1371
0.50 – 0.99	4	5	9	1260
1.00 – 1.49	3	6	9	1267
1.50 – 2.49	2	8	10	1351
2.50 – 4.99	1	9	10	1491
5.00 – 7.49				0
7.50 +				0
Average	5	6	9	1321

Table-4.6A.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted(Combined)	Thrashing				Others (Tk)	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	8	0	8	931	49	980
0.05 – 0.49	7	1	8	844	161	1009
0.50 – 0.99	5	1	6	792	166	958
1.00 – 1.49	4	2	6	785	181	966
1.50 – 2.49	4	2	6	759	150	909
2.50 – 4.99	5	1	6	736	107	843
5.00 – 7.49	0	0		0	0	0
Average	5	1	6	802	162	964

Table-4.6B.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted(Mustard)	Thrashing				Others (Tk)	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	7	0	7	996	21	1017
0.05 – 0.49	5	2	7	910	148	1058
0.50 – 0.99	5	1	6	849	152	1001
1.00 – 1.49	5	1	6	814	157	971
1.50 – 2.49	4	1	5	792	145	937
2.50 – 4.99	5	1	6	767	22	789
5.00 – 7.49	0	0		0	0	0
Average	5	1	6	850	143	993

Table-4.6C.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted (Rape)	Thrashing				Others (Tk	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	7	0	7	600	0	600
0.05 – 0.49	5	1	6	501	204	705
0.50 – 0.99	3	1	4	456	181	837
1.00 – 1.49	3	1	4	443	110	553
1.50 – 2.49	3	1	4	406	121	527
2.50 – 4.99	3	0	3	400	147	547
5.00 – 7.49	0	0	0	0	0	0
Average	4	1	5	470	179	649

Table-4.6D.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted (sesame/linseed)	Thrashing				Others (Tk	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	9	0	9	800	333	1133
0.05 – 0.49	8	1	9	904	178	1082
0.50 – 0.99	6	2	8	864	239	1103
1.00 – 1.49	5	2	7	782	380	1162
1.50 – 2.49	5	2	7	766	275	1041
2.50 – 4.99	4	3	7	694	479	1173
5.00 – 7.49	0	0		0	0	0
Average	6	2	8	843	267	1110

Table-4.6E.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted (own)	Thrashing				Others (Tk	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	9	0	9	943	71	1014
0.05 – 0.49	7	2	9	843	177	1020
0.50 – 0.99	5	2	7	797	203	1000
1.00 – 1.49	4	2	6	778	187	965
1.50 – 2.49	4	2	6	745	131	876
2.50 – 4.99	5	1	7	715	136	851
5.00 – 7.49	0	0		0	0	0
Average	5	2	7	799	179	978

Table-4.6F.Per acre thrashing and others cost & number of labour engaged by size of land planted.

Size of land planted (others)	Thrashing				Others (Tk	Total (Tk)
	Number of labour			Cost (Tk)		
	Family	Hired	Total			
<= 0.04	7	0	7	0	1905	1905
0.05 – 0.49	6	1	7	110	2330	2440
0.50 – 0.99	5	1	6	79	2118	2197
1.00 – 1.49	4	1	5	162	2235	2397
1.50 – 2.49	3	2	5	215	2374	2528
2.50 – 4.99	3	1		32	2313	2345
5.00 – 7.49	0	0		0	0	0
Average	5	1	6	113	2244	2357

Table -4.7A: Major head wise per acre production cost by size of land planted.

Size of land planted (Combined)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing &others	Total
<= 0.04	1756	354	289	2660	1311	980	7350
0.05 – 0.49	1728	295	329	2419	1274	1009	7054
0.50 – 0.99	1646	301	322	2785	1215	958	7227
1.00 – 1.49	1599	320	267	3051	1254	966	7457
1.50 – 2.49	1576	322	254	3328	1297	909	7686
2.50 – 4.99	1591	360	287	3416	1440	943	8037
5.00 – 7.49	0	0		0	0	0	0
Average	1655	308	305	2806	1265	964	7303

Table -4.7B: Major head wise per acre production cost by size of land planted.

Size of land planted (Mustard)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing & others	Total
<= 0.04	1794	377	248	2786	1396	1017	7618
0.05 – 0.49	1815	317	288	2584	1331	1058	7393
0.50 – 0.99	1701	329	292	3057	1277	1001	7656
1.00 – 1.49	1624	342	253	3250	1308	971	7750
1.50 – 2.49	1611	337	229	3528	1355	937	7997
2.50 – 4.99	1597	383	279	3583	1503	789	8134
5.00 – 7.49	0	0	0	0	0	0	0
Average	1706	332	275	3033	1324	993	7663

Table -4.7C: Major head wise per acre production cost by size of land planted.

Size of land planted (Rape)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing & others	Total
<= 0.04	1429	271	429	1850	786	600	5365
0.05 – 0.49	1428	249	475	1889	892	705	5638
0.50 – 0.99	1310	211	464	1889	795	837	5506
1.00 – 1.49	1150	197	320	1577	651	553	4448
1.50 – 2.49	1207	209	431	1986	645	527	5005
2.50 – 4.99	1235	214	309	1779	735	547	4809
5.00 – 7.49	0	0	0	0	0	0	0
Average	1337	227	449	1868	812	649	5342

Table -4.7D: Major head wise per acre production cost by size of land planted.

Size of land planted (sesame/ linseed)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing &others	Total
<= 0.04	1833	250	483	1700	1250	1133	6649
0.05 – 0.49	1604	219	385	1799	1442	1082	6531
0.50 – 0.99	1726	228	337	1412	1363	1103	6169
1.00 – 1.49	1680	237	328	1434	1228	1162	6069
1.50 – 2.49	1660	244	382	1441	1357	1041	6125
2.50 – 4.99	1667	270	330	1225	1359	1173	6024
5.00 – 7.49	0	0					0
Average	1664	230	356	1544	1365	1110	6269

Table -4.7E: Major head wise per acre production cost by size of land planted.

Size of land planted (Own)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing & others	Total
<= 0.04	1727	365	300	1685	1452	1014	6543
0.05 – 0.49	1731	297	345	2409	1243	1020	7045
0.50 – 0.99	1659	299	370	2733	1196	1000	7257
1.00 – 1.49	1559	326	292	3065	1250	965	7457
1.50 – 2.49	1487	330	242	3401	1282	874	7661
2.50 – 4.99	1462	377	314	3069	1420	851	7390
5.00 – 7.49	0	0	0	0	0	0	0
Average	1635	311	329	2731	1245	978	7238

Table -4.7F: Major head wise per acre production cost by size of land planted.

Size of land planted (Others)	Per acre production cost (Tk)						
	Land preparation	Seed & seed related	Insecticide, Irrigation & others	Fertilizer	Harvesting	Thrashing &others	Total
<= 0.04	1821	326	263	4189	1000	1905	9504
0.05 – 0.49	1718	289	281	2452	1371	2440	8551
0.50 – 0.99	1615	304	214	2897	1260	2197	8487
1.00 – 1.49	1732	301	186	3004	1267	2397	8827
1.50 – 2.49	1872	294	293	3077	1351	2528	9415
2.50 – 4.99	1924	322	220	3057	1491	2345	8263
5.00 – 7.49	0	0	0		0	0	0
Average	1712	299	240	2738	1321	2357	8667

Table-4.8A. Per acre production quantity (kg) and value (Tk) by size of land planted.

Size of land planted (combined)	Production		By production		Total value (Tk)
	Qty(KG)	Value(TK)	Qty(KG)	Value(TK)	
<= 0.04	383	11051	385	908	11958
0.05 – 0.49	370	10766	384	960	11726
0.50 – 0.99	349	10146	354	830	10977
1.00 – 1.49	342	9982	355	785	10767
1.50 – 2.49	351	10333	329	718	11051
2.50 – 4.99	318	9332	344	768	10100
5.00 – 7.49	0	0	0	0	0
Average	354	10310	361	851	11161

Table-4.8B. Per acre production quantity (kg) and value (Tk) by land size of Oil

Size of land planted (Mustard)	Production		By production		Total value (Tk)
	Qty(KG)	Value(TK)	Qty(KG)	Value(TK)	
<= 0.04	396	11577	358	885	12462
0.05 – 0.49	380	11229	344	886	12115
0.50 – 0.99	359	10592	309	721	11313
1.00 – 1.49	349	10257	314	696	10954
1.50 – 2.49	360	10710	312	671	11381
2.50 – 4.99	321	9376	282	651	10028
5.00 – 7.49	0	0	0	0	0
Average	362	10687	320	760	11447

Table-4.8C. Per acre production quantity (kg) and value (Tk) by size of land planted.

Size of land planted (Rape)	Production		By production		Total value (Tk)
	Qty(KG)	Value(TK)	Qty(KG)	Value(TK)	
<= 0.04	329	8043	414	714	8757
0.05 – 0.49	328	8407	349	858	9265
0.50 – 0.99	295	7434	338	804	8238
1.00 – 1.49	246	6172	322	771	6943
1.50 – 2.49	258	6309	318	676	6985
2.50 – 4.99	276	6618	300	600	7218
5.00 – 7.49	0	0	0	0	0
Average	302	7633	339	809	8443

Table-4.8D. Per acre production quantity (kg) and value (Tk) by size of land planted.

Size of land planted (sesame/linseed)	Production		By production		Total value (Tk)
	Qty(KG)	Value(TK)	Qty(KG)	Value(TK)	
<= 0.04	333	10000	583	1333	11333
0.05 – 0.49	372	11135	670	1548	12683
0.50 – 0.99	361	10784	679	1588	12372
1.00 – 1.49	344	10213	656	1396	11609
1.50 – 2.49	364	11120	636	1562	12682
2.50 – 4.99	319	9934	619	1315	11248
5.00 – 7.49	0	0	0	0	0
Average	358	10747	664	1511	12259

Table-4.8E: Per acre production quantity (kg) and value (Tk) by size of land planted.

Size of land planted(Own)	Production		By production		Total value (Tk)
	Qty(Kg)	Value(Tk)	Qty(Kg)	Value(Tk)	
<= 0.04	380	11743	402	891	12635
0.05 – 0.49	369	10742	381	966	11708
0.50 – 0.99	361	10456	354	826	11282
1.00 – 1.49	346	9988	348	766	10754
1.50 – 2.49	340	9914	312	685	10599
2.50 – 4.99	304	8493	330	687	9180
5.00 – 7.49	0	0	0	0	0
Average	355	10297	356	839	11136

Table -4.8F. Per acre production quantity (kg) and value (Tk) by size of land planted.

Size of land planted (Others)	Production		By production		Total value (Tk)
	Qty(Kg)	Value(Tk)	Qty(Kg)	Value(Tk)	
<= 0.04	389	9374	342	947	10321
0.05 – 0.49	374	10838	393	940	11778
0.50 – 0.99	324	9426	356	841	10267
1.00 – 1.49	329	9965	379	845	10810
1.50 – 2.49	388	11756	388	828	12584
2.50 – 4.99	361	11853	383	1010	12862
5.00 – 7.49	0	0	0	0	0
Average	350	10349	377	882	11231

Table-4.9A. Number of plots by tenureship and by size of land planted.

Size of land planted (Combined)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	13	0	4	0	1	18
0.05 – 0.49	1368	174	149	48	30	1769
0.50 – 0.99	389	65	65	19	13	551
1.00 – 1.49	143	16	18	4	6	187
1.50 – 2.49	56	8	5	2	3	74
2.50 – 4.99	16	1	3	1	1	22
5.00 – 7.49	0	0	0	0	0	0
Average	1985	264	244	74	54	2621

Table-4.9B. Number of plots by tenure ship and by size of land planted.

Size of land planted(Mustard)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	9	0	4	0	1	14
0.05 – 0.49	1016	129	108	29	13	1295
0.50 – 0.99	291	53	49	14	1	408
1.00 – 1.49	122	16	12	3	0	153
1.50 – 2.49	50	8	3	2	0	63
2.50 – 4.99	14	0	3	1	0	18
5.00 – 7.49	0	0	0	0	0	0
Total	1502	206	179	49	15	1951

Table-4.9C. Number of plots by tenure ship and by size of land planted.

Size of land planted (Rape)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	2	0	0	0	0	2
0.05 – 0.49	219	23	11	11	15	279
0.50 – 0.99	59	7	11	3	4	84
1.00 – 1.49	9	0	2	0	1	12
1.50 – 2.49	4	0	1	0	2	7
2.50 – 4.99	1	0	0	0	0	1
5.00 – 7.49	0	0	0	0	0	0
Total	294	30	25	14	22	385

Table-4.9D: Number of plots by tenure ship and by size of land planted.

Size of land planted (sesame/linseed)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	2	0	0	0	0	2
0.05 – 0.49	133	22	30	8	2	195
0.50 – 0.99	39	5	5	2	8	59
1.00 – 1.49	12	0	4	1	5	22
1.50 – 2.49	2	0	1	0	1	4
2.50 – 4.99	1	1	0	0	1	3
5.00 – 7.49	0	0	0	0	0	0
Total	189	28	40	11	17	285

Table-4.10A. Area in acres by tenure ship and by size of land planted.

Size of land planted (Combined)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	0.42	0.00	0.15	0.00	0.04	0.61
0.05 – 0.49	310.57	44.63	36.28	13.41	7.10	411.99
0.50 – 0.99	252.35	43.94	43.37	12.53	9.91	362.10
1.00 – 1.49	162.77	18.07	20.32	4.61	6.60	212.37
1.50 – 2.49	105.89	14.18	8.05	4.07	5.50	137.69
2.50 – 4.99	48.85	3.50	8.77	2.54	4.00	67.66
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00
Total	880.85	124.32	116.94	37.16	33.15	1192.42

Table-4.10B: Area in acres by tenure ship and by size of land planted.

Size of land planted (Mustard)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	0.29	0.00	0.15	0.00	0.04	0.48
0.05 – 0.49	228.55	32.05	25.89	8.29	2.66	297.44
0.50 – 0.99	189.29	36.35	32.45	9.54	0.68	268.31
1.00 – 1.49	138.08	18.07	13.26	3.61	0.00	173.02
1.50 – 2.49	94.54	14.18	5.00	4.07	0.00	117.79
2.50 – 4.99	41.25	0.00	8.77	2.54	0.00	52.56
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00
Total	692.00	100.65	85.52	28.05	3.38	909.60

Table-4.10C. Area in acres by tenureship and by size of land planted.

Size of land planted Rape)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	0.07	0.00	0.00	0.00	0.00	0.07
0.05 – 0.49	50.45	6.56	2.56	2.47	3.64	65.68
0.50 – 0.99	37.91	4.24	7.21	1.66	2.83	53.85
1.00 – 1.49	10.77	0.00	2.24	0.00	1.00	14.01
1.50 – 2.49	7.59	0.00	1.55	0.00	3.50	12.64
2.50 – 4.99	3.40	0.00	0.00	0.00	0.00	3.40
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00
Total	110.19	10.80	13.56	4.13	10.97	149.65

Table-4.10D. Area in acres by tenureship and by size of land planted.

Size of land planted (Sesame/linseed)	Number of tenure ship					Total
	Own	Share	Mortgage	Lease	others	
<= 0.04	0.06	0.00	0.00	0.00	0.00	0.06
0.05 – 0.49	31.57	6.02	7.83	2.65	0.80	48.87
0.50 – 0.99	25.15	3.35	3.71	1.33	6.40	39.94
1.00 – 1.49	13.92	0.00	4.82	1.00	5.60	25.34
1.50 – 2.49	3.76	0.00	1.50	0.00	2.00	7.26
2.50 – 4.99	4.20	3.50	0.00	0.00	4.00	11.70
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00
Total	78.66	12.87	17.86	4.98	18.80	133.17

Table-4.11A. Division wise number of plots by size of land planted.

Size of land planted (Combined)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0	1	5	5	7	0	18
0.05 – 0.49	41	170	573	402	576	7	1769
0.50 – 0.99	5	35	259	93	155	4	551
1.00 – 1.49	0	7	98	17	63	2	187
1.50 – 2.49	0	2	44	4	22	2	74
2.50 – 4.99	0	1	10	0	10	1	22
5.00 – 7.49	0	0	0	0	0	0	0
Total	46	216	989	521	833	16	2621

Table-4.11B. Division wise number of plots by size of land planted.

Size of land planted (Mustard)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0	1	4	3	6	0	14
0.05 – 0.49	14	120	454	218	483	6	1295
0.50 – 0.99	1	19	204	43	137	4	408
1.00 – 1.49	0	0	84	9	58	2	153
1.50 – 2.49	0	1	39	2	20	1	63
2.50 – 4.99	0	0	7	0	10	1	18
5.00 – 7.49	0	0	0	0	0	0	0
Total	15	141	792	275	714	14	1951

Table-4.11C. Division wise number of plots by size of land planted.

Size of land planted (Rape)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0	0	1	1	0	0	2
0.05 – 0.49	6	4	100	126	42	1	279
0.50 – 0.99	0	1	41	37	5	0	84
1.00 – 1.49	0	0	9	2	1	0	12
1.50 – 2.49	0	0	4	2	1	0	7
2.50 – 4.99	0	0	1	0	0	0	1
5.00 – 7.49	0	0	0	0	0	0	0
Total	6	5	156	168	49	1	385

Table-4.11D. Division wise number of plots by size of land planted.

Size of land planted (Sesame/linseed)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0	0	0	1	1	0	2
0.05 – 0.49	21	46	19	58	51	0	195
0.50 – 0.99	4	15	14	13	13	0	59
1.00 – 1.49	0	7	5	6	4	0	22
1.50 – 2.49	0	1	1	0	1	1	4
2.50 – 4.99	0	1	2	0	0	0	3
5.00 – 7.49	0	0	0	0	0	0	0
Total	25	70	41	78	70	1	285

Table-4.12A. Division wise area in acres of plots by size of land planted.

Size of land planted (Combined)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0.00	0.04	0.16	0.15	0.26	0.00	0.61
0.05 – 0.49	8.72	38.34	146.45	84.45	131.96	2.07	411.99
0.50 – 0.99	3.00	23.94	173.42	58.97	100.22	2.55	362.10
1.00 – 1.49	0.00	7.80	112.61	18.42	71.54	2.00	212.37
1.50 – 2.49	0.00	3.89	80.40	6.79	43.46	3.15	137.69
2.50 – 4.99	0.00	4.00	30.68	0.00	29.98	3.00	67.66
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	11.72	78.01	543.72	168.78	377.42	12.77	1192.42

Table-4.12B. . Division wise area in acres of plots by size of land planted.

Size of land planted (Mustard)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0.00	0.04	0.12	0.09	0.23	0.00	0.48
0.05 – 0.49	2.45	25.90	113.55	44.41	109.36	1.77	297.44
0.50 – 0.99	0.60	12.42	136.69	26.90	89.15	2.55	268.31
1.00 – 1.49	0.00	0.00	95.31	9.50	66.21	2.00	173.02
1.50 – 2.49	0.00	1.89	70.79	3.29	40.17	1.65	117.79
2.50 – 4.99	0.00	0.00	19.58	0.00	29.98	3.00	52.56
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.05	40.25	436.04	84.19	335.10	10.97	909.60

Table-4.12C. . Division wise area in acres of plots by size of land planted.

Size of land planted (Rape)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0.00	0.00	0.04	0.03	0.00	0.00	0.07
0.05 – 0.49	1.14	0.66	27.51	25.89	10.18	0.30	65.68
0.50 – 0.99	0.00	0.51	27.37	23.01	2.96	0.00	53.85
1.00 – 1.49	0.00	0.00	11.01	2.00	1.00	0.00	14.01
1.50 – 2.49	0.00	0.00	7.51	3.50	1.63	0.00	12.64
2.50 – 4.99	0.00	0.00	3.40	0.00	0.00	0.00	3.40
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.14	1.17	76.84	54.43	15.77	0.30	149.65

Table-4.12D. Division wise area in acres of plots by size of land planted.

Size of land planted (Sesame/linseed)	Division						Total
	Barisal	Chittagang	Dhaka	Khulna	Rajshahi	Sylhet	
<= 0.04	0.00	0.00	0.00	0.03	0.03	0.00	0.06
0.05 – 0.49	5.13	11.78	5.39	14.15	12.42	0.00	48.87
0.50 – 0.99	2.40	11.01	9.36	9.06	8.11	0.00	39.94
1.00 – 1.49	0.00	7.80	6.29	6.92	4.33	0.00	25.34
1.50 – 2.49	0.00	2.00	2.10	0.00	1.66	1.50	7.26
2.50 – 4.99	0.00	4.00	7.70	0.00	0.00	0.00	11.70
5.00 – 7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.53	36.59	30.84	30.16	26.55	1.50	133.17

Annexure-A

Concepts and Definitions

Mauza:

Mauza is the demarcated lowest administrative territorial unit having separate jurisdiction list number (J.L.No.) in the revenue records. Every mauza has its well demarcated cadastral 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 Units (PSUs):

100 Upzilas which have been selected at random from 64 districts are said to be PSUs.

Secondary Sampling Units (SSUs):

100 Mauzas which have been selected from 100 PSUs are said to be SSUs.

Ultimate Sampling Units (USUs):

250 households which have been selected from SSUs following the method of choosing the first one from the south-west corner of the SSU and then moving forwards following serpentine method until having 250 households are said to be USUs.

Enumeration Areas (EAs):

EAs are nothing but the SSUs.

Household (HH):

A household means a group of persons normally living together and eating in one mess (i.e. with common arrangement of cooking) with their dependents, relatives, servants etc. A household may be a one person household or a multi-person household. In other words, when a group of persons living together generally maintain a family or family like relations and take meals from the same kitchen is termed as a household. Popularly, it is descried 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 his family 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 his households has owner-like possession. This type of land was included in the area of owned land. The land held by the holder in owner like possession, can be operated by him in the same way as owned land although the holder does not possess a title of ownership.

Share Cropping:

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 one two-thirds (2/3) between owner and cultivator.

Mortgage:

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

Lease:

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

Others:

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

Plot:

Usually land is divided into many pieces for the purposes of cultivation or distributions among the owners of land or making houses. These pieces are commonly called plots. A plot might comprise of land under many identification numbers (Dag Number) or there might have many plots under the land of single identification number. Even a household has many plots which are situated in different mauzas. It is mentionable that under this survey plot means the land in which Pulses has been cultivated during the survey year.

Annexure- B

Statement-I

Crop	2005Cropped area (acres)	Cropping percent (p)	Minimum Sample size (n)	All farmers in the Mouza(n1)
Amon (4)	10488754	35.00	612	9625
Boro (3)	9272497	30.90	575	8498
Aus (2)	2670787	8.90	220	2448
Wheat	897403	2.99	78	823
Maize	217060	0.72	19	198
Pulses (10)	700651	2.34	60	644
Oil Seeds (12)	1217233	4.06	103	1116
Jute (3)	1117109	3.72	96	1023
Potato	811061	2.70	71	742
Onion	265136	0.88	23	242
Total			1857	25358

Gross cropped area – 2,99,90,170 acres

Annexure- c

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ পরিসংখ্যান ব্যুরো
কৃষি দাগগুচ্ছ হালনাগাদকরণ ও সম্প্রসারণ এবং উৎপাদন খরচ জরিপ প্রকল্প
পরিসংখ্যান ভবন (৭ম তলা, ব- ক-২)
ই-২৭/এ, আগারগাঁও, ঢাকা-১২০৭।

তৈল বীজ উৎপাদন খরচ জরিপ, ২০০৯

প্রথম অংশ

খানার পরিচিতি

খানার ক্রমিক নম্বর ☐☐☐

খানা প্রধানের নাম ঃ ---------- পিতা/স্বামীর নাম ঃ ----------
জেলা _____কোড ☐☐ উপজেলা _____ কোড ☐☐
ইউনিয়ন _____ কোড ☐☐ মৌজা/গ্রাম _____ কোড ☐☐☐

দ্বিতীয় অংশ

১। তৈল বীজের প্রকার ভেদে জমির খন্ডের পরিমাণ, মালিকানা, চাষের ধরন এবং খরচ (টাকা)

খন্ড	তৈল বীজের প্রকার (কোড)	জমির পরিমাণ (কোড)	জমির মালিকানা (কোড)	লীজ নেয়া হলে বাৎসরিক কত টাকা দিতে হয়	চাষের ধরন (নিজস্ব হলে বাজার দরে লিখতে হবে)					
					লাঙ্গল		যান্ত্রিক		অন্যান্য	মোট (টাকা)
					সংখ্যা	খরচ (টাকা)	সংখ্যা	খরচ (টাকা)	খরচ (টাকা)	
১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১
১ম										
২য়										
৩য়										
৪র্থ										
৫ম										
৬ষ্ঠ										

তৈল বীজের প্রকারের কোড ঃ সরিষা-১, রাই-২, তিল/তিশি-৩ **মালিকানা কোডঃ নিজস্ব-১, বর্গা-২, বন্ধক-৩, লীজ-৪ এবং অন্যান্য-৫**

২। বীজ, বীজ বপন, কীটনাশক, এবং সেচ খরচ (টাকা)

খন্ড	বীজ		বীজ বপন খরচ (টাকা)	কীটনাশকের খরচ (টাকা)	সেচ খরচ (টাকা)	অন্যান্য খরচ(টাকা)	মোট বিক্রয় (টাকা)
	পরিমাণ (কেজি)	মূল্য (টাকা)					
১	২	৩	৪	৫	৬	৭	৮
১ম							
২য়							
৩য়							
৪র্থ							
৫ম							
৬ষ্ঠ							

(পারিবারিক কর্মী হলে মজুরী বাজার দরে লিখতে হবে)

৩। সার ব্যবহারের পরিমাণ (কেজি) এবং মূল্য (টাকা)

খন্ড	ইউরিয়া		টিএসপি		পটাশ (এমওপি)		অন্যান্য	মোট (টাকা)
	পরিমাণ	মূল্য	পরিমাণ	মূল্য	পরিমাণ	মূল্য	মূল্য	
১	২	৩	৪	৫	৬	৭	৮	৯
১ম								
২য়								
৩য়								
৪র্থ								
৫ম								
৬ষ্ঠ								

৪। উত্তোলন ও মাড়াই শ্রমিকের সংখ্যা ও খরচ (টাকা)

খন্ড	উত্তোলন			মাড়াই			অন্যান্য খরচ (টাকা)	মোট খরচ (টাকা)
	শ্রমিকের সংখ্যা		খরচ (টাকা)	শ্রমিকের সংখ্যা		খরচ (টাকা)		
	পারিবারিক	ভাড়া		পারিবারিক	ভাড়া			
১	**২**	**৩**	**৪**	**৫**	**৬**	**৭**	**৮**	**৯**
১ম								
২য়								
৩য়								
৪র্থ								
৫ম								
৬ষ্ঠ								

(পারিবারিক কর্মী হলে মজুরী বাজার দরে লিখতে হবে)

৫। উৎপাদিত ফসল (কেজি) এবং উপজাতের পরিমাণ (কেজি) ও মূল্য (টাকা)

খন্ড	ফসল (সরিষা/রাই/তিল/তিশি)		উপজাত (ডাটা)		মোট উৎপাদিত দ্রব্যের মূল্য (টাকা)
	পরিমাণ (কেজি)	মূল্য (টাকা)	পরিমাণ (কেজি)	মূল্য (টাকা)	
১	**২**	**৩**	**৪**	**৫**	**৬**
১ম					
২য়					
৩য়					
৪র্থ					
৫ম					
৬ষ্ঠ					
৭ম					

৬। তৈল বীজ মৌসুমে তৈল বীজ চাষের জন্য এক একর জমি লীজ নিতে কত টাকা মালিককে দিতে হয়ঃ----------

তথ্য সংগ্রহকারীর নাম ---------- সুপারভাইজারের নাম ----------

পদবী ---------- পদবী ----------

তারিখ ---------- তারিখ ----------

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