

CHAPTER - IV

FINDINGS

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The economic wellbeing or otherwise of a family particularly in a rural farming community which lives in an area which is drought prone, can and does depend upon the size of the family. This can help to determine the number of working hands and number of dependants and possibly the economic status of that family. Since economic opportunities are limited in the rural Jath Taluka, the size of the family can indicate the possible "pressure" <sup>o</sup> on family holdings and the economic status of such families. This becomes more "Acute" if the size of the land holdings is small or the farmers are classified as small or marginal.

Of the total sample of 50 farmers, 21 were from Jath, 15 from Bilur, 10 from Dafalapur, 2 each from Revanal and Mendgari.

The size of the agricultural land varies between 'one and five acres' and '5' acres and above! Most of the farmers are in the 11-35 acres group. (Table No. 4.1).

TABLE NO. 4.1

SIZE OF THE FARMS AND AREA UNDER GRAPE CULTIVATION

Land holdings in Acres.	Jath		Bilur		Dafalapur		Revanal		Mendgari		Total
	Total	G.C. (a)	Total	G.C. (b)	Total	G.C. (b <sub>1</sub> )	Total	G.C. (b)	Total	G.C. (c)	
1 - 5	2	21	-	15	-	10	-	2	-	2	-
6 - 10	3	-	4	-	-	-	1	-	-	-	-
11 - 15	6	-	4	-	1	-	1	-	2	-	-
16 - 20	2	-	2	-	1	1	-	-	-	-	-
21 - 25	1	-	1	-	-	2	-	-	-	-	-
26 - 30	2	-	2	-	2	2	-	-	-	-	-
31 - 35	2	-	2	-	2	2	-	-	-	-	-
36 - 40	-	-	-	-	-	-	-	-	-	-	-
41 - 45	-	-	-	-	1	-	-	-	-	-	-
46 - 50	2	-	-	-	1	-	-	-	-	-	-
51 & Above	1	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>21</b>	<b>21</b>	<b>15</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

NOTE : a : The grape farms vary between 1 acre and 3 acres. (b) The grape farms of up to 2 acres only  
 b : The grape farms of up to 1 acre only.

The size of vineyards also varied, but not so much, indicating that a fairly small proportion of agricultural land was used for the vineyards in Jath which varied in size from one acre to 3 acres. In Bilur, Dafalapur and Revanal this was upto 2 acres, whereas, Mendgari had relatively smaller grape farms of one acre at the most. This indicates that the grape farms constitute "Small and marginal" sized farms. The data collected also shows that a few grape farms were as small as 20 acres e.g. in Bilur, Dafalapur and Revanal (Such farms).

The sample families had various members who could be classified as working members, of the 21 families in Jath, 13 had between one to four members working, 7 had between seven and ten working members and one family had between eleven and fifteen members. Working ( Table No. 4.2).

TABLE NO.4.2

WORKING MEMBERS IN THE FAMILY

Working members	No. of Families					
	Jath	Bilur	Dafalapur	Revanal	Mendgari	Total
1-4	13	3	Nil	1	2	19
5-10	7	12	8	1	Nil	28
11-15	1	Nil	2	Nil	Nil	3
Total	21	15	10	2	2	50

The member of families within the respective size groups of working members were 3,12 and nil in Bilur, Nil, 8 and 2 in Dafalaour, one, one and Nil in Revanal and Two,nil in Mendagari.

The data thus, indicates that most of the samples with working members were upto to ten. Only three families had more than ten working members in them. Many of these families also had members working on the farms and vineyards. Both male and female members worked on the vineyards.

The whole outlook of the families with respect to life can be affected by the educational levels reached by members of the families in the rural areas, and the use of modern methods of cultivation. The educational levels attained by some members of the sample families ranged from primary to post graduation.

TABLE NO. 4.3

EDUCATIONAL BACKGROUND OF THE FAMILY MEMBER

Education	Jath		Bilur		Dafalapur		Revanal		Mendgari		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Primary	6	11	5	3	1	1	1	1	2	2	15	18
Secondary (But not S.S.C.)	4	11	11	3	7	7	1	-	-	-	23	21
S.S.C.	22	13	13	7	10	4	1	1	1	1	47	27
H.S.C.	9	-	2	-	2	2	1	-	-	-	14	3
College Degree	7	3	5	1	8	-	-	-	-	-	20	4
Post Graduate	4	-	1	1	1	-	-	-	-	-	6	1
Other	7	-	-	-	-	-	-	-	-	-	7	-

NOTE : M. Indicate Male; F. Indicate Female.

Though there were not many graduates ( 20 males and 4 females) and post graduates ( 6 males and one female) there were many who had education of upto S.S.C. level. This reflect and indicate the willingness of the rural folks, on the whole, to make use of facilities available.

Besides family members contributing to the labour force on the grape farms, a number of hands have been employed to help on these farms. The type of labour can be classified as permanent, seasonal and casual (Table No. 4.4.).

TABLE NO. 4.4

NO. OF LABOURS EMPLOYED ON THE GRAPE FARM

	JATH			BILUR			DAPALAPUR			REVANAL			MENDGARI					
	P	PT	SE	CA	T	P	PT	SE	CA	T	P	PT	SE	CA	T			
Upto 3	19	2	2	24	15	2	2	3	20	10	10	1	1	1	3	1	1	2
4-6	2	1	6	1	10	3	3	1	4	2	2	2	2	2	1	1	1	4
7-9	-	-	4	-	4	-	2	-	2	-	3	-	5	-	-	-	-	-
10-12	-	-	8	-	8	-	7	-	7	-	5	-	5	-	-	-	-	-
13-15	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-

NOTE : P = Permanent. ; PT = Part Time.; SE= Seasonal .; CA = Casuál.

Of the 21 sample families from Jath, 19 had upto 3 permanent labourers, two seasonal and one two casual. Infact there were only two families reporting permanent labour on the grape farm ranging between four and six. In number (this was also so with respect to only one family reported employing between four and six labourers, on permanent basis). The Table shows that in Dafalapur all the sample families employed upto three permanent labourers on the grape farm with no other type of labour in this category. The data further indicate that the nature of employment opportunities in almost all the places surveyed is to a very large extent temporary, with the demand for labour going up during the season.

An important adjustment to the production and quality of grapes depends upon the type of soil. Most of the farms under grape cultivation had medium type of soil. (Table No. 4.5).

TABLE NO. 4.5

TYPES OF SOIL UNDER GRAPE CULTIVATION

Place/ Type of Soil	Jath	Bilur	Dafalapur	Revanal	Mendgari	Total
Light	3	3	-	-	2	8
Medium	18	1 2	10	2	-	42
Total	21	15	10	2	2	50

There were only three sample families each in Jath and Bilur and two in Mendgari. Whose grape farms were on light soil.

Further the age of the Vineyard can also account for the total costs and benefits to the farmers. The periods for which the farmers in Jath Taluka had been cultivating grapes extends from two years to ten years ( Table No. 4.6).

TABLE NO. 4.6

AGE OF THE VINEYARDS

Place/ Age in Years	Jath	Bilur	Dafalapur	Revanal	Mendgari	Total
1	-	-	-	-	-	-
2	6	-	-	2	1	9
3	6	4	-	-	1	11
4	4	2	1	-	-	7
5	3	3	2	-	-	8
6	-	2	1	-	-	3
7	-	1	3	-	-	4
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	2	3	3	-	-	8
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

^ The majority of grape farms (70%) were between two to five years old, suggesting that grape farming in this area is generally of more recent origin. Out of 50 sample families only 8 reported to be cultivating grapes for a considerable period ( of ten years).

^ The grape farming is a scientific process and involves use of many separate functions and inputs like fertilisers, irrigation, fungicides insecticides, pesticides, hormones, gibberlic acid etc.

The typical fertilisers used in grape cultivation in the region, as indicated by the sample is spray type both liquid and powder spray. Farmers in the region use both type of fertilisers (Table No. 4.7 ).

TABLE NO. 4.7

TYPES OF FERTILISERS USED

Types of Fertilisers	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Liquid Spray	15	12	9	2	2	40
Powder Spray	20	14	7	2	2	45
Total	35	26	16	4	4	85

In Jath out of 21 sample families, 15 used liquid spray and 20 powder spray. In Bilur out of 15 such families used liquid spray method and 14 used powder spray method too. For Dafalapur

(Ten sample families) the respective figures are nine and seven and in Ravnal and Mendgari, all sample families reported to be using both the types of fertilisers on the whole fewer families (40) used the liquid spray fertiliser as compared to the powder spray(45).

The fertiliser is sprayed with the help of the pumps which are either manually (hand ) operated, or post operated or automatic (Table No. 4.8).

TABLE NO. 4.8

KIND OF SPRAY PUMPS USED

Place	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Hand Pump	5	8	3	1	1	18
Foot Pump	16	13	9	1	1	40
Automatic Spray Pump	3	2	4	-	-	9

Some of the sample respondents used more than one type of Pump, for example, of the twentyone such families in Jath, Five reported to be using hand pumps, sixteen foot pump and three automatic pumps, such figures for Bilur are eight, thirteen and two respectively; for Dafalapur three, nine and four respectively and for Revanal and Mendgari one, one each with no automatic pumps. On the whole the foot pumps predominated with forty of total

fifty samples using this method.

The amount of powder used is according to the recommendations of the agricultural officers in the area, i.e. sixteen kilograms per month for four months per acre. Besides this, the amount of liquid spray used from time to time ( in the four month period), varied from 130 grams per acre and 500 grams per acre. Three doses of 130 grams, 200 grams and 500 grams have been applied by all the farmers in the study's sample size (Table No.4.9).

TABLE NO. 4.9

QUANTITY OF LIQUID FERTILISER USED FOR THE FOUR MONTH PERIOD

Quantity/ Liquid	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
130 grams	21	15	10	2	2	50
200 grams	21	15	10	2	2	50
500 grams	21	15	10	2	2	50

Thus the total amount of liquid spray fertiliser used amounts to 850 grams per acre.

Grape cultivation needs regulated water supply for effective results. All the respondents used irrigation facilities available to them. The most common prevalent source of irrigation waters was the open well. All the farms in Dafalapur, Revnal and Mendgari had only the open well system whereas in Jath and Bilur, there were 19 and 12 such wells respectively. (Table No. 4.10).

TABLE NO. 4.10

IRRIGATION FACILITIES

Place/ Type of Irrigation	Jath	Bilur	Dafalacour	Revnal	Mendgari	Total
Open Well	19	12	10	2	2	45
Bore Well	2	3	-	-	-	5
<u>Total</u>	<u>21</u>	<u>15</u>	<u>10</u>	<u>2</u>	<u>2</u>	<u>50</u>

There were only two bore wells in Jath and three in Bilur for irrigation purposes.

Grape vines need lot of care against possible attacks from various diseases and as a result preventive measures through the use of fungicides have been adopted. Out of the sample size of 50 except four, all reported to be using fungicides 4 farmers did not used fungicides.

TABLE NO. 4.11

FUNGICIDES USED ON THE VINEYARDS

Place	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
No. of Farmer	17	15	10	2	2	46

All those farmers not using any from of fungicides were from Jath. The most common types of fungicides used are M 45, Teprocycline, and phamcon.

TABLE NO. 4.12

TYPE OF FUNGICIDES USED

Place/ Used of Fungicides	Jath	Bilur	Dafalaour	Revnal	Mandgari	Total
M 45	7	4	5	1	-	17
Teprocycline	6	6	7	1	1	21
Lapmision	4	1	-	-	-	5
Betrolon	3	1	2	1	1	8
Phamcon	3	5	3	-	1	12
Shilphied	3	1	-	-	-	4
Wetesui	4	-	1	-	-	5
Kumanal	1	4	-	1	1	7
Ston	2	-	3	-	-	5

Some farmers used more than one type of fungicide. The other forms of fungicide used were lapmision, Betrolon, shilphied, wetesul, Kuman L and 22 sten. On the whole about 350 grams of fungicides were used every 25 days.

The cost of fungicides varied between Rs. 500 and Rs. 15000 per year, according to the area covered and the type and combination of fungicides used. There were 25 farmers from amongst those using fungicides to be ranging between Rs. 4000 and Rs. 15,000 per year.

TABLE NO.4.13

COST OF FUNGICIDES PER YEAR

Place Cost(Rs.)	Jath	Bilur	Dafalapur	Ravnal	Mandgari	Total
500- 1000	-	-	1	-	2	1
1000- 2000	1	4	2	1	-	10
2000- 3000	4	4	1	-	-	9
3000- 4000	1	1	-	-	-	2
4000- 5000	4	1	2	1	-	8
5000-10000	1	3	3	-	-	7
10000-15000	6	2	1	-	-	9
Total	17	15	10	2	2	46

There was only one respondent whose cost of fungicides was upto Rs. 1,000 per year ( in Dafalapur). There were in all 21 farmers whose cost of fungicides ranged from Rs. 2,000 to less than Rs. 4,000 per year.

The grape vines are not free from possible destruction from insects and pests. All the farmers have to use both insecticides and pesticides to protect the grape vines from pests and insects. This is an important aspect of farming in general in India. Care has to be taken to minimise (if eradication is not possible) the possible losses through machinations of insects and pests shows the type of insecticides used by the sample farmers in their vineyards. The most popular and widely used insecticides were

Nevacron (321 farmers) Democron (31 farmers) and Rogar (24 farmers). The data thus indicates that the farmers have used more than one type of insecticide. Other insecticides used are 22 ten ( 4 farmers). Geteax (3 farmers) Ekalics (9 farmers) Edasulphaton ( 3 farmers) Miliathon (6 farmers) Zaired (6 farmers) and M 45 ( 9 farmers).

TABLE NO.4.14

TYPE OF INSECTICIDES USED

Place Type of insecti- des	Jath	Bilur	Dafalapur	Revanal	Mendgari	Total
Nevacron	13	9	7	2	1	32
Democron	10	8	9	2	2	31
Rogar	13	6	2	2	1	24
ZZ, Ten	3	-	-	1	-	4
Getax	2	-	-	1	-	3
Ekalics	5	2	2	-	-	9
Edasulphaton	1	2	-	-	-	3
Millathon	1	3	2	-	-	6
Zairad	1	3	1	-	1	6
M 45	2	5	1	-	1	9
Total	50	38	24	8	6	127

The insecticides have been used in different combination and at different times, however, the total amount of insecticides used per acre comes to 3.5 Kg. used in increasing quantities. Starting with 0.5 Kg. and ending up with 200 Kg. indicating greater quantities used as the grape vines became more mature and productive depending upon the type, combination of quantities and area over which the insecticides have been used. The cost varied between Rs. 1,000 and Rs. 10,000 per acre per year.

TABLE NO. 4.15

ANNUAL COST OF INSECTICIDES USED PER ACRE

Place Cost (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mandgari	Total
1000- 2000	9	10	9	-	2	30
3000- 4000	6	3	-	2	-	11
5000- 6000	2	2	-	-	-	4
7000- 8000	3	-	-	-	-	3
9000-10000	1	-	1	-	-	2
Total	21	15	10	2	2	50

The majority of sample farmers reported to be spending less than Rs. 4,000 per acre per year on insecticides. Infact, this is an overwhelming majority ( 82 per cent) of the whole sample size. This could possible be correlated to the type of

insecticides used. The reasons for the overwhelming use of mainly three types of insecticides could be their prices competitiveness which has possible reflect in the cost of insecticides. However, four farmers reported to be spending between Rs. 5,000 and Rs. 6,000 per acre per year, 3 farmers between Rs. 7,000 and Rs. 8,000 per acre per year and only two farmers spent upto Rs. 10,000 per acre annually on insecticides.

The grape cultivators in Jath Taluka have been using a large variety of pesticides.

TABLE NO. 4.16

TYPE OF PESTICIDES USED

Place Type of Pesticides	Jath	Bilur	Dafalapur	Revnal	Mandgari	Total
Baizon	5	2	2	-	-	8
M 45	2			1	2	6
Cacover	1	-	-	1	-	2
Rogar	2	-	-	-	-	4
Rodomil	6	6	5	-	-	17
Baletin	3	3	1	-	-	6
J.M.Hormons	1	4	4	-	-	8
Biacks	4	2	2	-	-	9
ZZ,ten	1	-	-	-	1	2
Sulphates	4	3	3	-	-	7
Saided	3	-	-	-	-	3
Vetesul	2	-	-	1	-	4
Zairod	1	3	3	-	-	4
Bordonition	-	2	2	1	1	4

These pesticides include Baizon, M 45, Cacowar, Rogor, Rodonil, Baletin, Bairks, 22 ten sulphates, Saided, Wetesul, Zairod, Bordonition etc. As in the case of insecticides so also with pesticides a number of and combinations of these were used. However, only one type, rodonil was used by 17 farmers (highest) followed by Biacks ( 9 farmers) and Baizon and J.M. Hormones ( 8 farmers ) . Thus the distribution and use of pesticides was more even with a slight skew in favour of a few. The quantities of pesticide doses used ranged between 120 grams and 180 grams per acre, totalling 425 grams per acre.

The cost of pesticides used ranged between Rs. 1,000 and Rs. 6,000 (Table No. 4.17.)

TABLE NO. 4.17

COST OF PESTICIDES USED

Place Cost (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
1000-2000	11	10	7	2	2	32
2000-3000	3	2	1	-	-	6
3000-4000	4	2	-	-	-	6
4000-5000	1	-	1	-	-	2
5000-6000	2	1	1	-	-	4
Total	21	15	10	2	2	50

Most of the farmers( 64 per cent of the sample size) spent upto Rs. 2,000 on pesticides. Four farmers reported spending upto Rs. 6,000 on pesticides, whereas, six each upto Rs. 3,000 and Rs. 4,000 respectively, with two farmers spending upto Rs. 5,000 on pesticides.

✓The quality of grapes is an important factor in grape cultivation. The farmers must, as far as possible, gear their activities to better the quality of grapes grown on their farms. This perforce need harmones treatment. All the 50 sample grape cultivators used one or the other type of hormones. The quantity of hormones used by the farmers varied between 200 ml. and 400 ml plus 215 grams. The hormones are sprayed on every grape vine in accordance with the advice given by the government agricultural experts in the area. The types of hormones used are indicated in Table No. 4.18.

TABLE NO. 4.18

TYPES OF HORMONES USED

Place	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Rodomil	1	1	2	1	-	6
Vipul	13	12	9	2	2	38
Agromean	4	2	-	-	1	7
Micanelph	4	6	1	-	-	11
Suphala	2	-	-	1	1	4
Photoshim Sulphate	4	1	2	1	-	8
Paras	6	4	6	1	1	18
Phoshmay-sion	2	1	1	-	-	4
Bilzon	4	2				6
<u>Total</u>	<u>30</u>	<u>29</u>	<u>22</u>	<u>6</u>	<u>5</u>	<u>71</u>

These are, again used in combinations, and the sample farmers have used more than one type of hormones. The most widely used hormones are vipul type ( 76 per cent of the farmers) followed by paras ( 36 per cent) and micanelph ( 32 per cent).

The cost of hormone used on the vineyards ranges from, as low as Rs. 200 per year and as high as Rs. 5,000 per year (Table No. 4.19.).

TABLE NO. 4.19

COST OF HORMONES USED PER ACRE

Place Cost(Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
200- 400	8	2	-	-	-	10
500-1000	6	7	4	2	1	20
2000-3000	7	4	2	-	-	13
4000-5000	-	2	4	-	1	7
<u>Total</u>	<u>21</u>	<u>15</u>	<u>10</u>	<u>2</u>	<u>2</u>	<u>50</u>

Ten of the sample farmers spent upto Rs. 400 on hormones ( 8 in Jath and 2 in Bilur) 20 spent between Rs. 500 and Rs. 1,000 ( 6 in Jath, 7 in Bilur, 4 in Dafalapur, 2 in Revnal and 1 in Mendgari), 13 between Rs. 2000 and Rs. 3000 ( 7 in Jath, 4 in Bilur, 2 in Dafalapur, and 7 farmers spent between Rs. 4,000 and Rs. 5,000 for the purpose ( 2 in Bilur, 4 in Dafalapur and 1 in Mendgari).

All the sample farmers also used gibberelic acid through both the dipping and spraying methods. The number of dipping and spraying bottles used is shown in (Table No. 4.20) A and (4.20 B.).

TABLE NO. 4.20 A.

A NUMBER OF BOTTLES ( DIPPING AND SPARYING)

Place No.of Dipping Bottles	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
5 - 10	3	2	3	1	-	9
10- 15	9	3	4	-	1	22
15- 20	9	5	3	1	1	19
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

TABLE NO. 4.20B.

NO.OF SPARYING BOTTLES

Place No.of Srraying Bottles	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
1 - 3	5	3	-	-	-	8
3- 5	5	8	4	2	1	18
5 - 10	8	5	6	-	1	21
10- 15	3	-	-	-	-	3
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

A fairly large number of dipping bottles were used on the whole fortyone of the fifty sample farmers used between 10 and 20 such bottles, with only 9 farmers used upto 10 bottles. As far as spraying gibberlic acid is concerned, 39 farmers used only 3 bottles and 10 bottles, eight farmers used only 3 bottles and 3 farmers used between 10 and 15 bottles.

The annual cost of using gibberic acid ranged between Rs. 800 and Rs. 6000 (Table No. 4.21).

TABLE NO. 4.21

ANNUAL COST OF THE GIBBERELIC ACID

Place Cost(Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
800 -1000	5	3	-	-	-	8
1000-2000	6	4	2	2	2	16
2000-3000	7	2	1	-	-	10
3000-4000	1	3	6	-	-	10
4000-5000	-	1	1	-	-	2
5000-6000	2	2	-	-	-	4
Total	21	15	10	2	2	50

The number of farmers in the different ranges were more or less evenly distributed except for the two higher range costs i.e 2 for Rs. 4000 Rs. 5000 the total cost of gibberlic acid in the

range of Rs. 1000 and Rs. 2000 accounted for 16 of the total sample farmers.

In order to have 'orderly' growth of grape vines gardling is undertaken. All the fifty farmers undertook gardling activity of both the types, cane gardling and trunk gardling. The minimum cost per year of gardling was Rs. 200 and the maximum was Rs. 1500. (Table No. 4.22).

TABLE NO. 4.22

COST OF GARDLING PER YEAR

Place Cost(Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
200- 400	6	3	-	1	1	11
400- 500	11	3	2	1	1	18
500- 800	-	4	1	-	-	5
800-1000	2	4	3	-	-	9
1000-1500	2	1	4	-	-	7
<u>Total</u>	<u>21</u>	<u>15</u>	<u>10</u>	<u>2</u>	<u>2</u>	<u>50</u>

The majority of farmers incurred upto Rs. 1000 as cost of gardling. Only seven farmers had a higher cost upto Rs. 1500.

Besides gardling, the grape vines need to be 'pruned' in the form of thinning. Thinning is a process whereby 'extra' branches as well as berries are deliberately cut off. This allows for healthier growth of vines and for better and bigger

bervies which are then more lucious. All the farmers undertake the thinning process, both berry thinning and branch thinning This is quite a labour intensive process, but the type of labour required should be both experienced and knowledgeable. The cost of thinning varied between the minimum of Rs. 500 and the high of Rs. 4000. (Table No. 4.23).

TABLE NO. 4.23

ANNUAL COST OF THINNING

Place Cost(Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
500- 800	8	2	1	-	1	12
800-1000	4	4	3	-	-	11
1000-1500	4	2	2	1	1	10
1500-2000	1	2	3	1	-	7
2000-3000	2	-	-	-	-	2
3000-4000	2	5	1	-	-	8
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

The annual thinning cost for 33 farmers was upto Rs. 1500 and 17 farmers reported such cost to be varying between Rs. 1500 and Rs. 4000.

A conscious farmer, looking for greater returns from his investment on the grape form must be on the look out for those natural factors which hamper productivity. One such factor is 9, the weeds which grow inhampered'inaided'. Those weeds have to be removed which involve labour intensive methods. Thus weeding

process requires large amount of labour which has been supplied by family members casual labours as also with the help of chemical weedicides (Table No. 4.24).

TABLE NO.4.24

METHOD USED FOR REMOVING WEEDS

Place Method	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Family members	5	11	9	2	2	29
Hired labour	20	15	10	1	1	47
Chemicals Weedicides	1	-	-	-	-	1

Members of each family engaged under this activity, but almost all sample families hired labour for the purpose. Only one such family in Jath used a third method along with other methods, i.e. using chemical weedicides.

The cost of weeding ranged between Rs. 200 and Rs. 5000 per year. Thirty two farmers reported such cost as upto Rs. 1,000. (Table No. 4.25).

Eleven further reported incurring weeding costs between Rs. 1000 and Rs. 2000, eight between Rs. 2000 and Rs. 5000.

TABLE NO. 4.25  
COST OF WEEDING

Place Cost of weeding (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
200- 500	5	4	2	2	-	13
500-1000	5	7	6	-	-	18
1000-1500	3	1	1	-	1	6
1500-2000	2	2	-	-	1	5
2000-2500	2	-	-	-	-	2
2500-5000	4	1	1	-	-	6
Total	21	15	10	2	2	50

✓ The farmers (Sample) have been using borrowed money on the development of the grape farms, most of these farmers have borrowed from the co-operative Sector whereas only twelve have taken to recourse to financial intermediaries (Table No. 4.26).

TABLE NO.426  
SOURCES OF FINANCE

Place Sources	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Co-op. Institute	13	13	8	2	2	38
F.I.	8	2	2	-	-	12
Total	21	15	10	2	2	50

The amount borrowed ranged between Rs. 2,000 ( minimum) and Rs. 5,000 (Maximum) (Table.No. 4.27).

TABLE NO. 4.27

AMOUNT BORROWED

Place Amount (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
20000-25000	5	6	4	-	-	15
25000 -30000	2	-	-	-	1	2
30000-35000	3	2	2	-	1	8
35000-40000	9	3	1	2	-	15
40000-45000	1	1	1	-	-	3
45000-50000	2	3	2	-	-	7
Total	21	15	10	2	2	50

Fifteen farmers borrowed upto Rs. 25,000, whereas only two farmers took loans to the tune of Rs. 25,000 to Rs. 30,000, eight between Rs. 30,000 and Rs. 35,000, fifteen between Rs. 35,000 and Rs. 40,000, three between Rs. 40,000 and 45,000 and seven between Rs. 45,000 and Rs. 50,000. These loans carried on interest rate burden varying from 12.5 per cent per year to 17 per cent( maximum) per year (Table No. 4.28).

TABLE NO. 4.28

RATE OF INTEREST

Place Rate of Interest	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
12.5	6	5	1	-	1	13
13.5	4	-	-	-	-	4
14.5	7	7	8	-	-	22
15.5	2	2	1	-	-	5
16.5	-	1	-	-	1	2
17.0	2	-	-	2	-	4
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

A large number of sample farmers interest burden came to about 14.5 per cent per year. Only 11 farmers paid more than that and from among these only four were charged an interest rate of 17 per cent per year. Further most of the farmers borrowed for a maximum period of 5 years. Infact only 5 farmers needs for such loans went beyond five years.(Table No. 4.29).

TABLE NO.4.29

LOAN PERIOD

Place Borrowed Period	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
1 - 3	10	9	7	-	1	27
3 - 5	7	6	3	2	-	18
5 - 7	4	-	-	-	1	5
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

There are times when farmers are not in a position to own all the equipment and the implements required in grape cultivation, Seven of the total fifty farmers borrowed/hired equipments and implements (Table No. 4.30). Mainly from the co-operatives. The cost of use of implements and equipments varied between Rs. 200 per year ( minimum) to Rs. 2000 per year ( maximum) Table NO. 4.31.

TABLE NO. 4.30

SOURCE OF EQUIPMENT AND IMPLEMENTS

Place Source	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Own	19	12	10	-	2	43
Hired	2	3	-	2	-	7
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

TABLE NO. 4.31

EQUIPMENT AND IMPLEMENTS COST PER YEAR

Place Cost (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mandgari	Total
200- 400	1	2	-	1	1	5
500- 800	10	3	2	1	1	17
800-1000	9	5	4	-	-	18
1000-1500	-	4	4	-	-	8
1500-2000	1	1	-	-	-	2
<b>Total</b>	<b>21</b>	<b>15</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>50</b>

The introduction of Thomson Seedless grapes to a wide variety of grapes like Bangalore, Purple, Bhokani, Cheema Shahebi Koli, Koli, Sahaebi etc. has increased the prospects of enhancing total grape production with this prospect, the market for grapes has widened substantially due to the climatic conditions in the grape growing areas. The vines are to be pruned from September to October and the crop is matured and harvested from late December to early April. Harvested grapes should immediately be packed and despatched to various trade centres by the mode of transportation available.

The distribution system employed by grape farmers( in the sample) is represented in Table No. 4.32.

TABLE NO. 4.32

MARKETING DISTRIBUTION SYSTEM

Place Distribu- tion system	Jath		Bilur		Dafalapur		Revnal		Mendgari		Total	
	L	O	L	O	L	O	L	O	L	O	L	O
Farmer to Consumers	-	-	-	-	-	-	-	-	-	-	-	-
Farmer to Agent	8	20	4	14	4	10	2	2	-	1	18	47
Farmer to Wholesaler	-	-	-	-	-	-	-	-	-	-	-	-
F to Retailer to Cous.	-	-	2	-	-	-	-	-	1	-	3	-
<b>Total</b>	<b>8</b>	<b>20</b>	<b>6</b>	<b>14</b>	<b>4</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>21</b>	<b>47</b>

Note : L : Denotes Local; and O:Denotes Other.

The farmers can either have their own retail outlets or sell through the agents or to the wholesalers or to the consumer through the retailers. The farmers can sell either in the local market or can dispose of their product in the other areas. They could follow a combination of all these. As indicated in the table not a single farmer could sell through on owned retail outlet. All the farmers sold grapes in the local market through an agent. Besides that 47 of the sample farmers sold in other markets through agents and three disposed of their grapes through the retailers, but in the local market, there was no arrangement made by the farmers to sell their produce directly to the wholesalers. Thus the importance of the middlemen can hardly be minimised.

The despatch of grapes to various markets from farm houses of a all 50 farmers( Table No. 4.33 is assisted by the available transport facilities. Such facilities in Jath Taluka include the use of trucks, tempos, railways, and others, (Table No.4.34).

TABLE NO. 4.33

STORAGE OF GRAPES

Place Mode	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Ware houses	-	-	-	-	-	-
Farm houses	21	15	10	2	2	50
Others	-	-	-	-	-	-
Total	21	15	10	2	2	50

TABLE NO. 4.34

TRANSPORTATION

Place Types of Transport	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Trucks	17	14	10	2	2	45
Tempos	14	13	10	2	1	40
Railways	4	3	2	2	1	12
Airways	-	-	-	-	-	-
Others	-	-	-	-	-	-

Very few farmers used railway facilities probably reflecting the non availability of regular timing and convenient railway service. It is important to note that the total season for marketing grapes extends from 90 to 100 days. During the late harvesting season which approaches summer, the temperature rises and the incidence of damages/ spoilage in transit also rises. Thus grapes once harvested should reach the markets within period of fortyeight hours beyond which the rate of spoilege would depend upon the length of delay. In order to reduce the incidence of spoilage in transit a fairly cheap and dependable type of packaging is a must. All the sample farmers used corrugated paper boxes for the purpose. The market areas where the grapes from Jath Taluka are sold(besides, of course the

local market), are Bombay, Pune, Sangli, Bangalore and Calcutta (Table No. 4.35).

TABLE NO. 4.35

MARKET PLACES

Place Market Place	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Bombay	20	15	10	2	2	49
Pune	3	1	-	2	-	6
Sangli	4	5	6	-	-	15
Banglore	4	3	4	-	-	11
Calcutta	2	-	-	-	1	3
Total	33	24	20	4	3	84

The farmers spread/ their risks by selling in these areas but it is also clear that most of these market areas are of about 12 hours journey from the producing area except Calcutta. This is mainly because of lack of proper and reasonably priced transportation facilities, Bombay appears to be the most important market as 49 of the 50 sample farmers sell their produce there, followed by Sangli, Bangalore, Pune, Calcutta in that order of importance.

Despite care taken in packaging, all the sample farmers reported spoilage ranging between a minimum of 5 per cent of all the boxes to a maximum of 10 per cent (Table No. 4.36).

TABLE NO. 4.36

PERCENTAGE OF BOXES SPOILT ( AVERAGE)

Place Percentage	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
5	5	4	-	1	1	11
8	2	3	-	-	-	5
9	5	1	-	1	1	8
10	9	7	10	-	-	26
Total	21	15	10	2	2	50

The farmers reporting a 10 per cent ( boxes) spoilage are very large, 26 followed by 5% spoilage (11 farmers), a per cent spoilage ( 8 farmers) and 8 per cent spoilage( 5 farmers). The major reasons reported by all the sample farmers was lack of cold storage facilities, inadequate and timely transport and negligence in handling.

In order to be on the safe side, all the farmers prefer payments to be made through the banking system (Table No. 4.37).

TABLE NO. 4.37  
METHOD OF PAYMENT

Place Method of Payment	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Through Bank	21	13	10	2	2	48
Cash	-	2	-	-	-	4
Total	21	15	10	2	2	52

The payment is guaranteed.

Only one farmer from Jath accepted cash payment as also payment through the Banking system.

The mode of payment used is both the cash and credit type.  
(Table No. 4.38).

TABLE NO. 4.38  
METHOD OF SELLING

Place Method	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Cash	10	9	10	-	-	29
Credit	11	6	-	2	2	21
Total	21	15	10	2	2	50

Of the fifty sample farmers, 29 preferred and used the cash method of sale while the remaining sold on credit basis.

The price realised by the sample farmers for a two kilograms packing ranged between Rs. 20 (minimum) and Rs. 35 (maximum) Table No. 4.39.

TABLE NO. 4.39

"PRICE" PER BOX

Place Price	Kg.	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
20-25	2	1	5	-	-	2	8
25-30	2	3	1	3	-	-	7
30-35	2	4	2	-	-	-	6
35-40	5	7	3	5	2	-	17
40-45	5	6	4	2	-	-	12
Total		21	15	10	2	2	50

Twentynine farmers realised between Rs. 35 and Rs. 45 for a box of grapes of five kilogrammes, each probably indicating the quality of grapes produced and sold by them, eight of the farmers realised upto Rs. 25, seven between Rs. 25 and Rs.30, and only six between Rs. 30 and Rs. 35; for a pack of two kilograms each.

As has been discussed earlier almost all the sample farmers disposed of their produce in the market, both local and otherwise, through agents, the farmers had to pay commission to these agents. The commission ranged between five and ten per cent. (Table No. 4.40).

TABLE NO. 4.40

PERCENTAGE OF COMMISSION

Place Percentage	Jath	Bilur	Dafalapur	Revanal	Mendgari	Total
5	2	2	-	-	1	7
8	12	6	1	1	1	21
9	4	5	9	-	-	18
10	1	2	-	1	-	4
Total	21	15	10	2	2	50

In fact, the commission rate was dustered for most of the farmers around eight to nine per cent, only four farmers reported to have paid a commission of ten per cent, and seven farmers paid a commission of five per cent.

The farmers also try to increase their clientelle by advertising through magazines ( 15 farmers) and through the use of attractive lables on their grape cartons (49 farmers) Table No.4.41.

TABLE NO. 4.41

METHODS FOR USED FOR ADVERTISING

Place	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Mazinging	3	8	2	1	1	15
Lable	20	15	10	2	2	49

The cost of advertising ranged between Rs. 200 per year to Rs. 1500 per year ( Table No. 4.42).

TABLE NO. 4.42

ADVERTISING COST PER YEAR

Place Cost (Rs.)	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
200-300	5	4	3	-	2	14
400-500	8	8	4	-	-	20
600-700	6	2	3	-	-	11
800-900	-	-	-	2	-	2
1000-1500	2	1	-	-	-	5
Total	21	15	10	2	2	50

As can happen with any agricultural produce, farmers producing grapes may be saddled with unsold loose grapes. Depending upon the type of grapes unsold the farmers try to dry them off to produce 'raisins' or Prune'. Failing that they

distribute these locally exgratia (Table No. 4.43).

TABLE NO. 4.43

USE OF UNSOLD AND LOOSE GRAPES

Place Use of Grapes	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
Raisins/ Prune	19	11	9	-	2	41
Free Distribution	14	11	6	2	1	34

Farmers would naturally make all efforts to transform unsold loose grapes into raisins or prunes. Fortyone of the sample farmers did this. But despite that thirty four farmers were forced to distribute loose and unsold grapes free.

The income earned by the farmers from grape cultivation as reported by the sample farmers was Rs. 2,500 minimum and Rs. 45,000 (maximum) (Table No. 4.43 ).

TABLE NO. 4.44

INCOME DISTRIBUTION ( OUT OF GRAPE CULTIVATION )

Income	Jath	Bilur	Dafalapur	Revnal	Mendgari	Total
2500- 5000	5	2	-	2	-	9
5000-10000	1	-	-	-	1	2
10000-15000	3	-	2	-	-	5
15000-20000	2	2	2	-	-	6
20000-25000	6	5	4	-	1	16
25000-30000	3	2	-	-	-	5
30000-40000	2	2	1	-	-	5
40000-45000	-	1	1	-	-	2
Total	21	15	10	2	2	50

Thirty eight farmers earned upto Rs. 25,000 whereas the remaining earned more than that amount, only two farmers earned between Rs. 40,000 and 45,000. Infact, there were nine farmers who earned maximum of Rs. 5,000 from this activity.