

CHAPTER V

ANALYSIS & INTERPRETATION

OF DATA

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ANALYSIS AND INTERPRETATION OF DATA

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CHAPTER V

ANALYSIS & INTERPRETATION OF DATA

5:1 INTRODUCTION:

After collecting the necessary data from selected farmers in four selected villages of Mahabaleshwer taluka of Satara district, the researcher has analyzed it with different tools and technique of cost structure and pricing of strawberry. The data has been collected from 92 farmers through structured interview. The analysis and interpretation of the data have been made into six sections. The first section relates to the analysis and interpretation of data collected from Bhilar village, second section to the Panchgani, third section covers data of Bhose and fourth to Avkali village. The fifth section related to average cost analysis of data of selected villages and sixth section relates to pricing structure of strawberry.

5.2 SECTION –I

Data analysis and interpretation of strawberry farming in Bhilar

The Bhilar village has 750 hector lands under cultivation and the total numbers of farmer in the village were 670 out of 384 were strawberry farmers. For the present study sample size was 10% of the total population i.e. 38 strawberry farmers.

5.2.1 Demographic profile of sample in Bhilar

The Demographic profile of sample has been analyzed on the basis of the various factors i.e. age, education, no of family members, area of land & crop scheduled.

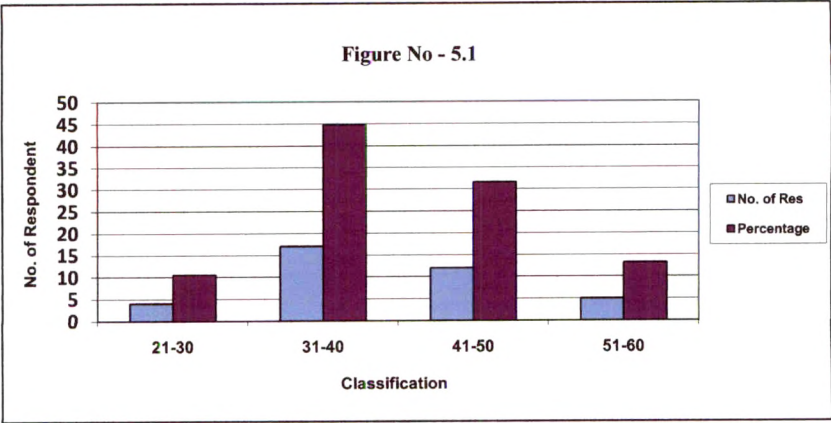
1. CLASSIFICATION OF DATA ACCORDING TO AGE

Age of farmers has got an important bearing on his attitude towards strawberry farming Following table describes the age wise classification of selected strawberry farmers.

Table 5.1
Age wise classification of strawberry farmers

Sr. No.	Age group (years)	No. of Respondents	Percentage
1	21-30	4	10.52
2	31-40	17	44.73
3	41-50	12	31.57
4	51-60 and above	5	13.15
Total		38	100%

Source: field work



Above table no.5.1 shows that out of which total 38 strawberry farmers 4 member (i.e.10.52%) belong to the age group of 21 to 30 which is the lowest, (i.e.44.73%)belong to the age group of 31 to 40 years, (i.e.31.57%) belong to the age group of 41to 50 and only 5 (i.e.13.15%) strawberry farmers belong to the age group of 51 above.

From the above table it is clear that majority of farmers belong to age group between 31 to 40 years.

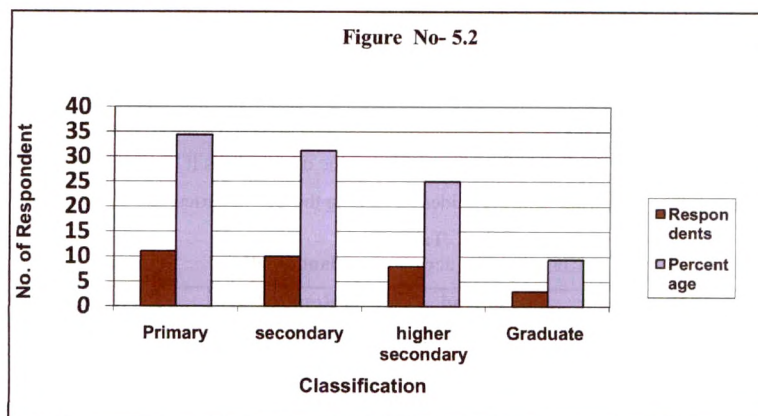
2. CLASSIFICATION ACCORDING TO EDUCATION

Education level is one of the parameters of the sample farmers while studying their social status. The following table presents the classification of strawberry farmers according to level of education.

Table 5.2
Classification as per Educational Background

Sr. no	Level of Education	No of Respondents	Percentage
1	Primary	13	34.21
2	Secondary	12	31.57
3	High - secondary	8	21.05
4	Graduate	5	13.15
Total		38	100%

Source: field work



Above table 5.2 indicates that out of the total 38 respondents, 13 respondents (i.e. 34.21%) have taken education up to primary level, 12 respondent (i.e. 31.57%) has studied up to secondary, 8 respondent (i.e. 21.05%) has taken education up to higher secondary, whereas only 5 member (13.15%) have completed their graduation. From the above table it is clear that majority of the farmers have studied up to primary and secondary level.

3. SIZE OF FAMILY

The family size existed at the time of this study is described table as classification according to size of family.

Table 5.3
Classification According to family size

Sr. No	No. of family member	No of Respondents	Percentage
1	1 to 3	7	18.42
2	4 to 6	13	34.21
3	Above-6	18	47.36
Total		38	100%

Source: field work

Above table 5.3 reflects that out of the total 38 respondents the number of family member, 7 respondents is between 1 to 3 (i.e. 18.42%), the no. of family member, 13 member which is between 4 to 6 (i.e. 34.21%), whereas the no. of family members is above 6 were found among 18 respondents (i.e. 47.36%). From the above table it is clear most of the respondents have big size family.

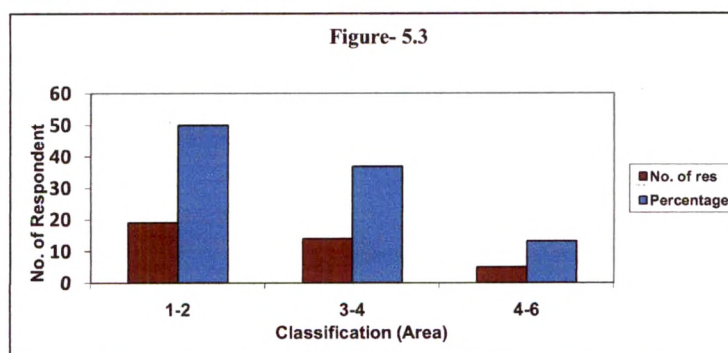
4. LAND HOLDINGS

The size of the land becomes necessary to be dealt with as it bears importance in production. Following table gives ideas regarding the size of agriculture land.

Table 5.4
Classification according to land holding

Sr. No	Area of land	No of Respondents	Percentage
1	1 to less than 3	19	50.00
2	3 to less than 5	14	36.44
3	Above 5	5	13.15
Total		38	100%

Source: field work



The above table 5.4 illustrates that out of the total 38 respondents, 19 respondents (i.e. 50.00%) belong to 1 to less than 3 acre land, 14 respondents (i.e. 36.44%) belong to 3 to 5 and only 5 respondents (i.e. 13.15%) belong to above 5 acre land. It is observed that maximum strawberry farmers have small size land in Bhilar village.

5. CROPPING SCHEDULE

The following table described as cropping schedule of strawberry farmers.

Table No- 5.5
Cropping Schedule

Sir .No	Pattern	No of Respondents	Percentage
1	Seasonal	38	100
2	Annual	0	000
Total		38	100%

Source: field work

Above table no. 5. 5 Reflects that out of the total 38 respondents, all respondents (100%) has seasonal crop schedule. It is clear that 100% farmer's seasonal crop scheduled.

5.2.2. Classification of Data According to Production related factor

The production factor of strawberry farming has been analyzed on the basis of the variables such as sources of irrigation, quality of plant, fertilized used , daily wages of the worker, selling price range.

1. IRRIGATION FACILITY

A source of water is the major contributing factor in the study area. During the study it was found that the major source of irrigation was well, borings, lake and other irrigation scheme. The following table explains the sources of water.

Table 5.6
Sources of water

Sr. no	Sources of water	No of Respondents	Percentage
1	Well	17	44.74
2	Boring	7	18.42
3	Other scheme	14	36.84
Total		38	100%

Source: field work

From the above table no. 5.6 shows that out of the total 38 respondents, 17 (i.e.44.23%) respondents using the well as water resource from their own land. 14 respondents (i.e. 36.84%) are using irrigation scheme as water resources and only 7 members (18.42%) boring resources. From the above table it is clear that were using well as source of for their crop.

2. CULTIVATION TECHNIQUE

There are two types of cultivation technique, traditional and modern .The following table shows that classification in according to cultivation technique.

Table 5.7
Cultivation technique

Sr. no	Technique of cultivation	No of Respondents	Percentage
1	Traditional	26	68.42
2	Modern	12	31.58
Total		38	100%

Above the table 5.7 shows that out of the total respondents, 26 respondents (i.e. 68.42%) follows traditional method for cultivation of strawberry, whereas only 12 respondents (i.e.31.58 %) follows modern method of strawberry cultivation. From the above table it indicates that maximum farmers are using traditional technique for strawberry cultivation.

3. SOURCES OF STRAWBERRY PLANTS

The following table shows the as sources of plants of strawberry farmers. There are four sources of strawberry plants.

Table 5.8
Sources for strawberry plants

Sr. No	Sources	No of Respondents	Percentage
1	Farmers	12	31.60
2	Factory (Nursery)	16	42.10
3	Agri. University	10	26.30
Total		38	100%

Source field work

The above table no.5.8 reflects that out of the total 38 respondents, 12 respondents (i.e.31.60%) are purchasing plants from farmers, 16 respondents (i.e.42.10%) are purchasing plants from nursery , 10 respondents (i.e.26.30%) are purchasing plants from agric university. It is observed that maximum strawberry farmers have purchased strawberry plants from nursery.

4. QUALITY OF PLANT

Quality is an important factor of strawberry farming because those depend on income of strawberry farmer's. The following table shows that classification as per quality of plant for strawberry farming

Table 5.9

Classification as per Quality of plant

Sir .no	Quality of plant	No of Respondents	Percentage
1	Good	16	42.10
2	Average	22	57.90
Total		38	100%

Source- field work

Above the Table 5.9 reveals that out of the total 38 respondents, 16 respondents (42.10%) are purchasing and using good quality of strawberry plants, 22 respondents (57.90%) have purchasing and average quality strawberry plants. It is observed that the maximum strawberry farmers are using average quality of strawberry plants.

5. PER ACRE YIELD OF STRAWBERRY

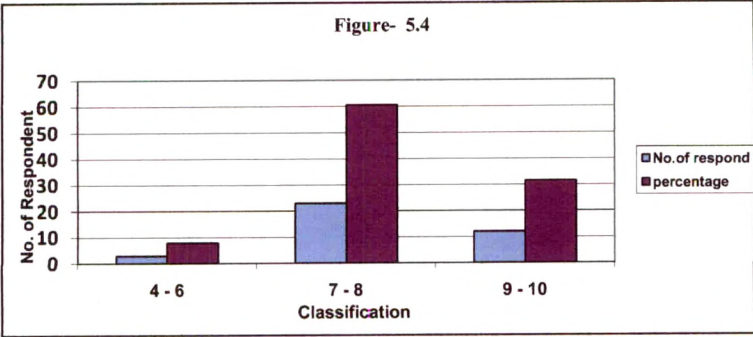
Following table describes classification of strawberry according to per acre yield.

Table 5.10

Production of strawberry

Sr. no	Production in tones (per acre)	No of Respondents	Percentage
1	Minimum 4-less than 6	3	7.90
2	Minimum 6 to less than -8	23	60.52
3	Above -8	12	31.57
Total		38	100%

Source: field work



Above the Table 5.10 reflects that out of the total 38 respondents , 3 respondents (i.e.7.90%) have strawberry production in between the range 4 to 6 tones per acre , 23 (i.e.60.5%) Respondents are producing strawberry minimum 6 to less than 8 to tones per acre. Whereas 12 members (i.e.31.57%) are producing strawberry above -8 tones per acre It is observed that maximum farmers are producing minimum 6 to less than 8 tones per acre.

6. USE OF FERTILIZERS

The farmers use different types of fertilizers such as organic, inorganic and other manures fertilizers etc. the following table describes as types of fertilizers.

Table 5.11

Classification of strawberry farmers in Terms of Fertilizers Types

Sr. No	Type of fertilizers	No of Respondent	Percentage
1	Inorganic	18	47.36
2	Organic (Branded)	8	21.05
3	Other	12	31.57
Total		38	100%

Source; field work

The table 5.11 indicates that out of the total 38 respondents, 18 respondents (i.e.47.36) are using inorganic fertilizers for the strawberry cultivation, 8 members (21.05%) are using organic fertilizers for the strawberry cultivation, whereas 12 respondents (i.e31.57 %) are using other types of fertilizers. It is clear that maximum farmers are using inorganic fertilizers for the strawberry cultivation

7. DAILY WAGES OF THE WORKER

Wages is the rewards paid for the labor for spacing their productive services. The following table described as classification of the workers as per daily wages.

Table 5.12
Classification of the worker as per daily wages

Sr. no	Daily wages (in Rs)	No of Respondents	Percentage
1	100	5	13.15
2	150	12	31.57
3	200	21	55.26
Total		38	100%

Source: field work

Above table no. 5.12 indicates that out of total 38 respondents, (i.e.13.15%) farmers are paying the Rs 100 as daily wages for workers. (i.e.55.26%) farmers are paying Rs 200 and (i.e.31.57 %) farmers are paying Rs 150 per day. It is clear that farmers are paying Rs 150 to 200 wages per day.

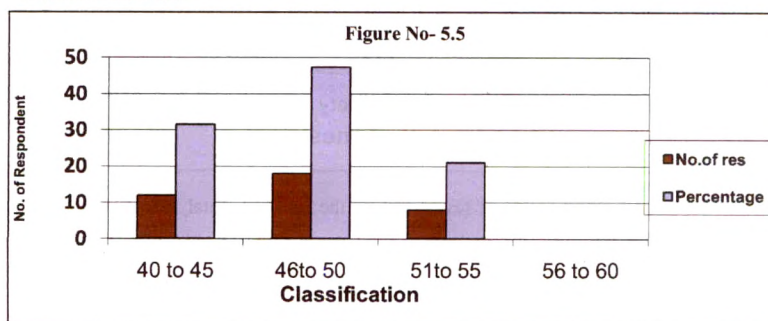
8. SALES PRICE OF STRAWBERRY FARMERS

The prices of agriculture produce are important for farmers as these determine their income. The following table shows the price ranges fetched by the strawberry farmers.

Table: 5.13
Price Range of Strawberry

Sr. No	Price range (per kg)	Respondents	Percentage
1	40 to 45	12	31.57
2	45 to 50	18	47.36
3	51 to 55	8	21.05
Total		38	100%

Source: field work



Above Table 5.13 reflects the market rate of strawberry per kg during the year 2010-11. It is clear that 31.57 % farmers are getting price of Rs. 40 to 45 per kg, while 47.36 % farmers are getting 46 to 50 Rs per kg and 21.05 % farmers are getting Rs 51 to 55 per kg. It indicates that out of total 38 respondents, 12 respondents (i.e.31.57%) have sale their production in the price range Rs 40 to 45 whereas 18 respondents (i.e.47.36%) have sale their production in the price range between 45 to 50.

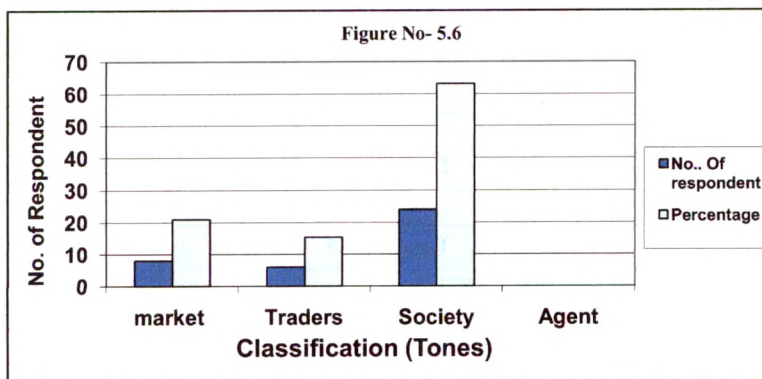
9. DISTRIBUTION CHANNEL FOR FARMERS

The following table described as distribution of marketing channel for strawberry farmers.

Table 5.14
Distribution of marketing channel for strawberry farmers

Sr. no	Classification	No. Of Respondents	Percentage
1	Market	8	21.45
2	Traders	6	15.38
3	Society	24	63.15
4	Agent	0	0
		38	100

Source: field work



Above the Table 5.14 reveals that the out of total 38 farmers, 8 members(i.e.21.45%) are selling strawberry, to the society, 15.38% and 21.05% to the traders and market respectively. It is observed that maximum farmers are strawberry selling to society.

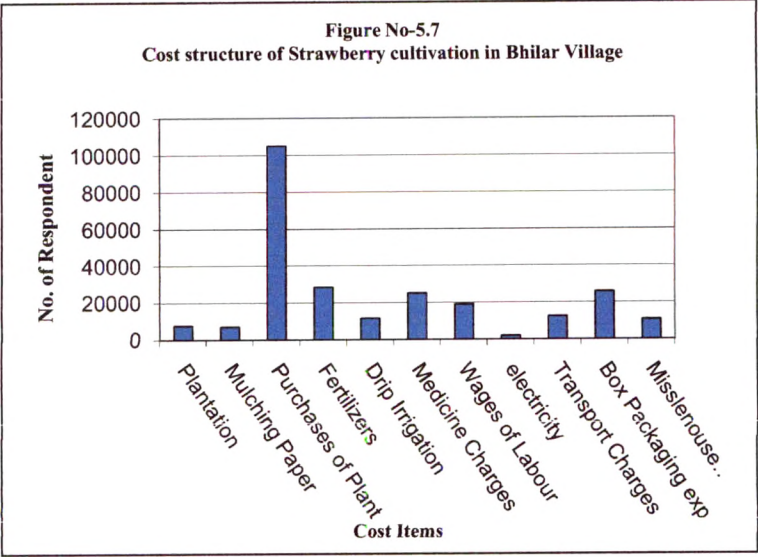
5.2.3 Cost Analysis of Strawberry

The cost of production has been considered on the basis of plantation of strawberry crop. The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry the data has been collected on the field survey during the 2010-2011 in the Bhilar village. The following table describes the cost structure of strawberry cultivation.

Table -5.15
Cost structure of Strawberry cultivation in Bhilar Village
(No of Respondents 38) (Per acre)

Cost Items	Rs	Percentage of Cost
Plantation Cost		
Plantation	7630	3.16%
Mulching Paper	7000	2.90%
Purchase		
Purchases of Plant	105000	43.50%
Production Cost		
Weeding	-	
Fertilizers	28425	11.77%
Drip Irrigation	11515	4.77%
Medicine Charges	25110	10.40%
Wages of Labour	19050	7.90%
(Harvesting & Other)	-	-
Other Expenditure	-	-
Administrative Expenses		
Crop Insurance	-	-
Telephone Expenses	-	-
Electricity Charges	2000	0.82%
Selling & Distribution		
Transport Charges	12335	5.10%
Box Packaging exp	25845	10.60%
Cooling	-	
Miscellaneous Expenses		
(Tax, Commission, Other)	8585	3.56%
Total Cost	241393	100%
Profit	116189	-
Total Sales	357782	-

Source: field work



The above statement 5.15 showing cost structure of strawberry cultivation of Bhilar village gives the cost for cultivation of strawberry. The total cost of cultivation per acre is Rs 241393. The farmers have invested majority amount for plants cost and very low amount for plantation and other cost. The above statement shows average cost of 38 respondent of Bhilar village. It is clear that strawberry cost of farming is high. The result shows that strawberry farming in Bhilar village is profitable.

SECTION -II

5.3 Data Analysis and Interpretation of strawberry farming of Panchgani

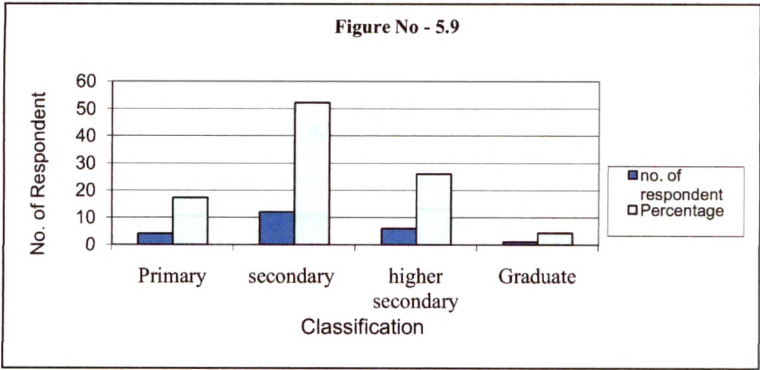
Panchgani village is one of the progressive and tourist place in Mahabaleshwer taluka of satara district, the geographical area of this village is 2550 hectare. The total number of farmers in the village is 570 out of which 228 are strawberry farmers. For the present study sample size was 10% of the total population i.e.23 strawberry famers.

2. LEVEL OF EDUCATION

The following table presents the educational background of strawberry farmers.

Table 5.17
Classification as per Educational Background

Sr. no	Classification of Education	No of Respondents	Percentage
1	Primary	4	17.40
2	Secondary	12	52.17
3	Higher secondary	6	26.08
4	Graduate	1	4.35
Total		23	100%



Above table 5.17 indicates that out of the total 23 respondents, 4 respondents (i.e. 17.40%) has studied up to primary, 12 respondent (i.e. 52.17%) has studied up to secondary, 6 respondent (i.e. 26.08%) has taken education up to higher secondary, whereas only 1 respondent (i.e.4.35%) has completed his graduation. From the above table it is clear that majority of the farmers have studied up to primary and secondary level.

3. SIZE OF FAMILY

The family size existed at the time of this study is described in the following table as classification according to size of family.

5.3.1 Demographic Profile of sample in Panchgani

The Demographic profile of sample has been analyzed on the basis of the variables like age, education, no. of family members, area of land & crop scheduled.

1. CLASSIFICATION BY AGE

Following table describes the age wise classification of selected strawberry farmers.

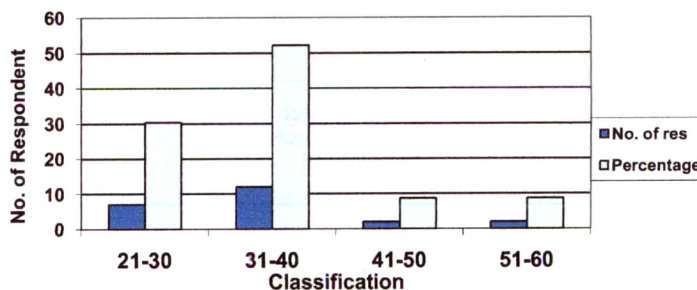
Table No- 5.16

Age wise classification of strawberry farmers

Sr. no	Age	No. of Respondents	Percentage
1	21-30	7	30.45
2	31-40	12	52.17
3	41-50	2	8.69
4	51- above	2	8.69
Total		23	100%

Source: field work

Figure No 5.8



Above table 5.16 shows that out of total 23 strawberry farmers, 7 (i.e. 30.45%) belong to the age group 21 to 30 which is the lowest, 12(i.e. 52.17%) belong to the age group of 31 to 40 years, 2(i.e.8.69%) belong to the age group of 41to 50 and the 2(i.e. 8.69%) strawberry farmers are in the age group of 51 to above years. From the above table it is clear that majority of farmers belong to age group of 31 to 40.

Table: 5.18
Classification According to family size

Sr. No	Classification	No of Respondents	Percentage
1	1 - 3	4	17.40
2	4 – 6	15	65.21
3	Above -6	4	17.39
Total		23	100%

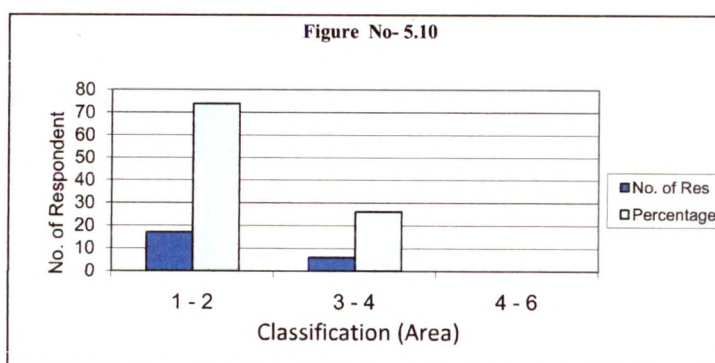
Above table 5.18 reflects that the out of the total 23 respondents 4 respondents (i.e.17.40%) have family size of 1 to3 members, 15 respondents (i.e. 65.21%) have family size of 4 to 6 members,4 respondents (i.e. 17.39%) have family size of above 6 members. From the above table it is clear that majority of respondents have medium size family.

4. LAND HOLDINGS

The size of the land becomes necessary to be dealt with as it bears importance in production. Following table gives ideas regarding the size of agriculture land in Panchgani.

Table 5.19
Classification in terms of size of land

Sr. No	Area of land	No of Respondents	Percentage
1	1 but less than 2	17	73.91
2	2but less than 4	6	26.09
3	4 & above	-	
Total		23	100%



The above table 5.19 illustrates that out of the total 23 respondents, 17 respondents (i.e. 73.91%) have 1 to 2 acre land, and 6 respondents (i.e. 26.09%) have 3 to 4 acre land. It is observed that maximum strawberry farmers have small size of land.

5. CROPPING SCHEDULE

The following table described as cropping schedule of strawberry farmers.

Table 5.20
Cropping pattern

Sr. no	Pattern	No of Respondents	Percentage
1	Seasonal	23	100%
2	Annual	0	0
Total		23	100%

Source: field work

Above table 5.20 Reflects that out of the total 23 respondents, All respondents have seasonal crop schedule.

5.2.3. ANALYSIS OF PRODUCTION TECHNIQUE

The production factor of strawberry farming has been analyzed on the basis of the variables such as sources of irrigation, standard of plant, fertilizers used, daily wages of the worker, price range.

1. SOURCES OF WATER

The major source of irrigation in the study area was well, borings, lake and other irrigation scheme. The following table explains the sources of water.

Table 5.21
Classification as per Sources of water.

Sr. no	Sources of water	No of Respondents	Percentage
1	Well	14	60.86
2	Boring	7	30.43
3	Other scheme	2	8.71
Total		23	100%

Source: field work

From the above table 5.21 shows that out of the total 23 respondents, 14(i.e.60.86 %) respondents are using well as water resources.7 (i.e. 30.43%) are using boring source, and only 2 respondent (i.e.8.71%) use other sources. It is observed that maximum farmers are using well as resources of water for strawberry farming.

2. CULTIVATION TECHNIQUE

There are two types of cultivation techniques, traditional and modern .The following table shows that classification in terms of cultivation technique.

Table 5.22

Classification in terms of Cultivation Technique

Sr. no	Technique of cultivation	No of Respondents	Percentage
1	Traditional	9	39.14
2	Modern	14	60.86
Total		23	100%

Above the table 5.22 shows that out of the total 23 respondents, 9 respondents (i.e. 39.14%) follow traditional method for cultivation of strawberry, whereas 14 respondents (i.e. 60.86 %) follow modern method of strawberry cultivation. It means that maximum farmers are using traditional technique for strawberry cultivation.

3. SOURCES OF STRAWBERRY PLANTS

The following table shows the sources of plants of strawberry farmers. There are four sources of strawberry plants.

Table 5.23

Sources of Plant

Sr. No	Classification	No of Respondents	Percentage
1	Farmers	6	26.10
2	Factory (Nursery)	15	65.21
3	Agri. University	2	8.69
Total		38	100%

Source field work

The above table 5.23 reflects that out of the total 23 respondents, 6 respondents (i.e. 26.08%) purchased plants from nursery, 15 respondents (i.e.65.21%) are purchasing plants from farmers, 2 respondents (i.e.8.69%) are purchasing plants from Agri. University. It is observed that maximum no. of farmers are purchasing strawberry plants from nursery.

4. QUALITY OF STRAWBERRY PLANT

The following table shows classification as per quality of plant for strawberry farming

Table 5.24
Classification as per Quality of Plant

Sr. no	Quality of Plant	No of Respondents	Percentage
1.	Good	14	60.89
2	Average	9	39.14
Total		23	100%

Source- field work

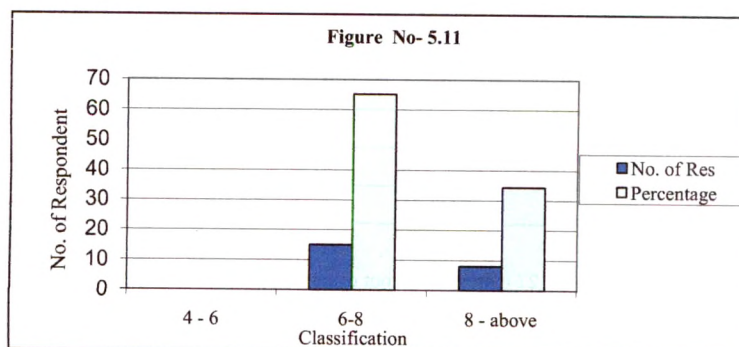
Above the Table 5.24 reveals that out of the total 23 respondents, 14 respondents (i.e.60.89%) are purchasing and using good quality of strawberry plants, 9 respondents (i.e.39.14%) are purchasing average quality strawberry plants. It is observed that the maximum strawberry farmers are using average quality of strawberry plants.

5. PER ACRE YIELD OF STRAWBERRY

This table describes classification of strawberry production on the basis of production per acre.

Table 5.25
Classification in terms of production of strawberry (Per acre)

Sr. no	Production in tones	No of Respondents	Percentage
1	4-6	-	-
2	6-8	15	65.21
3	8 - above	8	34.39
Total		23	100%



Above the Table 5.25 reflects that out of the total 23 respondents, 15 (i.e.65.21%) respondents producing strawberry in the range of 6 to 8 tons per acre. whereas 8 respondents (i.e.34.39%) producing strawberry in more than 8 tons per acre. From the table seen that maximum farmer is producing up to 6 to 8 tons per acre.

6. USE OF FERTILIZERS

The farmers use different type of fertilizers such as organic, inorganic and other manures, fertilizers etc. The following table describes as types of fertilizers.

Table 5.26
Classification of strawberry farmers in Terms of Fertilizers types

Sr. No	Type of fertilizers	No of Respondents	Percentage
1	Inorganic	3	13.05
2	Organic (Branded)	16	69.56
3	Other	4	17.39
Total		23	100%

Source: field work

The table 5.26 indicates that out of the total 23 respondents, 3 respondents (i.e.13.05%) use inorganic fertilizers for the strawberry cultivation, 16 respondents (i.e.69.56%) use organic fertilizers .whereas 4 respondents (i.e.17.39 %) are using other types of fertilizers. From the above table it is clear that maximum farmers are using inorganic fertilizers for the strawberry cultivation

7. DAILY WAGES OF THE WORKER

Wages are the rewards paid for the labour for spacing their productive services. The following table describes as classification of the workers on the basis of daily wages.

Table 5.27
Classification of the worker as per wages

Sr. no	Daily wages (in Rs)	No of Respondents	Percentage
1	150	14	60.86
2	200	9	39.14
Total		23	100%

Source: field work

Above the table 5.27 indicates that out of total 23 respondents, 14(i.e 60.86%) pay Rs 150 as daily wages for workers, 9(i.e. 39.14%) pay Rs 200. From the above table it is clear that majority farmers are paying daily wages at the rate Rs.150.

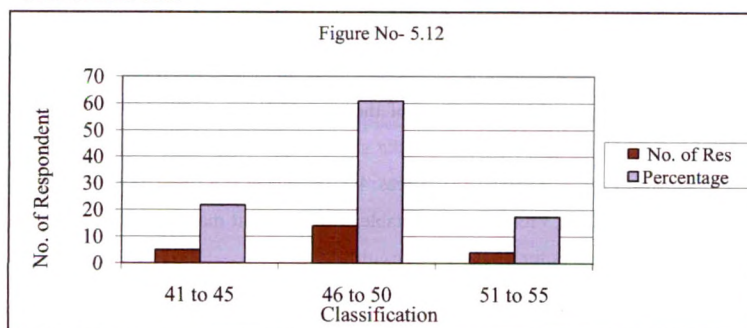
8. Price of strawberry farmers

The prices of agriculture produce are important for farmers as these determine their income. The following table shows the price ranges fetched by the strawberry farmers.

Table 5.28
Price Range of Strawberry farmers

Sr. No	Price range	Respondents	Percentage
1	41 to 45	5	21.79
2	46 to 50	14	60.86
3	51 to 55	4	17.40
Total		23	100%

Source: field work



Above the Table 5.28 reflects the market rate of strawberry per kg during the year 2010-11. It is clear that 21.79 % farmers are getting price of Rs. 40 to 45 per kg,

while 60.86 % farmers are getting Rs 46 to 50 per kg and 17.40 % farmers are getting Rs 51 to 55 per kilogram.

9. DISTRIBUTION CHANNEL FOR FARMERS

The following table describes the distribution channel for strawberry farmers.

Table 5.29

Distribution channel for strawberry farmers

Sr. No	Classification	No. Of Respondents	Percentage
1	Local Market	4	7.47
2	Traders	3	13.04
3	Society	16	69.56
4	Agent	0	0
Total		23	100%

Source: field work

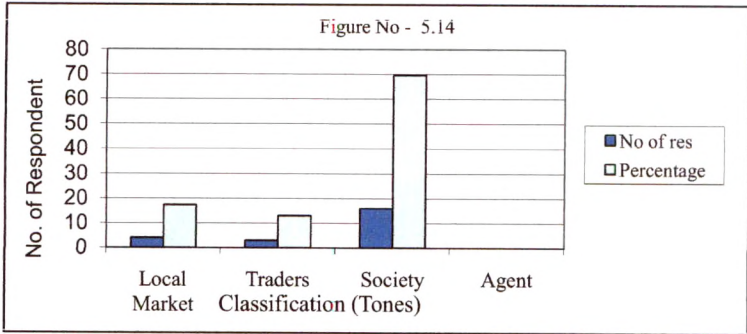


Table 5.29 reveals that out of the 23 respondents, 16 respondents (i.e.69.56%) are selling strawberry to the society, 4 respondents (i.e.13.04%) are selling to the market and 3 respondents (i.e.7.39 %) are selling to the traders. It is observed that maximum farmers are selling strawberry to society and minimum to traders,\

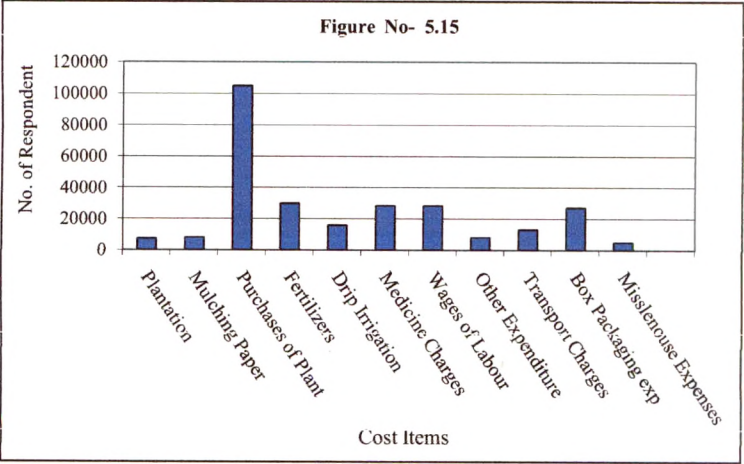
5.3.3 Cost Analysis of Strawberry

The cost of production has been considered on the basis of plantation of strawberry crop. The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry. The data has been collected on the field survey during the 2010-2011 in the Panchgani village.

Table 5.30
Cost structure of Strawberry cultivation in Panchgani Village
(No. of respondents: 23) (Per acre)

Cost Items	Rs	Percentage of Cost
Plantation Cost	7220	2.61%
Plantation	8000	2.89%
Mulching Paper		
Purchase	105500	38.23%
Purchases of Plant		
Production Cost		
Weeding	29875	10.82%
Fertilizers	15810	5.72%
Drip Irrigation	28275	10.24%
Medicine Charges	28300	10.25%
Wages of Labor		
(Harvesting & Other)	6000	2.17%
Other Expenditure		
Administrative Expenses		
Corp Insurance		
Electricity Charges	2000	0.73%
Selling & Distribution		
Transport Charges	13050	4.72%
Box Packaging exp	27015	9.78%
Cooling		
Miscellaneous Expenses	4900	1.77%
(Tax, Commission, Other)		
Total Cost	275945	100%
Profit	91575	
Total Sales	367520	

Source: field work



The above statement 5.31 showing cost structure of strawberry cultivation of Panchgani village. The total cost of cultivation per acre is Rs 275945,the farmers have invested majority amount for plants cost and very low amount cost for plantation and other cost. The average profit of strawberry farmers Rs 91575 is per acre. It is observed that strawberry farming in Panchgani village is profitable and strawberry farming cost is high.

SECTION -III
5.4 Data Analysis and Interpretation of Strawberry Farming in Bhoose :

The village Bhoose has near the city in Panchgani. Bhoose village is very small village but has progressive by economically and socially. The population of Bhoose village is 2150 and the geographical area of village is 850 hector. The land under cultivation 450 hector around 350 hector land irrigated. The main crop of Bhoose village is strawberry and total number of farmers in Bhoose village 160 strawberry farmers. For the present study sample size was 10%of the total production i.e. 16 strawberry farmers.

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5.4.1 Demographic Profile of sample of Bhose

The Demographic profile of sample has been analyzed on the basis of the variables like age, education, no of family members, area of land & crop scheduled.

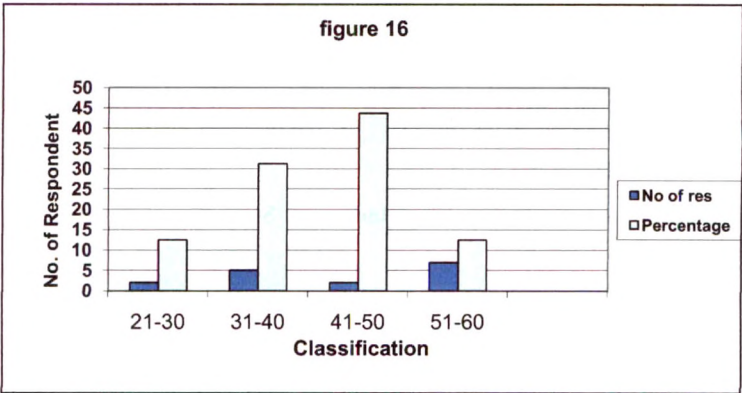
1. CLASSIFICATION BY AGE

Age of farmers has got an important bearing on his attitude towards strawberry the farming Following table describes the age wise classification of selected strawberry farmers.

Table 5.31
Age wise classification of strawberry farmers

Sr. no	Age group	No. Of Respondent	Percentage
1	21-30	2	12.50%
2	31-40	5	31.25%
3	41-50	7	43.75%
4	51-60	2	12.50%
Total		16	100%

Source: Field work



Above table 5.31shows that out of total 16 strawberry farmers, 12.50 % belong to the age group 21 to 30 which is the lowest, 31.25% belong to the age group of 31 to 40 years, 43.75% belong to the age group of 41to 50 and the 12.50% strawberry farmers are in the age group of 51 to 60 is only 2 members. From the above table it is clear that majority of farmers belong to age group of 41 to 50.

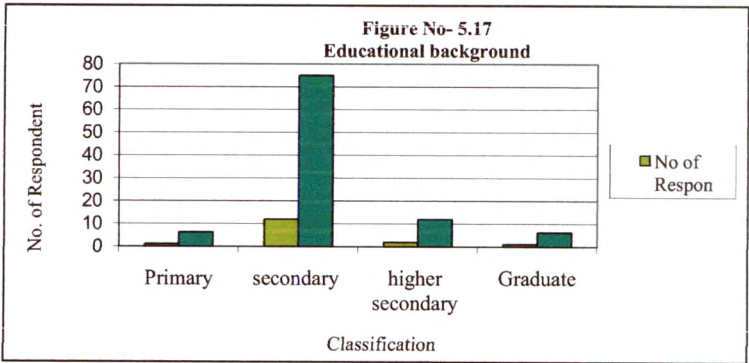
2. LEVEL OF EDUCATION

Education level is one of the parameters of the sample farmers while studying their social status. The following table presents the educational background of strawberry farmers.

Table 5.32
Classification as per Educational Background

Sr. no.	Classification	No of Respondent	Percentage
1	Primary	1	6.25%
2	Secondary	12	75%
3	Higher secondary	2	12%
4	Graduate	1	6.25%
Total		16	100%

Source: field work



Above table 5.32 indicates that out of the total 16 respondents, 1 respondents (i.e. 6.25%) has studied up to primary, 12 respondents (i.e. 75 %) has studied up to secondary, 2 respondents (i.e. 12%) has taken education up to higher secondary, whereas only 1 member (i.e.6.25 %) have completed their graduation. From the above table It is clear that majority of the farmers have studied up to primary and secondary level.

3. SIZE OF FAMILY

The family size existed at the time of this study is described table in the following as classification according to size of family.

Table 5.33
Classification According to family size

Sr. No	Size of family	No of Respondents	Percentage
1	1 - 3	4	25
2	4- 6	8	50
3	Above -6	4	25
Total		16	100%

Source : field work

Above table 5.33 reflects that out of the total 16 respondents 4 respondents (i.e.25 %) have family size of 1 to3 members, 08 respondents (i.e. 50 %) have family size of 4 to 6 members,4 respondents (i.e. 25.00%) have family size of above 6 members. From the above table it is clear that 4to 6 size of family members are available at maximum level.

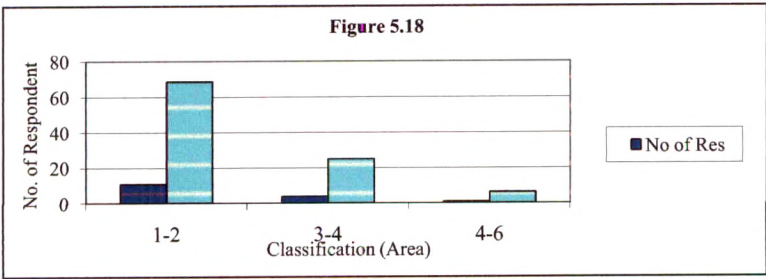
4. LAND HOLDINGS

Following table gives ideas regarding the size of agriculture land.

Table 5.34
Classification in terms of size of land

Sr. No	Classification (Area in acre)	No of Respondents	Percentage
1	1-2	11	68.75%
2	3-4	4	25%
3	4-6	1	6.25%
Total		16	100%

Source: field work



The above table 5.34 illustrates that out of the total 16 respondents, 11 respondents (i.e. 68.75%) belong to 1 to 2 acre land, 4 respondents (i.e. 25 %) belong to 3 to 4 acre land and only 1 member (i.e. 6.25%) have 4 to 6 acre land. It is observed that maximum strawberry farmers are small size farmers in Bhilar village.

5. CROPPING SCHEDULE

The following table described as cropping schedule of strawberry farmers.

Table 5.35

Cropping pattern

Sr. No	Classification	No of Respondents	Percentage
1	Seasonable	16	100%
2	Annual	0	0
Total		16	100%

Source: field work

Above table 5.35 Reflects that out of the total 16 respondents, all respondents (i.e.100%) have seasonable crop schedule.

5.4.2. ANALYSIS OF PRODUCTION TECHNIQUE

The production factor of strawberry farming has been analyzed on the basis of the variables such as sources of irrigation, standard of plant, fertilizers used, daily wages of the worker, price range etc.

1. SOURCES OF WATER

Source of water is the major contributing factor in the study area. The major source of irrigation in the study area was well, borings, lake and other irrigation scheme. The following table explains the sources of water.

Table 5.36

Sources of water

Sr. no	Sources of water	No of Respondents	Percentage
1	Well	12	75%
2	Boring	4	25%
3	Other sources	0	0
Total		16	100%

Source: field work

From the above table 5.36 shows that out of the total 16 respondents, 12 (i.e.75%) respondents are using the well as water resources from their own land. 4 respondent(i.e. 25 %) are use the boring as water resources. It is observed that maximum farmers are using well as resources of water for strawberry farming.

2. CULTIVATION TECHNIQUE

There are two types of cultivation techniques, traditional and modern .The following table shows that classification in terms of cultivation technique.

Table 5.37

Classification in terms of Cultivation Technique

Sr. No	Techniques cultivation	No of Respondents	Percentage
1	Traditional	6	37.50%
2	Modern	10	62.50%
Total		16	100%

Source: field work

Above the table 5.37 shows that out of the 16 total respondents, 6 respondents (i.e. 37.50%) follow traditional method for cultivation of strawberry, whereas 10 respondents (i.e.62.50 %) follow modern method of strawberry cultivation. From the above table it is clear that maximum farmers are using modern technique for strawberry cultivation.

3. SOURCES OF PLANTS

The following table shows the sources of plants of strawberry farmers. There are four sources of strawberry plants.

Table 5.38

Sources of strawberry plants

Sr. no	Sources	No of Respondents	Percentage
1	Farmers	2	12.50%
2	Factory (Nursery)	12	75%
3	Agri. University	2	12.50%
4	Agri. division	0	0
Total		16	100%

Source field work

The above table 5.38 reflects that out of the total 16 respondents, 2 respondents (i.e. 12.50%) are purchasing plants from nursery, 12 respondents (i.e.75%) are purchasing plants from farmers, 2 respondents (i.e.12.50%) are purchasing plants from Agri University and the farmers of Bhoose village are not purchasing strawberry plants from agriculture division. It is observed that maximum no. of farmers are purchasing strawberry plants from nursery.

4. QUALITY OF PLANT

Quality is an important factor of strawberry farming because that has impact on income of strawberry farmer's. The following table shows classification as per quality of plant for strawberry farming

Table 5.39

Classification as per Quality of plant

Sr. no	Quality of plant	No of Respondents	Percentage
1	Good	9	56.25%
2	Average	7	43.75%
3	Bad	0	0
Total		16	100%

Source- field work

Above the Table 5.39 reveals that out of the total 16 respondents, 09 respondents (i.e.56.25%) are purchasing and using good quality of strawberry plants, 7 respondents (i.e.43.75%) are purchasing average quality strawberry plants.

It is observed that the maximum strawberry farmers are using good quality of strawberry plants.

5. PRODUCTION OF STRAWBERRY

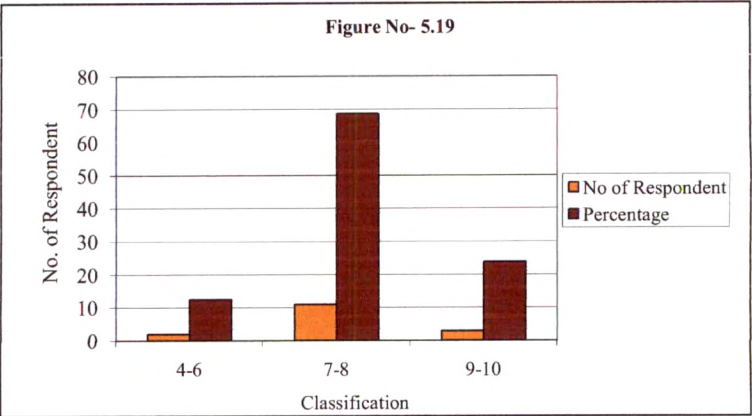
Here in this table described classification of strawberry production as per acre.

Table 5.40

Classification in terms of Production of strawberry (Per acre)

Sr. No	Strawberry prod.	No of Respondents	Percentage
1	4 - 6	2	12.50%
2	7 - 8	11	68.75%
3	9- 10	3	23.75%
		16	100%

Source- field work



Above the Table 5.40 reflects that out of the total 16 respondents , 2 respondents (12.50%) have strawberry production in their range of per acre 4 to 6 tones , 11 respondents (i.e.68.75) respondents are producing in the range of strawberry 7 to8 tones per acre . whereas 3 members (23.75%) are producing strawberry in their range 9 to 10 tones per acre .

It is observed that maximum farmers are producing up to 7 to 8 tons per acre, that the production of 2 respondents is very low as compared to other respondents.

6. USE OF FERTILIZERS

The farmers use different type of fertilizers such as organic, inorganic and other manures, fertilizers etc. The following table describes as types of fertilizers.

Table 5.41
Fertilizers types

Sr. No	Types of Fertilizers	No of Respondents	Percentage
1	Inorganic	2	12.50%
2	Organic (Branded)	13	81.25%
3	Other	1	6.25%
Total		16	100%

Source; field work

The table 5.41 indicates that out of the total 16 respondents , 2 respondent (i.e.12.50%) are using inorganic fertilizers for the strawberry cultivation , 13 members

(81.25 %) are using organic fertilizers for the strawberry cultivation , whereas 1 respondent (i.e. 6.25 %) are using other types of fertilizers.

It is clear that maximum farmers are using inorganic fertilizers for the strawberry cultivation.

7. DAILY WAGES OF THE WORKER

The following table describes as classification of the workers on the basis of daily wages.

Table 5.42
Classification of the workers as per wages

Sr. no	Classification	No of Respondents	Percentage
1	100	1	6.25%
2	150	10	62.50%
3	200	5	31.25%
Total		16	100%

Source: field work

Above the table 5.42 indicates that out of total 16 respondents, 6.25% farmers are paying the Rs 100 as daily wages for workers, 62.50% farmers are paying Rs 150 and 31.25 % farmers are paying Rs.200. It is clear that farmers are paying 150 to 200 Rs wages per day.

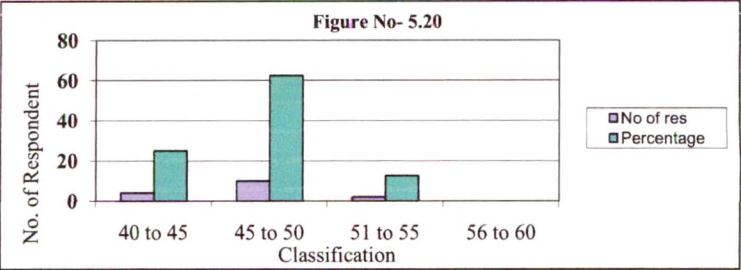
8. SALES PRICE OF STRAWBERRY FARMERS

The prices of agriculture produce are important for farmers as these determine their incomes. The following table shows that the price ranges of paid buy the strawberry farmers.

Table 5.43
Price Range of Strawberry farmers

Sr. No	Classification	Respondents	Percentage
1	40 to 45	4	25%
2	45 to 50	10	62.50%
3	51 to 55	2	12.50%
4	56 to 60	0	0
Total		16	100%

Source: field work



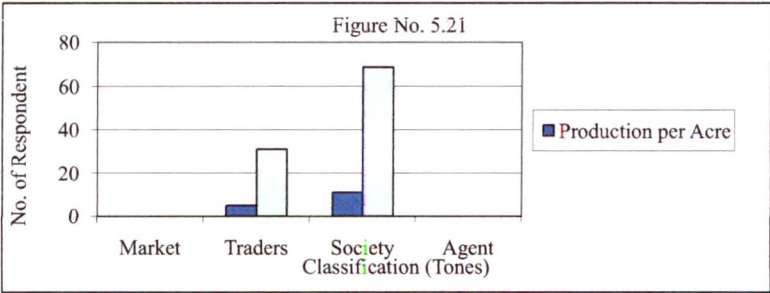
Above the Table 5.43 reflects the market rate of strawberry per kg during the year 2010-11. It is clear that 25.00 % farmers are getting price of Rs. 40 to 45 per kg, while 62.50 % farmers are getting Rs 46 to 50 per kg and 12.50 % farmers are getting Rs 51 to 55 per kilogram.

9. DISTRIBUTION CHANNEL FOR FARMERS

The following table described as distribution of marketing channel for strawberry farmers.

Table 5.44
Distribution of marketing channel for strawberry farmers

Sr. No	Classification	No. Of Respondents	Percentage
1	Market	0	0%
2	Traders	5	31.25%
3	Society	11	68.75%
4	Agent	0	0
Total		16	100%



Above Table 5.44 reveals that out of the 16 respondents, 11 respondents (i.e.68.75%) are selling strawberry to the society, 5 respondents (i.e.31.25%) are selling to the traders. It is observed that maximum farmers are strawberry selling to society and minimum selling to traders,

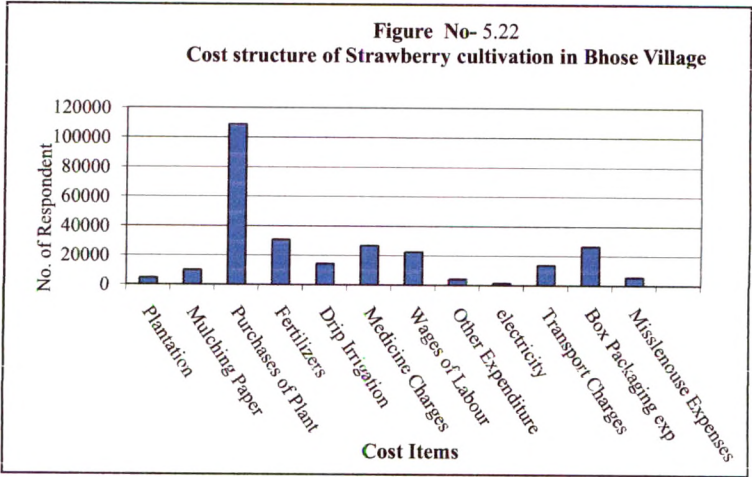
5.4.3 Cost Analysis of Strawberry farming

The cost of production has been significantly considered deciding the plantation of strawberry crop. The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry. The data was collected are 2010 - 11 in Bhoze village, these farmers while responding to our survey acknowledged various types of cost of strawberry production.

Table: 5.45
Cost structure of Strawberry cultivation in Bhoze Village
(No of Respondents 16) (Per acre)

Cost Items	Rs	Percentage of Cost
Plantation Cost		
Plantation	4675	1.72%
Mulching Paper	10000	3.79%
Purchase		
Purchases of Plant	108875	40.21%
Production Cost		
Weeding	-	
Fertilizers	30625	11.21%
Drip Irrigation	14356	5.30%
Medicine Charges	26887	9.93%
Wages of Labor	22595	8.34%
(Harvesting & Other)		
Other Expenditure	4125	1.52%
Administrative Expenses		
Corp Insurance	-	
electricity	1500	0.55%
Selling & Distribution		
Transport Charges	13725	5.06%
Box Packaging exp	26500	9.78%
Cooling	-	
Miscellaneous Expenses		
(Tax, Commission, Other)	5500	2.03%
Total Cost	270735	100%
Profit	102235	-----
Total Sales	372970	-----

Source: field work



The above statement 5.45 shows that out of total 16 respondents of Bhoose village gives the cost for cultivation of strawberry. The total cost of cultivation per acre is Rs 270735, the farmers have invested maximum amount for plants cost and low cost amount for plantation and other co. The average profit of strawberry farmers Rs 102235 is per acre.

It is observed that strawberry farming in Bhoose village is profitable and strawberry farming cost is high.

SECTION – IV

5.5 Data Analysis and Interpretation of Strawberry Farming in Avkali

The village of Avkali is developed socially and economically. The population of village is 1650. The geographical area of the village 247.41 hectors. The main crop in this village is strawberry. The total strawberry farmers in Avkali village are 146. For the present study sample size was 10% of the total population i.e.15 strawberry famers.

5.5.1 Demographic Profile of sample in Avkali

The Demographic profile of sample has been analyzed on the basis of the variables like age, education, no of family members, area of land & crop scheduled in Avkali village.

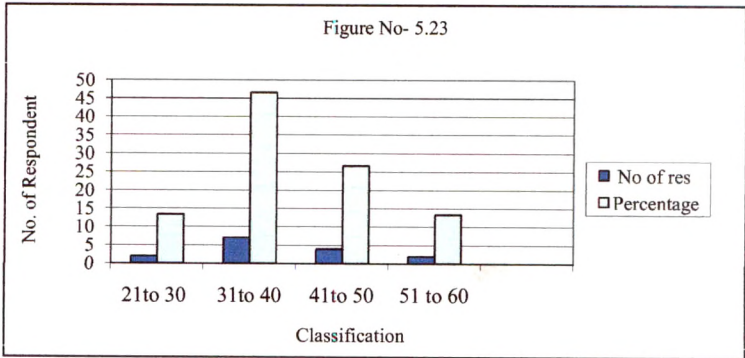
1. CLASSIFICATION OF DATA ACCORDING TO AGE

Age of farmers has got an important bearing on his attitude towards strawberry farming Following table describes the age wise classification of selected strawberry farmers.

Table 5.46
Age wise Classification of strawberry farmers

Sr. No	Age group	No. of Respondents	Percentage
1	21 -30	2	13.34
2	31 -40	7	46.66
3	41 -50	4	26.66
4	51-60 and above	2	13.34
Total		15	100%

Source; field work



Above table 5.46 shows that out of total 15 strawberry farmers, 2 respondents (i.e. 13.34%) belong to the age group 21 to 30 which is the lowest, 7 respondents (i.e. 46.66 %) belong to the age group of 31 to 40 years, 4 respondents (i.e. 26.66%) belong to the age group of 41 to 50 and the 2 respondents (i.e.13.34%) strawberry farmers are in the age group of 51 to 60 years.

From the above table it is clear that majority of farmers belong to the age group between 31 to 40 years.

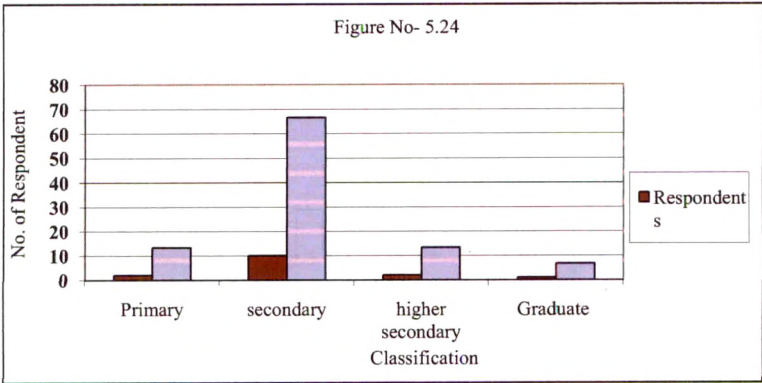
2. CLASSIFICATION ACCORDING TO EDUCATION

Education level is one of the parameters of the sample farmers while studying their social status. The following table presents the classification of strawberry farmers according to level of education.

Table 5.47
Classification as per Educational background

Sr. no	Level of Education	No of Respondents	Percentage
1	Primary	2	13.33
2	Secondary	10	66.67
3	Higher - secondary	2	13.34
4	Graduate	1	6.66
Total		15	100%

Source field work



Above table 5.47 indicates that out of the total 15 respondents, 2 respondents (i.e. 13.33%) has studied up to primary, 10 respondent (i.e.66.67%) has studied up to secondary, 2 respondents (i.e. 13.34%) has taken education up to higher secondary, whereas only 1

Members (i.e.6.66%) have completed their graduation. From the above table it is clear that majority of the farmers have studied up to primary and secondary level.

3. SIZE OF FAMILY

The family size existed at the time of this study is describes in the following table as classification according to size of family.

Table 5.49
Classification According to size of family

Sr. No	Classification	No of Respondents	Percentage
1	1 to 3	4	26.67
2	4 to5	5	53.33
3	Above -6	3	20.00
Total		15	100%

Above table 5.49 reflects that out of the total 15 respondents, 4 respondents (i.e.26.67%) have family size of 1 to 3 members, 5 respondents (i.e. 53.33%) have family size of 4 to 5 members, and 3 respondents (i.e. 20.00%) have family size of above 6 members. From the above table it is clear that most of the respondents have big size family.

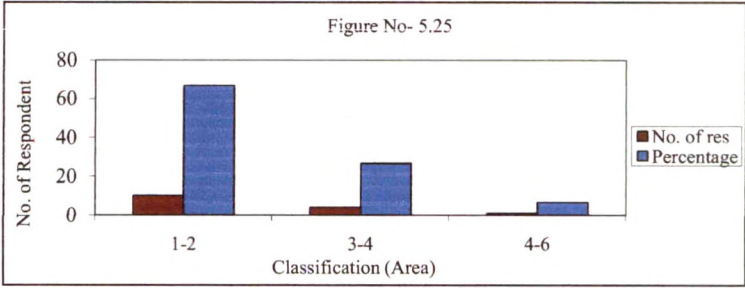
4. LAND HOLDINGS

Following table gives ideas regarding the size of agriculture land.

Table 5.50
Classification according to land holdings

Sr. No	Area of land (acre)	No of Respondents	Percentage
1	1 to less than 2	10	66.67
2	Above 3 to less than 5	4	26.66
3	Above 5	1	6.66
Total		15	100%

Source: field work



The above table 5.50 illustrates that out of the total 15 respondents, 10 respondents (i.e. 66.67 %) belong to 1to 2 acre land, and 6 respondents (i.e. 26.09%) belong to 3 to less than 5 acre land and 1 respondent have a land holding between above 5 acre. It is observed that maximum strawberry farmers are small size farmers

5. CROPPING SHEDULDE

The following table described as cropping schedule of strawberry farmers.

Table 5.51
Classification in terms of cropping pattern

Sr. no	Pattern	No of Respondents	Percentage
1	Seasonal	15	66.67
2	Annual	0	33.34
Total		15	100%

Source: field work

Above table 5.51 Reflects that out of the total 15 respondents, all respondents (i.e.100%) have seasonal schedule.

5.2.3. CLASSIFICATION OF DATA ACCORDING TO PRODUCTION FACTORS

The production factor of strawberry farming has been analyzed on the basis of the variables such as sources of irrigation, quality of plant, fertilizers used, daily wages of the worker, price range.

1. IRRIGATION FACILITY

Source of water is the major contributing factor in the study area. During the study it was found that the major source of irrigation was well, borings, lake and other irrigation scheme. The following table explains the sources of water.

Table 5.52
Sources of water

Sr. no	Sources of water	No of Respondent	Percentage
1	Well	10	66.67
2	Boring	0	-
3	Other scheme	5	33.34
Total		15	100%

Source: field work

From the above table 5.52 shows that out of the total 15 respondents, 10 (i.e.66.67 %) respondents are using the well as water resources from their own land.5 (i.e. 33.34%) are using irrigation scheme as water resources. It is observed that maximum farmers are using of well as resources of water for strawberry farming.

2. CULTIVATION TECHNIQUE

There are two types of cultivation techniques, traditional and modern .The following table shows that classification in according to cultivation technique.

Table 5.53

Classification in terms of cultivation technique

Sr. no	Technique of cultivation	No of Respondents	Percentage
1	Traditional	5	33.33
2	Modern	10	66.67
Total		15	100%

Above the table 5.53 shows that out of the total 15 respondents, 5 respondents (i.e. 33.33%) follow traditional method for cultivation of strawberry, whereas 10 respondents (i.e. 66.67 %) follow modern method of strawberry cultivation. From the above table it is clear that maximum farmers are using modern technique for strawberry cultivation.

3. SOURCES OF PLANTS

The following table shows the sources of plants of strawberry farmers. There are four sources of strawberry plants.

Table 5.54

Classification as per sources for strawberry plants

Sr. No	Classification	No of Respondents	Percentage
1	Farmers	2	13.34
2	Factory (Nursery)	10	66.66
3	Agri. University	3	20.00
Total		15	100%

Source - field work

The above table 5.54 reflects that out of the total 15 respondents, 2 respondents (i.e.13.34 %) are purchasing plants from nursery, 10 respondents

(i.e.66.66%) are purchasing plants from farmers, and 3 respondents (i.e. 20.00 %) are purchasing plants from Agri University.

It is observed that maximum strawberry farmers are purchased strawberry plants from nursery.

4. QUALITY OF PLANT

The following table shows classification as per quality of plant for strawberry farming

Table 5.55
Classification as per Quality of plant

Sr. no	Quality of plant	No of Respondents	Percentage
1	Good	6	40.00
2	Average	9	60.00
Total		15	100%

Source- field work

Above Table 5.55 reveals that out of the total 15 respondents, 6 respondents (i.e.40.00%) are purchasing and using good quality of strawberry plants, 9 respondents (i.e.60 %) are purchasing average quality strawberry plants.

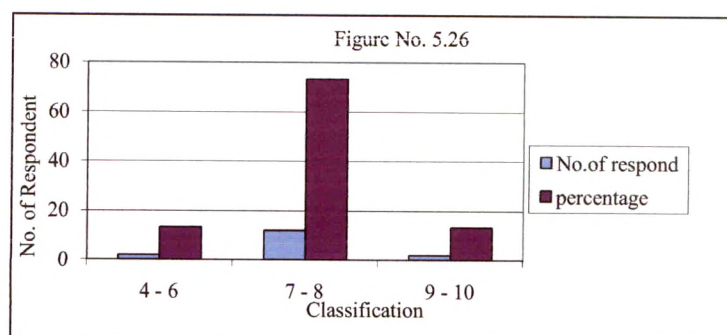
It is observed that the maximum strawberry farmers are using average quality of strawberry plants.

5. PER ACRE YIELD OF STRAWBERRY

This table describes classification of strawberry production on the basis of production,per acre.

Table 5.56
Classification in terms of Production of Strawberry (Per acre)

Sr. no	Production in tones	No of Respondent	Percentage
1	Minimum 4 to less than 6	2	13.33
2	Minimum 6 to less than 8	12	73.33
3	Above- 8	2	13.34
Total		15	100%



Above the Table 5.56 reflects that out of the total 15 respondents, 2 respondents (i.e.13.34%) have strawberry production in the range of minimum 4 to less than 6 tones per acre, 12 (i.e.73.33%) respondents are producing strawberry in the range of minimum 6 to less than 8 tones per acre. whereas only 2 members (i.e.13.34%) are producing strawberry in the range of 9 to 10 tones per acre.

It is observed that maximum farmers are producing minimum 6 to less than 8 tones per acre.

6. USE OF FERTILIZERS

The farmers use different types of fertilizers such as organic, inorganic and other manures, fertilizers etc. The following table describes as types of fertilizers.

Table 5.57

Classification as per use of Fertilizers Types

Sr. No	Type of fertilizers	No of Respondents	Percentage
1	Inorganic	3	20.00
2	Organic (Branded)	10	66.67
3	Other	2	31.57
Total		15	100%

Source; field work

Above table no.5.57 indicates that out of the total 15 respondents, 3 respondents (i.e.20.00%) are using inorganic fertilizers for the strawberry cultivation, 10 respondents (i.e.66.67%) are using organic fertilizers for the strawberry cultivation whereas 2 respondents (i.e.31.57 %) are using other types of fertilizers. It is clear that maximum farmers are using organic fertilizers for the strawberry cultivation

7. DAILY WAGES OF THE WORKER

The following table describes as classification of the workers on the basis of daily wages.

Table 5.58
Classification of the worker as per wages

Sr. no	Daily wages (in Rs)	No of Respondent	Percentage
1	100	-	-
2	150	9	60.00
3	200	6	40.00
Total		15	100%

Source: field work

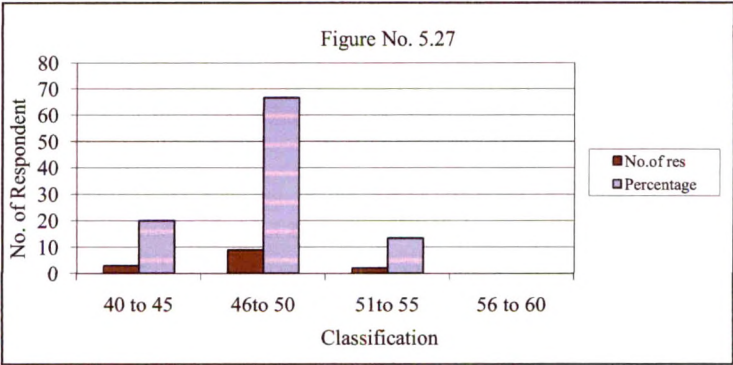
Above table 5.58 indicates that out of total 15 respondents, 9 respondents (60.00%) farmers are paying the Rs 150 as daily wages for workers, 6 respondents (40.00%) are paying Rs 200. It is clear that farmers are paying 150 to 200 Rs wages per day.

8. SALES PRICE OF STRAWBERRY FARMERS

The prices of agriculture produce are important for farmers as these determine their income. The following table shows the price ranges fetched by the strawberry farmers.

Table 5.59
Price Range of Strawberry farmers

Sr. No	Price range	Respondents	Percentage
1	40 to 45	3	31.57
2	45 to 50	9	47.36
3	51 to 55	2	21.05
4	56 to 60	-	-
Total		15	100%



Above the Table 5.59 reflects the market rate of strawberry per kg during the year 2010-11. It is clear that 21.79 % farmers are getting price of Rs. 40 to 45 per kg, while 60.86 % farmers are getting Rs 46 to 50 per kg and 17.40 % farmers are getting Rs 51 to 55 per kilogram.

It indicates that out of total 15 respondents, 3 respondents (i.e.31.57%) have sale their production in the price range Rs 40 to 45 whereas 9 respondents (i.e.47.36%) have sale their production in the price range between 45 to 50.

9. DISTRIBUTION CHANNEL FOR FARMERS

The following table describes as distribution of marketing channel for strawberry farmers.

Table 5.60
Distribution of marketing channel for strawberry farmers

Sr. no	Classification	No. of Respondents	Percentage
1	Market	3	20.00
2	Traders	2	13.33
3	Society	10	66.67
Total		15	100

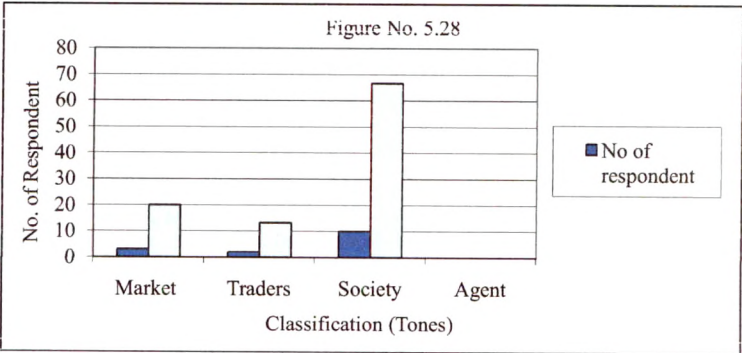


Table 5.61 reveals that out of the 15 respondents, 10 respondents (i.e.66.67%) are selling strawberry to the society, 3 respondents (i.e.20.00%) are selling to the market and 2 respondents (i.e.13.33 %) are selling to the traders. It is observed that maximum farmers are strawberry selling to society and minimum selling to traders.

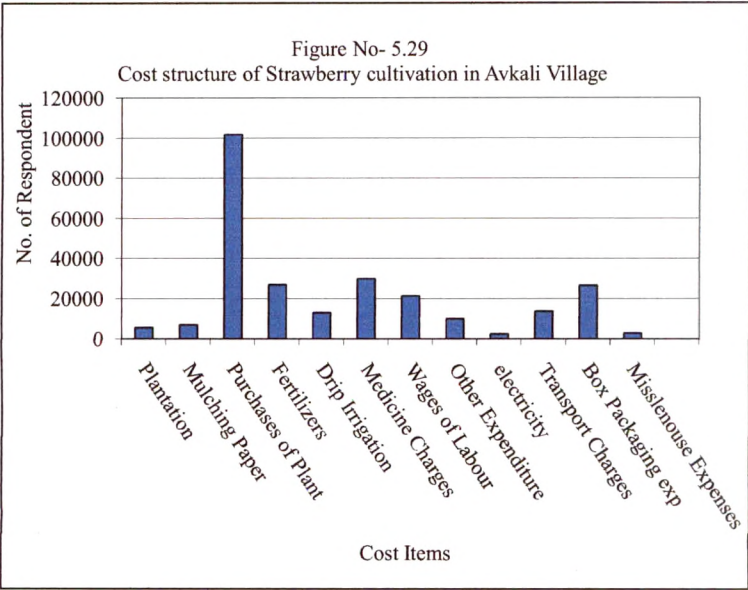
5.5.3 Cost Analysis of Strawberry

The cost of production has been considered on the basis of plantation of strawberry crop. The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry. The data has been collected on the field survey during the 2010-2011 in the Avkali village. Following table describes the cost structure of strawberry cultivation.

Table 5.62
Cost structure of Strawberry cultivation in Avkali Village
(No. of Respondents 15)

(Per acre)		
Cost Items	Rs	Percentage of Cost
Plantation Cost		
Plantation	5613	2.17%
Mulching Paper	7000	2.71%
Purchase		
Purchases of Plant	101750	10.44%
Production Cost		
Weeding	-	
Fertilizers	26960	10.44%
Drip Irrigation	13025	5.04%
Medicine Charges	29970	11.60%
Wages of Labour	21375	8.27%
(Harvesting & Other)		
Other Expenditure	10000	3.86%
Administrative Expenses		
Corp Insurance	-	-
Telephone Expenses	-	-
Electricity Charges	2500	0.97%
		-
Selling & Distribution		
Transport Charges	13120	5.08%
Box Packaging exp	26563	10.28%
Cooling	-	
	2750	1.06%
Miscellaneous Expenses		
(Tax, Commission, Other)		
Total Cost	258160	100%
Profit	105780	
Total Sales (Production * price)	363940	

Source: field work



The above statement 5.62 shows that out of the total 15 respondents, Avkali village gives the cost for cultivation of strawberry. The total cost of cultivation per acre is Rs 258160 the farmers have invested maximum amount for plants cost and low cost for plantation and other cost. The above statement shows that average cost of 15 respondent of Avkali village. The average profit of strawberry farmers of Avkali village is Rs 105780. Main component of cost of strawberry are Plant cost, fertilizers, medicine charges, drip irrigation and labor charges.

SECTION-V

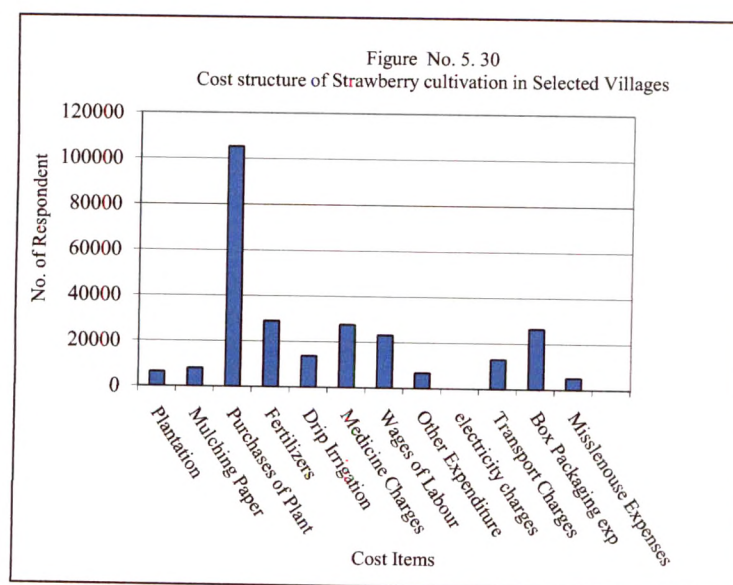
5.6 Average Cost structure

The cost of production has been considered on the basis of plantation of strawberry crop. The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry. The data has been collected on the field survey in selected villages. Following table describes the average cost structure of selected villages of strawberry cultivation.

Table 5.63
Average cost structure of selected villages
(No of respondent 92)

(Per acre)		
Cost Items	Rs	Percentage of Cost
Plantation Cost		
Plantation	6285	2.37%
Mulching Paper	8000	3.02%
Purchase		
Purchases of Plant	105282	39.834%
Production Cost		
Weeding	-	
Fertilizers	28975	10.96%
Drip Irrigation	13675	5.17%
Medicine Charges	27560	11.60%
Wages of Labour	23135	8.75%
(Harvesting & Other)		
Other Expenditure	4406	1.85%
Administrative Expenses		
Corp Insurance	-	-
Telephone Expenses	-	-
Electricity Charges	2000	0.77%
Selling & Distribution		
Transport Charges	13058	4.94%
Box Packaging exp	26480	10.02%
Cooling	-	
Miscellaneous Expenses		
(Tax, Commission, Other)	5434	2.05%
Total Cost	261534	100%
Profit	104076	-
Total Sale (Production * price)	365553	-

Source: field work



The above table 5.63 shows that the average of 92 respondents from selected villages' reveals the cost structure for cultivation of strawberry. The total cost of cultivation of strawberry per acre is Rs. 261534 Strawberry farmers have invested maximum for plant of strawberry. And low for plantation and other cost. The average profit is per acre Rs.1, 07,450. By the increase in rate of input total prime cost of strawberry farming Rs 105282 production of cost Rs 100127, selling and distribution cost Rs 44598. Main component cost is plant of cost, fertilizers, irrigation and other expenses per acre. Cost of growing of strawberry and other annual expenses increasing consistently. During the study period main component of cost of fertilizers, medicine charges and labor cost, water cost is on respectively

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5:7 COMPARATIVE COST STATEMENTS

The cost statement of four villages Bhilar, Panchgani, Bhose and Avkali has been studied comparatively. Following table shows the more details.

Table 5.65

Comparative cost statement of strawberry farmers of selected villages (per acre)

Cost items	Bhilar	Panchgani	Bhose	Avkali	Average cost
Plantation cost					
Plantation	7630	7220	4675	5613	6285
Mulching paper	7000	8000	10000	7000	8050
Purchase of plant	105000	105500	108875	101750	105282
Production cost					
Wedding					
Fertilizers	28425	29875	30625	26960	28975
Drip Irrigation	11515	15810	14356	13025	13675
Medicine charges	25110	28275	26887	29970	27560
Wages of labour	19050	28300	22595	21375	23135
Harvesting and other	-	6000	4125	7500	4406
Administrative exp					
Crop expenses	-	-	-	-	-
Electricity expenses	2000	2000	1500	2500	2000
Selling and distribution					
Transport	12333	13050	13725	13125	13058
Box packing	25345	27015	26500	26563	26480
Miscellaneous	8585	4900	5500	2750	5434
Total Cost	241393	275945	270735	258160	261534

The table 5.64 is the statement of comparative cost structure of strawberry from the selected villages. The cost of each village is different. The total cost of Bhilar village is 2, 41,393, of Panchgani 2, 75,945, of Bhose Rs. 2, 70,735 and Avkali Rs. 2, 58,107. Among the cost of strawberry Panchgani Village is high Rs. 2, 75,945. Above the table reveals that the cost of purchase plant is more because the farmers are aware of purchasing the better plant.

5.8. Profitability of Strawberry farming:

The following table is related about profitability statement of strawberry cultivation in selected villages.(per acre)

Table 5.65

Profitability Statement of Strawberry in selected Villages (Per Acre)

Selected Villages	Average Production (Tones)	Average Cost	Average Price (K. g)	Average Income (Sales)in Rs	Profit
Bhilar (No. of Rasp- 38)	7.5 tones	241393	47.70	357782	116389
Panchgani(No. of res 23)	7.5 tones	275945	49.00	367520	91575
Bhose (No. of Res 16)	8.0 tones	270735	46.62	372970	102235
Avkali (No of Res-15)	7.0 tones	258160	51.99	363940	105780
Total Average	7.5	261534	49.00	365553	104076

(Source: - Field work)

The above table 5.65 shows profitability statement of strawberry is selected villages. Taking into consideration average production, average cost, average price and average income in each village researcher have estimated the average profit of each village. In Bhilar village the profit is Rs. 1, 16, 389, in Panchgani Rs. 91,575, in Bhose is Rs 102,235, in Avkali Rs. 1, 05,780. On the basis of above observation it is found that strawberry farming is profitable crop.

SECTION -VI

5:9 Price Analysis of Strawberry

Introduction

The price for any commodity has a vital significance in mixed economy. The research based on the observation including interviews with cultivators in local market, and strawberry grower’s societies, the behavior suggest that there are various factors influencing the demand for strawberry, the price of strawberry is based on various factors such as fresh strawberry, industrial grade and class three strawberries, Hence priced differently on the quality.

The strawberry farmers need to maintain the adequate prices of strawberry in order to cover production expenses. The local market and society also determines the maximum price growers can receive for strawberry.

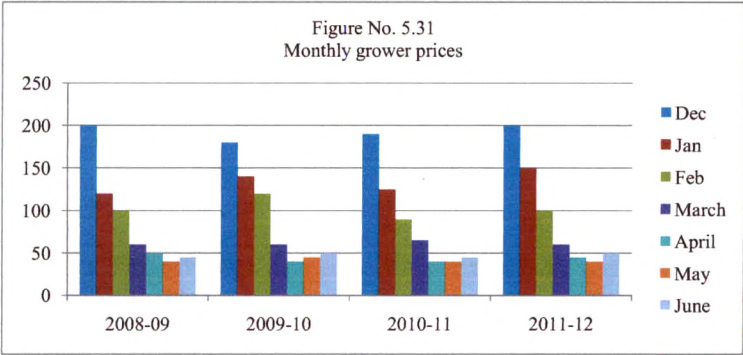
1. Prices of fresh strawberry

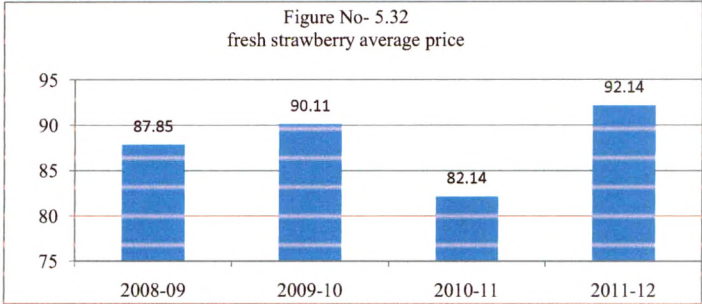
The following table describes the farmer’s monthly prices of fresh strawberry.

Table 5.66
Monthly Grower Prices of Fresh Strawberry (At producer end)
(Price in per kg)

Year	Dec	Jan	Feb	March	April	May	June	average
2008-09	200	120	100	60	50	40	45	87.85
2009-10	180	140	120	60	40	45	50	90.11
2010-11	190	125	90	65	40	40	45	82.14
2011-12	200	150	100	60	45	40	50	92.14

(Source: strawberry grower’s co-op society)





The above table 5.66 shows the monthly prices of strawberry received by the growers. During the year 2008-09 strawberry prices had been received in average by the growers, as Rs.87.85 per kg for fresh strawberry. During the year 2009-10, Rs 90.11 received in average, 82.14 in 2010-11 and Rs 92.14 in 2011- 12. Above observation reveals the fluctuating prices of strawberry.

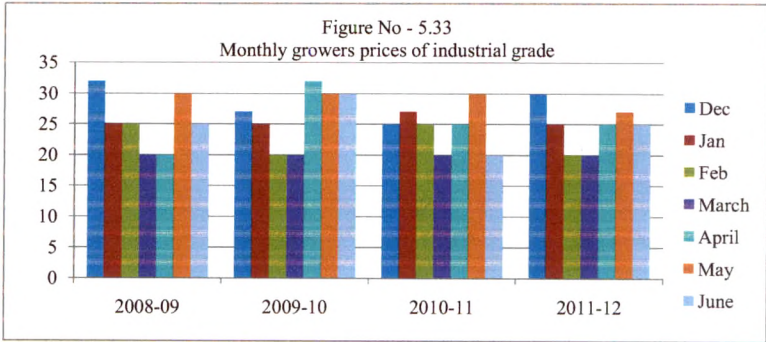
2. STRAWBERRY PRICES OF INDUSTRIAL GRADE

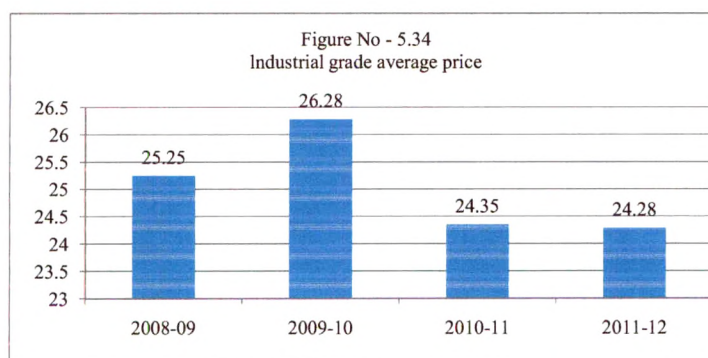
The following table describes the farmers strawberry monthly prices of industrial grade .

Table 5.67
Monthly growers prices industrial Grade (At producer end) (Price in Rs.)

Year	Dec	Jan	Feb	March	April	May	June	average
2008-09	32	25	25	20	20	30	25	25.25
2009-10	27	25	20	20	32	30	30	26.28
2010-11	25	27	25	20	25	30	20	24.35
2011-12	30	25	20	20	25	27	25	24.28

(Source: strawberry grower societies and field work)



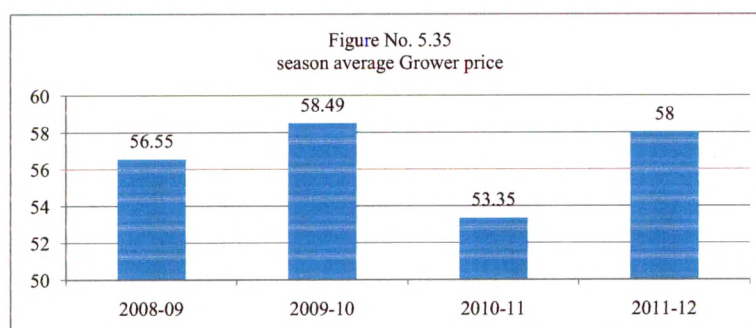


The above table 5.67 shows that the industrial grade strawberry has been priced at low price .The average price of strawberry received by farmers. During 2008-09 is 25.28 and during 2009-10, Rs 26.28, 2010-2011, is 24.58 and during 2011-12 is 24. Hence the above observation reflects the fluctuating prices of strawberry.

Table 5.68
Mahabaleshwer Strawberries Acreage, Production, Season average Grower price and value.

Year	Acre	Production M. T.	Grower price	Value (R.S.)
2008-09	2150	17000	56.55	961350
2009-10	2300	22000	58.49	1286780
2010-11	2400	21000	53.35	1120350
2011-12	2500	18000	58.00	1044000

(Source: Strawberry grower's co-op societies and field work)



above table the strawberry average prices are 56. 55 per kg and production are 17000 Metric tons, during the year 2008-09. During the year 2011-12 the average price is 58 per kg and production is 18000 M.T. Thus the strawberry prices are changing monthly and yearly and strawberry production is increasing yearly.

5.10. TESTING OF HYPOTHESIS

1) The farmers are unaware about maintenance of accounting record.

Table No. 5.69

Maintaining Accounting Record

Village	Opinion		Percentage	
	Yes	No	Yes	No
Bhilar	12	26	31.57%	68.43%
Panchgani	7	16	30.43%	69.56%
Bhose	4	12	25%	75%
Avkali	6	9	37.50%	62.50%

Above hypothesis No. 1 is accepted. The Bhilar village 26 respondent given the opinion about maintaining accounting record has negative, the percentage is (i.e.68.43%) only 12 (i.e.31.57%)respondents are given positive ,Panchgani village 7 (i.e.30.43%) respondents are given positive response about the same question and 16 (i.e.69.56) respondents given negative opinion his percentage is 4 (i.e.25%)and 12(i.e.75%) respectively. In Bhose village 4 respondent are given is positive and 12 respondents are giving the negative. Avkali village 6 (i.e.37.50%) respondents have given answer positive and 9(i.e.62.50%) respondents is negative opinion. It means that strawberry farmers are unaware about maintaining accounting record.

Testing of Hypotheses no. 1

The farmers are unaware about maintenance of accounting record.

P = proportion of farmers unaware of maintaining accounting record.

Q = 1 - P

H₀ = P = $\frac{1}{2}$ H₁ = P < $\frac{1}{2}$ Accepted H₁

Z 0.05 = -1 which is less than 1.64, Rejected H₀

2) The Strawberry farming in Mahabaleshwer is profitable fruit crop.

Table No. 5.70

Profitability Statement of Strawberry in selected Villages

(Per acre estimate)

Selected Villages	Average Production (Tones)	Average Cost	Average Price (K. g)	Average Income (Sales)in Rs	Profit
Bhilar (No. of Rasp-38)	7.5 tones	241393	47.70	357782	116389
Panchgani (No. of res 23)	7.5 tones	275945	49.00	367520	91575
Bhose (No. of Res.16)	8.0 tones	270735	46.62	372970	102235
Avkali (No of Res-15)	7.0 tones	258160	51.99	363940	105780
Total Average	7.5	261534	49.00	3,65,553	104076

(Source: - Field work)

Hypothesis no. 2 is accepted. The table no.5.73 shows that strawberry farming is profitable. The average profit of all these villages of strawberry farming is Rs. 1, 04,005.

Testing of hypotheses no.2

Strawberry farming is profitable fruit crop.

P = proportion of profit making unit in selected villages of strawberry farming.

q = 1-P (proportion of loss making unit)

H₀ = p = 1/2, H₁ = p < 1/2

Z = 0.05 (√4) / 1

= -0.5 × 2 / 1 , = -1/1 = - 1

5% of level of confidence, Z_{0.05} = < 1.64

Reject H₀, Accepted H₁, Profit making units are > 1/2

∴ Strawberry farming is profitable.

3) The prices of strawberry are highly fluctuating.

Table No. 5.71

Monthly Grower Prices of Fresh Strawberry (at producer end)

(Price in per kg)

Year	Dec	Jan	Feb	March	April	May	June	average	S.D
2008-09	200	120	100	60	50	40	45	87.85	57.8689
2009-10	180	140	120	60	40	45	50	90.11	55.55992
2010-11	190	125	90	65	40	40	45	82.14	55.82711
2011-12	200	150	100	60	45	40	50	92.14	61.63448

(Source: strawberry grower's co-op society)

The above table no.5.71 shows that the price of strawberry is highly fluctuated. The Hypothesis no. 3 is accepted as the strawberry prices are highly fluctuating.
