THE ECONOMIC IMPACT OF FIG PRODUCTION ON DRY LAND FARMERS IN PUNE DISTRICT

(WITH SPECIAL REFERENCE TO PURANDAR TALUKA, FROM 2005-06 TO 2009-10)

A Thesis Submitted to Tilak Maharashtra Vidyapeeth, Pune (Deemed University) for the Doctor of Philosophy (Ph. D.) Degree in Economics

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C E R T I F I C A T E

This is to certify that the thesis entitled, "**The economic impact of fig production on dry land farmers in Pune District** (with special reference to Purandar Taluka, from 2005-06 to 2009-10)" which is being submitted herewith for the award of the Doctor of Philosophy degree in Economics of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by Shri. Durgade Digambar Ganpat under my supervision and guidance. To the best of knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any degree or similar title of this or any other university or examining body.

Place : Pune.

Date : 30.12.2011

Dr. B. D. Kulkarni
Research Guide

D E C L A R A T I O N

I hereby declare that the thesis entitled, **The economic impact of fig production on dry land farmers in Pune District** (with special reference to Purandar Taluka, from 2005-06 to 2009-10) submitted by me for the degree of Doctor of Philosophy (Economics) is my original work and has not previously formed the basis for the award or any degree or other similar title of this for any other university or examining body.

Place : Pune

Date : 30.12.2011

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ABBREVIATIONS

1) A Farmers = Fig Producer farmers.

2) B Farmers = Non Fig producer farmers.

3) A.O = Agriculture Officer.

4) B. D. O. = Block Development Officer.

5) NABARD = National Bank for Agriculture and Rural Development.

6) PDCC Bank = Pune District Central Co-Operative Bank.

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Agriculture is an engine of economic growth and development. Agriculture constitutes the main source of employment of the majority of the world's poor. The share of agriculture in total employment in developing countries constitutes 53% of the total work force in 2004. The history of the world provides overwhelming global evidence that general economic growth of any nation must be preceded or at least accompanied by solid agricultural growth. Agriculture has played this central role. Since the Agricultural Revolution in England this process still applied today, and poor countries in Africa, Asia and South America will be no exception.

When we think of sustainable development, the agricultural sector of any economy is viewed broadly to encompass the associated aspects of food, farming and natural resources management.

Agriculture in India has a long history, dating back to ten thousand years. Today India ranks second the world in respect of Farm output. Agriculture and allied sectors like forestry and loggings accounted for 16.6% of the GDP in 2007. It employed 52% of total work force. It is still the largest economic sector

and plays a significant role in the overall social economic development of India. India is the largest producer of fresh fruits. It is second only to China in the production of rice. It is second largest producer of Cashews, Cotton seed, fresh vegetable. It is largest producer of Mango, Papaya, and Sapota.

1.2 FRUITS.

About 10 percent of total production of the fruits in the world is produced in India. India holds the first position in the world in producing Papaya, Mangoes, Sapota and Banana.

India produces large variety of food crops. The diversified agriculture is the priority of the central government. The technical and financial support is being extended to farmers to encourage diversitzation especially in the areas of horticulture, floriculture, medicinal and aromatic plants, apiculture (bee-keeping) and sericulture, Maharashtra, Tamilnadu, Karnataka, Andhra Pradesh, Bihar, Uttar Pradesh and Gujrat are the major fruits growing states in India.

1.2.1 Production of the fruits in the World :

Table 1.1 indicates the figures of cultivated area and production of the fruits in various countries of the world.

Table 1.1
Fruit production of the world

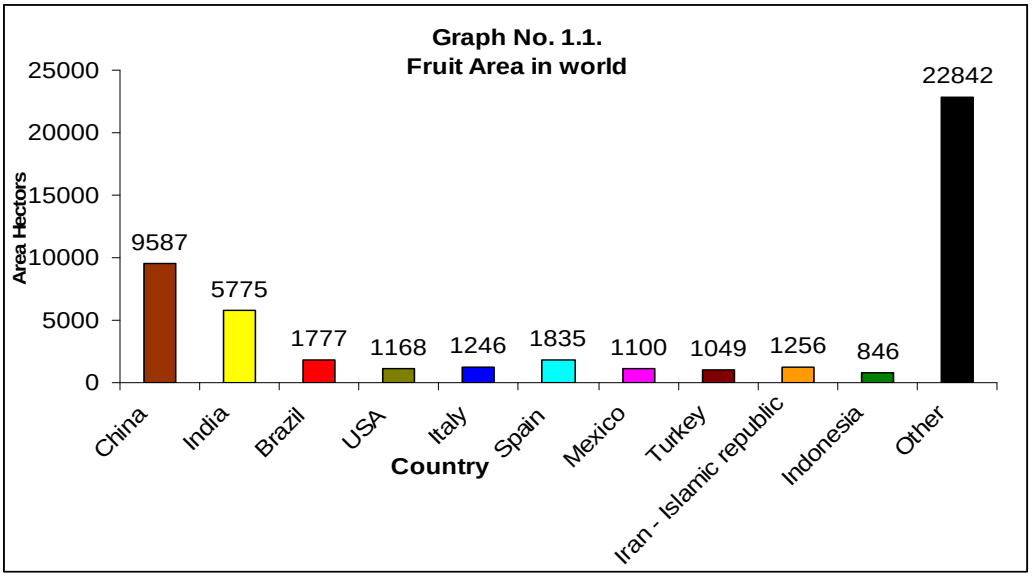
Sr. No.	**Country**	**Area** (in '000 hectares)	**Production** (in '000 metric tonne)	**Productivity** (per hectare/ tonne)
1.	China	9587	94418	9.85
2	India	5775	63503	11.00
3	Brazil	1777	36811	20.72
4	USA	1168	24963	21.37
5	Italy	1246	17981	14.36
6	Spain	1835	15293	8.33
7	Mexico	1100	15041	13.67
8	Turkey	1049	12390	11.81
9	Iran - Islamic republic	1256	12102	9.64
10	Indonesia	846	11615	13.73
11	Other	22842	208044	9.11
	Total	**48481**	**512070**	**10.56**

Source: Agriculture Department, Govt. of Maharashtra - 08.

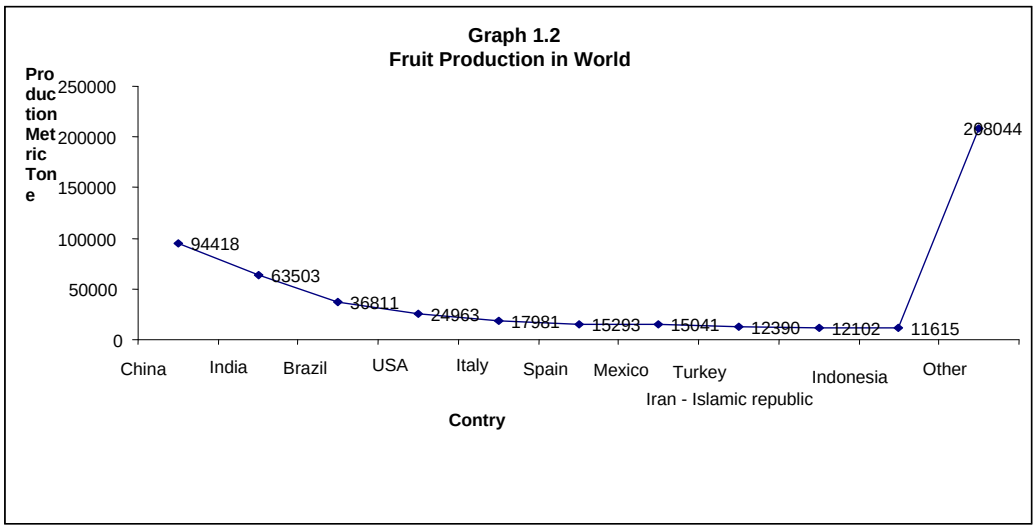
It is observed from table 1.1 that the total land brought under cultivation of the fruits in the world is 48,481 thousand hectares, while the total production of the fruits is 512070 thousand metric tonne. Productivity of the fruits per hectare is 10.56 metric tonne.

In production of fruits, China ranks first and India ranks second in the world. The land brought under cultivation of the fruits is 9587 thousand hectares in China and 5775 thousand

hectores in India. With productivity of 21.37 tonne per hectare, United States of America ranks first in the world; while India ranks seventh in the world with 11.00 tonne per hectare which is more than China by 9.85 tonne. The graphs indicating fruit cultivation area in world and fruit production in world are given in graph 1.1. and 1.2.



Source : Table No. 1.1



Source : Table No. 1.1

1.2.2 Production of the Fruits in India.

In India, the land brought under plantation of the fruits is increasing constantly, as the plantation of the fruits receives various grants. Table 1.2 reveals the production of fruits in India.

Table 1.2
Fruit Production in India.

Year	**Area** ('000 hectare)	**% increase/ decrease**	**Production** ('000 m. tonne)	**% increase/ decrease**	**Productivity** (m.tonne/hectare)
2005-06	5324	-	55356	8.10	10.4
2006-07	5554	4.14	59563	7.06	10.7
2007-08	5775	3.82	63503	6.20	11.0

Source: Agriculture Department, Govt. of Maharashtra, 2009-10, Pune

It is observed from table 1.2 that the area under fruits production in India increased by 8.40 % from 5324 thousand in 2005-06 to 5775 thousand hectares in 2007-08.

The production of fruits increased by 14.71 % from 55356 thousand tonnes in 2005-06 to 63503 thousand tons in 2007-08. The productivity of fruits has also registered upward trend from 10.4 m. tonne per hectare in 2005-06 to 11.0 m tonne per hectare in 2007.08.

1.2.3 Statewise Production of the fruits:

Table 1.3 indicates the statewise production of the fruits in India.

Table 1.3
Statewise production of fruits in India

Sr. No.	**State**	**Area** (in '000 hectares) 2005-06	**Rank**	**Production** (in '000 metric tone) 2005-06	**Productivity** (per hectare/ tonne) 2005-06
1	Maharashtra	7.5	24	10252.3	1432.3
2	Andhra Pradesh	11.1	16	8696.4	853.0
3	Tamilnadu	22.4	3	5778.6	292.3
4	Gujarat	17.3	6	4677.6	306.9
5	Karnataka	16.1	8	4241.8	279.0
6	Uttar Pradesh	11.1	14	3137.2	316.0
7	Bihar	11.1	15	3084.9	286.2
8	West Bengal	13.3	11	2301.7	194.3
9	Keral	8.2	21	2793.1	323.3
10	Jammu Kashmir	7.39	23	1389.3	194.9
11	Aasam	12.0	12	1352.1	122.7
12	Orisa	5.9	27	1403.4	265.3
13	Madhya Pradesh	25.1	2	1173.0	46.7
14	Punjab	14.5	10	746.3	61.6
15	Chhatisgad	9.0	19	601.8	107.7
16	Uttaranchal	4.1	28	676.1	171.3
17	Himachal Pradesh	3.8	29	692.4	202.4

18	Tripura	15.9	9	525.1	34.1
19	Rajasthan	16.9	7	418.5	27.6
20	Zarkhand	11.7	13	388.6	37.6
21	Manipur	6.1	26	189.1	39.1
22	Hariyana	8.7	20	236.2	33.6
23	Meghalaya	8.2	22	231.7	28.6
24	Mizoram	3.6	31	66.0	22.3
25	Arunachal Pradesh	2.0	32	105.1	57.5
26	Goa	17.7	5	183.8	11.0
27	Nagaland	1.9	33	19.6	11.8
28	Pondicherry	31.1	1	52.0	1.7
29	Andaman Nicobar	6.4	25	18.5	30.0
30	Dadra and Nagar Haveli	10.1	18	7.1	1.8
31	Sikkim	1.5	34	13.2	9.3
32	Lakshadweep	3.67	30	1.10	0.35
33	Chandigadh	11.	17	1.10	0.10
34	Delhi	17.95	4	0.99	0.06
35	Dadam and Div.	1.35	35	0.02	0.02
	Total	10.4	-	55356	5775

Source: Agriculture Department, Govt. of Maharashtra, Pune 2009-10,

It is observed from table 1.3 that fruits are produced in all states in India. Pondecherry tops in the list with 31.1 thousand hectares in 2005-06. Total fruits production was 52 thousand metric tonnes. It is followed by Madhya Pradesh, where total

area under fruits was 25.1 thousand hectares with production of 1173 thousand metric tonnes. Tamilnadu ranks third in the list with total area of 22.4 thousand hectares and production of 5778 thousand tonnes. Delhi occupied fourth place with 17.95 thousand hectares and production of 990 m. tonnes. Maharashtra ranks 24th in the production of fruits in India with total area of 7500 hectares and production of 10252 thousand tones.

It is observed that total area under fruits in Maharashtra is 7500 hectares, it has production of 1.2 Lacs tonnes and it is because of the fact that productivity per hectare is highest in Maharashtra.

1.3 FIG FRUIT :

All types of fruits are produced in India, such as, custard apple, pomegranate, jujube, sapota, sweet lime, orange, lemon, banana, jackfruit, apple, grapes, fig, cashew nut, coconut, tamarind, guava, etc. The atmosphere, precipitation and variation of land in India are favourable for cultivation of these various fruits. The fevarouable land, atmosphere, precipitation is also exist in India for the cultivation of fig.

1.3.1 Significance of Fig. :

Fig is an important fruit, which has been under cultivation since ancient time. Fig was unattended crop till the date. But day by day, more and more land is being brought

under cultivation of fig. Farmers who engaged in the fostering of this fruit were being benefited to a large extend. Fig contains minerals such as iron, copper and calcium in a large quantity and plenty of various vitamins. Food items like dry fig, sweetmeat, fig milkshake etc. are made from fig. Due to all these reasons, fig has become a significant fruit. As fig blooms rapidly after cultivation, it becomes possible to bloom the fig in the consecutive year, which facilitates the immediate earnings.

1.3.2 Importance of Fig from Diet's Viewpoint :

People prefer to eat fig, which has sachharine taste. Fresh fig contains sugar (12-18 per cent), calcium, iron, vitamin A and C in a large quantity. Fig is useful to fulfil the deficiency of iron in the blood. Thus, fig being full of various nutrients is nourishing to health. According to Ayurved, fig is used as a medicine to cure the disease, such as disorder of blood, tuberalosis constipation and anaemic illness. Dry fig contains a large quantity of iron along with different types of alkalis and vitamins. Fig keeps the digestive system intact, which helps to increase appetite and it also helps to amplify the quantity of hemoglobin in the blood. Unani practitioners consider a fig to be the best stimulant. Fresh or a dry fig, being digestive, is believed to be a valuable fruit, as it is power gainer and blood purifier.

Fig contains various medicinal properties, as it works as a laxative and appetizer. A fresh or dry fig with warm water, if

taken before sleep, brings a good healthy result within five to seven day. Ayurved alleges that a dry fig proves to be beneficial to cure the problem of insomnia (sleeplessness). A fig proves to be useful to get the rid of constipation, thus, the physical problem arising due to constipation can be prevented.

1.3.3 Importance of Fig as a Dry Fruit :

Dry fig stands at a higher position in dry fruit. An important food contents in a dry fig have been indicated, which bring a significance to fig. Dry fruits are always in a great demand in the festivals like Dasara, Diwali, Ramzan, etc. Dry fig is important in the countries like Iran, Greece and is sold at Rs. 250 to 300 per kg in the domestic market. Thus, to make dry fig, it is necessary to import the suitable breeds of fig to produce it on a large scale in India. Thus, developing the technology and the allied processing industry is a need of the day, which has a great scope in the near future.

1.3.4 Importance of Fig as a processed food item :

Considering the demand for the processed fig in the state and the world, it is essential to cultivate fig, which is suitable to be processed, on a large scale. Grants are being made available through various schemes under National Fruit Production Programme for making various types of food items from the processed fig and for the grading, packaging, storage and sale of

such food items. Every fig producer should take the maximum advantage of these schemes to enhance the production.

Value added process of fig includes the following components.

1. Dry Fig.
2. Fig fruit leather.
3. Fig jam.
4. Dry fruits of fig.
5. Fig pulp.
6. Fig sweetmeat.
7. Fig cake
8. Fig powder.

We had fig production on small scale in the earlier time. Farmers used to get benefited due to a substantial demand for the fresh figs in the market. But now there are many farmers producing the fig, which produce the fig in a large quantity in a fruit season. However, farmers are compelled to face the difficulties to get proper price for their produce due to the absence of sufficient demand for the fruits. Ripened fig can not stay fresh more than 2-3 days; therefore, farmers are motivated to produce value added food items by processing the ripened fig. Thus, considering about the increased production, it would certainly be beneficial, if farmers get

themselves engaged into the processing industry based on fig production.

Members of Shriram Farmers Club of Madha taluka in Maharashtra have decided to develop dry fruits of fig and wine from fig as they have successfully cultivated fig on large scale.

1.3.5 Importance of Fig in the view of deep cultivation:

Fig contains plenty of minerals such as iron, copper and calcium and it also has rich vitamins. Food items dry fig, fig jam, fig sweetmeat etc. are processed from fig fruit. This has made a fig a significant fruit.

It has been noticed in the survey about the marketing a fig that only one person in of one lac population is familiar with fig. Further, only single person in every three lacs people has had the taste of this fruit and in every ten lacs people, only one person enjoys fig regularly. It shows clearly that there is a wide scope for the cultivation of the fig in the forthcoming time. There is scope to sell fig in national as well as international market also. While comparing to other fruits, fig plant bloom in the very first year and it has a blossom twice in every year, which makes the cultivation of fig more profitable.

1.3.6 Importance of Fig to earn Foreign Exchange :

Fig, being a perishable fruit, can be processed to have various food items from it. Food items made from fig like dry fruits are rich in quality and last for more than a year.

Therefore, these foods items can have a foreign market. In the early times, fig was being exported to foreign countries from Maharashtra. Plantation of fig has under taken on large scale owing to good precipitation during last two years. Production of fig certainly will grow in near future. Thus, the surplus production of fig, if exported to foreign countries, would undoubtedly earn huge amount of foreign exchange.

1.4 TYPES AND BREEDS OF FIG. :

Fig belongs to Moraceae family of the flowering plants. It is a foremost fruit developed from the Hypanthodium tye of inflorescence. There are more than 1000 sub breeds in this family. Fig is one of these fruit plants.

There are four types of fig according to the pollination.

a. Capri Fig :

This is also known as 'Forest Fig', This kind of fruits are not eatable, because it contains insects and a dry bunch of flowers.

b. Smirna Fig :

Stiffness of the seeds can be felt while eating Smirna Fig. This type of fig contains high quantity of sugar and can be preserved for a long time.

c. White San Pedro :

First crop of this kind of fig can be taken without pollination; however, pollination is required for the subsequent crop. Plants of this breed are called as 'Breva'.

d. Adriatic Common Fig :

Pollination is not necessary for this kind of fig, because it blooms naturally. Seeds of this breed are thin. These seeds are not useful for new cultivation. This type of fig is cultivated in Saswad (Pune) and Daulatabad (Aurangabad) in Maharashtra. It is also cultivated in Coimbture and some parts of the state of Gujrat. Adriatic common fig is cultivated in the countries like Italy, Spain and France. Fruits of this breed are eatable. Plants of Adriatic Common Fig ensure assured and high quantity of produce compared to Smirna Fig.

Despite of these four types of fig as discussed above, there are many other popular breeds of fig on basis of their cultivation qualities. Research work on fig has been undertaken in various Agriculture Universities in Maharashtra such as Mahatma Phule Agriculture University, Rahuri, Marathwada Agriculture University and Parbhani Agriculture University.

Renowned expert of fig Mr. Bobone has classified fig into different breeds according to fruits size, colour of skin,

taste, length. In accordance with these features, there are 52 breeds of fig. All these breeds are found in Portuguese. Grasovaski, an agricultural scientist, has referred 40 breeds of fig in Palestine; while Italian scientist Ravasini has classified fig into 50 different breeds. Caudit, an agriculturist, has specified that there are 711 breeds of fig, which are known as 946 sub names. Despite numerous breeds of fig having local names as Anjir in Marathi, Hindi and Gujarati following breeds of fig are mostly cultivated and prevalent.

1. Poona Fig :

This breed, having commercial value, is very popular among the farmers. The breed of Poona fig tone with Indian weather and land. The colour of the skin of a fruit is light purple and colour of the pulp is similar to strawberry, besides, it has a sweet taste and the fruit is very delicious. The weight of a fruit is 40-50 gms. and its skin is slender. Because of sweet taste and high quantity of production Poona Fig is cultivated in Western Maharashtra on a large scale.

2. Marsels :

This breed is imported from foreign countries and it is cultivated in mostly in South India. Gradation is not carried out, as the size of a fruit is middling. The skin of a fruit is soft. The colour of a fruit is light green and the taste of a fruit is sweet.

3. Dienna :

The distinctive feature of Dienna fruit is that its average weight is more than other breeds of fig. The colour of this fig is lemon yellow and the colour of the pulp is light yellow. The taste of its pulp is sweet.

4. Dinkar :

This breed has been innovated at Daulatabad. The size of this fruit is comparatively bigger than other. Proceeds from this breed has reached the top when compared to other breeds of fig. The quantity of sugar in the fruit is found up to 21 bricks. Dinkar is more popular in Marathwada and progressively more land is being brought under cultivation of this breed of fig.

5. Black Ichia :

This breed of a fig is known as Black Ichia, as the colour of this fruit is gloomy purple. By and large, black Ichia is cultivated at Lakhnow and Saharanpur in Uttar Pradesh. The fig of this breed survives and grows even in a dry weather condition.

6. Brown Turkey:

The colour of this fruit is brown. This breed of fig has been developed in Saharanpur at Uttar Pradesh and Kodur at Tamilnadu.

7. Coimbtur Fig:

This breed is better than Poona Fig. The trees grow up to two meters. Fruits colours is pink and the fruit has a sweet taste. Production of this breed is moderately high.

8. Conadriya :

Conadriya is imported from United States of America, which is known as high yielding breed. The colour of the fruits is green and the pulp has pink colour. The distinctive feature of this breed is that the fruits can be dried within a short span of time and it is an excellent breed for process industry.

9. Excel :

Excel is a breed of fig, which is imported from USA. The skin of the fruit is yellowish, while the pulp has a colour combination of pink and yellow. The taste of the fruits is sour sweet. Excel figs are excellent in every way as its name indicates itself.

Besides, there are various breeds of fig viz Diredo, Fladders, Mission, Yovhonno, Salebee, Tena, Rainia, Nardine, Vienna, Gulban, Iveram, which are found in the United States of America. Similarly, some breeds of fig are found in India, such as Ganjam, Banglore, Siserram, Kabul, Lucknow, Bezvada, etc.

1.5 HISTORY OF THE FIG :

The sub name of a fig is Anjoos Dumar Simayati. Fig belongs to Moraceae family of Umbar breed. The scientific name of fig is *ficus caruca*. The fig belongs to the family of Umbar, Banyan, Peepul, Jack fruit and Mulberry. The height of the tree of fig is medium.

Fig is a fruit developed from a breed of Umbar. In ancient times, a tree of fig was found near the city of Athens. The tree was known as holy tree. This fact proves that origination of fig was at Greece. Various reference of Bible affirms that proliferation of fig was carried out from the region of Central Sea to the rest of the world. Fig is supposed to be popular fruit during 4000 B. C. Fig is also supposed to originate in Western Asia. Fig was being cultivated in Turkey, Spain, Italy, Greece, Algeria, and Portuguese from the commercial viewpoint. Besides, fig is cultivated also in New Zealand, California, Australia and some region of India. 26 per cent of the total production of fig in the world comes from Turkey. Principally, dry fig was produced in United States of America, Greece, Turkey and Spain.

Fig, has high in nutritious value and rich in food quality, has been popular as strength boosting and as a medicine since ancient times. Fig has a great ancient and historical reference. In India, fig as belonging to the Umbar family is presumed to be

sacred. The origination of fig is believed to be in 3000 B. C. in South Arabsthan.

Mughal Emperor Mohammad Tughlak had shifted his capital city from Delhi to Daulatabad in 1338 A. D. He was associated with few of his colleagues, who were well acquainted with the cultivation of the fruits in Central Asia and Kabul. These associates cultivated the different fruits in the land in Daulatabad. Fig was cultivated successfully along with grapes and strawberry, where the production of fig went on increasing.

In 1550, King of Ahmednagar had given various grants to Christian mission, which was active at Aurangabad, where he stimulated the cultivation of the fruits on a large scale. It helped the cultivation of fig to a great extent. In the middle of seventeenth century, the cultivation of fig was carried out on a large scale at Aurangabad, as there was a very high demand for the fig from the palace and the army of Aurangjeb.

Meanwhile, the fig plant was moved on the way to Pune from Daulatabad. Especially, in 1904, fig was cultivated at Jadhavwadi of Divegaon, in Purandar Taluka. Yet fig is found to be cultivated in a few states.

Fig is also cultivated at Bangalore in the State of Karnataka. There is production of fig in Shrirangpattan and Penkonda of Andhra Pradesh and Saharanpur of Uttar Pradesh

on a small scale. However, Maharashtra State ranks first in the production of fig in India.

1.6 AREA, PRODUCTION AND PRODUCTIVITY OF FIG IN THE WORLD :

Fig has secured a significant place in the world. The figures indicating production, productivity and area covered are revealed in Table 1.4.

Table 1.4
Countrywise area and production of fig in world

S. No.	Country	Area (In hectares)	%	Production	%	Average Production (hectare/tonne)	Rank
1	Albania	9500	2.29	16650	1.56	1.75	10
2	Algeria	49180	11.84	914227	8.55	1.86	3
3	Argentina	251	0.06	827	0.08	3.29	31
4	Australia	30	0.01	56	0.01	1.86	37
5	Azerbaijan Republic	1479	0.35	11361	1.06	7.68	18
6	Bolivia	274	0.07	1750	0.16	6.38	30
7	Bosina and Harjego	2911	0.7	450	0.04	0.15	13
8	Brazil	22	0.01	236	2.22	10	39
9	China	1500	0.36	7000	0.65	4.66	17
10	Columbia	86	0.02	1710	0.07	19.88	36

continued

11	Croatia	1370	0.33	2031	0.19	1.48	20
12	Cairprus	383	0.09	3900	0.36	10.18	29
13	Aquadaur	25	0.01	25	0	1	38
14	Egypt	29000	6.98	170000	15.92	5.86	5
15	France	460	0.11	2648	0.25	5.75	27
16	Greece	2750	0.66	23524	2.2	3.63	15
17	India	2750	0.66	12315	1.15	4.47	14
18	Iran, Islamic Republic	51256	12.34	87522	8.2	1.7	2
19	Israel	109	0.03	1380	0.13	12.66	34
20	Italy	3848	0.93	23269	2.18	6.04	12
21	Japan	1181	0.28	15942	1.5	13.49	22
22	Jordan	542	0.13	3481	0.33	6.43	26
23	Lebanon	1400	0.34	6900	0.65	4.92	19
24	Lebion Arab	1992	0.48	5601	0.52	2.81	16
25	Macedonia	20	0	847	0.1	17.35	40
26	Malta	110	0.03	388	0.04	3.52	33
27	Mexico	1025	0.25	6678	0.62	6.41	23
28	Montenjiro Republic	1200	0.29	4000	0.38	8.33	21
29	Morocco	44000	10.59	77000	7.21	1.75	4
30	Pakistan	2498	0.05	730	0.07	2.93	32
31	Peru	566	0.14	1741	0.26	4.86	25
32	Portugal	85900	20.68	6115	0.57	0.07	1
33	Slovenia	7	0	49	0	7	41

34	South Africa	700	0.17	1525	0.14	2.17	27
35	Spain	20000	4.82	37000	3.47	1.85	6
36	Syrian Arab Republic	10000	2.41	49800	4.66	4.98	9
37	Tayunishia	15000	3.61	25000	2.34	1.66	7
38	Turkistan	15000	15.65	290141	27.18	4.46	8
39	USA	4978	12	46176	4.32	9.27	11
40	Uzbekistan	100	0.02	1400	0.13	14	35
41	Yemen	445	0.11	4569	0.43	10.46	28
	Total	415325	100	1043989	100	2.51	

Source: Agricultural Department of Maharashtra (2009-10) Pune.

Following are the observations from table 1.4

1. The total land brought under the cultivation of fig in the world is 4.15 lac hectares, while in India it is 2750 hectares.
2. Turkey is a leading fig producing country in the world, followed by Egypt and Algeria. India ranks fifteenth in the world. However, in case productivity, India ranks twenty second. Thus, it becomes apparent that there is wide scope for the cultivation of fig in India.
3. Protuguese is a country, where the utmost area of land (85900 hectares) has been brought under the cultivation of fig. followed by Turkey (65000 hectares), Iran (51256 hectares) and Algeria (49180 hectare). On the contrary, in India, the land brought under the cultivation of fig is relatively low, i.e. 2750 hectares.

1.7 AREA, PRODUCTION AND PRODUCTIVITY OF FIG IN INDIA.

In India, the fig is cultivated in the dry areas, of in the states like Maharashtra, Karnataka, Tamilnadu and Andhra Pradesh where the annual rain fall is 500 to 600 mm. In Maharashtra, fig is produced on commercial basis.

Table 1.5 indicates statewise area and production of fig.

Table 1.5
Statewise Area, production and Productivity of Fig

S. No.	**State**	**Area** (in hectares)	**%**	**Production** (m. tonne)	**%**	**Average Production** (Hectare/ Tonnes)
1	Maharashtra	2242	77.34	7894	56.67	3.52
2	Karnataka	641	22.11	6021	43.22	9.39
3	Andhra Pradesh	16	0.55	15	0.11	0.93
	Total	2899	100.00	13930	100.00	4.80

Source: Agricultral department of Maharashtra (2007-08) Pune.

It is evident from table 1.5 in India, the largest area brought under the cultivation of fig is in the state of Maharashtra i.e. 2242 hectares out of 2899 hectares from India. It means that, 77.34% of total area in India cultivated under fig is in Maharashtra. The Productivity of fig in Maharashtra State is 3.52 tonnes per hectare. The productivity of Karnataka is 9.39 tonne per hectare which is 5.87 tonnes more than that of Maharashtra. However, Maharashtra has a great opportunity to increase its productivity. Production in Maharashtra is 56.67

per cent of the total production of fig in India. The average productivity of fig of the country is 4.80 tonne per hectare, while in case of Maharashtra; it is 3.52 tonne per hectare.

1.8 AREA, PRODUCTION AND PRODUCTIVITY OF FIG IN MAHARASHTRA :

The cultivation of the fig in Maharashtra was confined to Saswad, Rajewadi, Walhe, Velu and Khedshivapur in Pune District. But now days the cultivation of fig is extended in other areas of Pune District, such as, Daund Ambegaon, Junnar and Haveli. Likewise, the fig plantation is also taking place in the Districts of Parbhani, Latur, Osmanabad, Ahmednagar, Satara, Solapur and Jalgaon, where the weather is arid.

In Maharashtra prior to 1990, the land brought under the cultivation of fig was 300 hectare and after 1990-91, under employment Guaratnee Scheme, nearly 650 hectare of land has been brought under the cultivation of fig. The area under fig plantation varies between 800 to 850 hectares. At present the total area under the cultivation of fig 2242 hectares. The cultivation of fig is extended in other districts especially Nashik, Solapur, Sangli, and East Khandesh.

The area under cultivation of fig is increasing. It includes mainly Purandar Taluka in Pune District, where Poona fig breed of fig has been planted on a large Scale. In the earlier days, Dinkar, a new breed of fig is being cultivated on a large scale

around Aurangabad. Similarly, Dienna breed is also being cultivated to a greater extent. Even though, the cultivation of Poona fig and Dinkar is taking place commercially on a large scale, the new breeds, such as Dienna, Conadriya and Excel have been tested in the research carried out in Agriculture University at Rahuri.

1.9 CULTIVATION AND PRODUCTION OF FIG IN MAHARASHTRA.

There is a continuous growth in the cultivation and production of fig in Maharashtra from 2005. Table 1.6 describes the cultivation and production of fig in Maharashtra.

Table 1.6
Cultivation and Production of Fig in Maharashtra

Sr. No.	**State**	**Area** (in hectares)	**Average Rate of Growth per year (%)**	**Production** (Tonnes in Lacs)	**Average Rate of Growth per year (%)**
1	2004-05	944	32.03	2763	20.81
2	2005-06	1371	45.23	3587	29.8
3	2006-07	1671	21.88	4118	14.0
4	2007-08	2242	34.17	7894	52.16

Source: Agricultral department of Maharashtra, Pune (2007-08).

It is observed from table 1.6 that the area under the cultivation of fig was 944 hectares in 2004-05, in Maharashtra. It increased up to 2242 hectares in the year 2007-08. It means that the cultivated area increased by 1298 hectares. It makes comprehensible that the growth of 42.10 per cent in the area under the cultivation of fig has taken place in Maharashtra during last three year. The production has

increased by 5131 lac tonne. This growth of production is 35.00 per cent. It leads us to conclude that average productivity of the fig increased.

1.10 AREA OF FIG IN PUNE DISTRICT :

There is an increase in the area under the cultivation of fig in Pune district from 1994-95.

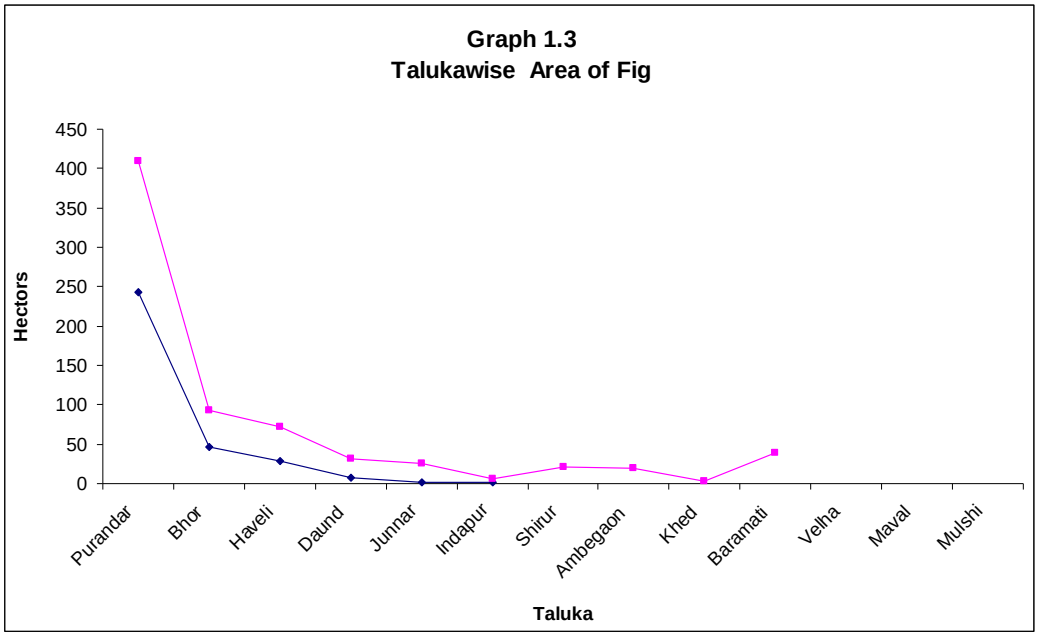
Table 1.7 shows the growth in the total area that has been brought under the cultivation of fig during 1994-95 to 2007-08 in each Taluka of Pune District.

Table 1.7
Talukawise area under the cultivation of fig in Pune District
(Year 1994-95 and 2007-08)

Sr. No.	Taluka	1994-95		2007-08	
		Hectars	%	Hectares	%
1	Purandar	243.00	73.86	410.17	56.99
2	Bhor	47.00	14.51	93.30	12.96
3	Haveli	29.00	8.80	72.55	10.08
4	Daund	8.00	2.45	32.10	4.46
5	Junnar	1.00	0.19	25.45	3.53
6	Indapur	1.00	0.19	5.70	0.79
7	Shirur	-	-	20.30	2.82
8	Ambegaon	-	-	19.34	2.68
9	Khed	-	-	2.30	0.35
10	Baramati	-	-	38.45	5.34
11	Velha	-	-	-	-
12	Maval	-	-	-	-
13	Mulshi	-	-	-	-
	Total	**329.00**	**100.00**	**719.60**	**100.00**

Source: Agricultral department of Maharashtra, Pune (1994-95 to 2007-08).

The growth in area under fig in Talukas in Pune district as shown in Grah No. 1.3



Source : Table 1.7

It is observed from the table 1.7 that the cultivated land of the fig in Pune District has increased from 329 hectares in 1994-95 to 719 hectares in the year 2007-08. This means that the total cultivated area has increased by 390 (45.75%) hectares. In 2007-08 the largest area brought under the cultivation of the fig is 410 hectares (57.40%) in Purandar taluka of Pune District, which was 243 hectares (73.86%) in 1994-95. This means the total cultivated area has increased by 59.24 per cent. Purandar taluka alone occupies 57.40 per cent of the total area under the cultivation of the fig in Pune District.

Poona fig a breed of the fig is prevalent in Pune district, which is a leading region in Maharashtra regarding the

cultivation of fig. Fig is cultivated principally in Khedshivapur in Bhor Taluka, Gogalwadi in Haveli Taluka, Purandar Taluka in Pune District. Similarly, fig is cultivated in Daund, Baramati and Junnar Talukas also. Albeit, fig is known as a rare fruit in India and Maharashtra, it is very popular in the cities of Pune and Mumbai. When we talk about fig, the areas such as Purandar, Saswad and Khedshivapur in Pune district come up on the forefront. Fig of Pune District is poular as Rajewadi Anjir, in the foreign markets. Fig can be bloomed two times in a year in Pune District. Blossom that takes places in the months of July and August in rainy season is known as Khatta Bahar. Fruits of fig which ripen in this season have moderate sweet taste. The colour of the fruits is also not so attractive. The subsequent period of blossom comes in the months of March, April and May, which is known as Meetha Bahar (Sweet Blossom). The fruits in this season have a sweet taste and the quality of the fruits is excellent, which give good earnings. As the fruits is also eye catching. The fig produced by the farmers with the help of a favourable weather condition in the region of Pune is treated as high grade fig.

The fig is cultivated in fifty villages of Purandar Taluka in Pune district. Nearly 1500 (410) hectares land is under cultivation of Poona fig in Purandar taluka. In the last year, Dinkar a new breed of fig was cultivated on the land of 550

hectares as recommended by the university. The fig producing farmers in the village of Gurholi named Ramchandra Khedekar, Mhasku Dadasaheb Khedekar and Bapusaheb Khedekar and exported the fig before two years. Later, fig could not be exported of due to drought in the village.

It is said that for the first time, fig was cultivated before 101 years i.e. in 1904 around Jadhavgadhi near the Dive village in Purandar Taluka of Pune district. Maharashtra State Fig Producer Organization was established at Pune on 2nd August, 2006 with an intention to the increase the area to be brought under the cultivation of fig.

Application of new techniques such as cultivate through graft use of biological fertilizers, achieve the technique of blooming, gardening on water sprinkling, deployment of earthwork fertilizers, pesticides, chemical fertilizers, and organic fertilizer have made the cultivation of fig more profitable in many regions of Maharashtra. Purandar Taluka is a leading region in Pune District in this respect. Especially, the villages in Purandar Taluka, such as Gurholi, Waghpur, Singapore, Rajewadi, Dive, Zendewadi, Kalewadi, Sonori, Vanpuri, Pimple, Supe, Pisarve, Kothale, Chambali, Bhivari, Bobgaon, Garade, Walhe, Hivare, Risepise, Malshiras, etc. have contributed a lot. Besides, the cultivation of fig is constantly increasing in the villages like Khedshivapur (Velu), Shindewadi, Nhavi,

Bhongawali, Kondhanpur of Bhor Taluka, Shirval, Khandala and Bavda.

Moreoever, the grants are given by Government to undertake the cultivation of fig in the regions of Satara, Sangli, Kolhapur, Pune, Nashik and Solapur in western Maharashtra.

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CHAPTER - 2
RESEARCH METHODOLOGY

2.1 INTRODUCTION :

The present research is focused on the study of the economic impact of Fig Production of Dry Land Farmers in Pune district with special reference to Purandar Taluka. The land brought under the cultivation of fig varies between 2500 to 3000 hectares. In India, Maharashtra ranks first in the production of the fig. The fig is cultivated in 2242 hectares of land in Mahrashtra, especially in the districts of Pune, Nasik, Aurangabad and Ahmednagar.

A comparative study of the production and the cost of production of fig producing farmers and non fig producing farmers with dry land farming is carried out in the present research. This research work is based on the Schultz's theory of transformation of traditional agricultural to modern agriculture.

2.2 SCHULTZ'S THEORY :

2.2.1. Introduction

The only significant contribution of Prof. Schultz was his thesis on the subject of Transformation of Traditional Agriculture, [1] published in 1964.

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1. Schutlz Thedore W., (1964), ***Trasnforming Traditonal Agriculture,*** New Haven and London, Yale University Press.

"How to transform traditional Agriculture, which is niggardly, into a highly productive sector of the economy is the central problem"[2] of the thesis put forth by Prof. Schultz.

2.2.2 Summary of Schultz's Thesis :

Schultz's whole thesis of Traditional Agriculture may be summarised in his own words:

The man who is bound by Traditional agriculture cannot produce much food no matter how rich the land. Thrift and work are not enough to overcome the niggardliness of this type of agriculture. To produce an abundance of farm products requires that the farmers has access to and has the skill and knowledge to use what science knows about soils, plants, animals and machines. To command farmers to increase production is doomed to failure even though they have access to knowledge. Instead, an approach that provides incentives and rewards to farmers is required. The knowledge that makes the transformation possible is a form of capital, which entails investment. Investments not only a material inputs in which a part of this knowledge is embedded but importantly also investment in farm people".[3]

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2. Ibid., p. 4
3. Op. cit. 206

His thesis can be studied in two parts.

Part 1 : Traditional Agriculture

Part 2 : Transformation of Traditional Agriculture.

Part 1 : Traditional Agriculture

Agriculture is the back bone of the Indian Economy. Agricultural development is central to economic of the country. It is primary sector of economy. It provides food to mankind and raw material to industry.

2.2.3 Old Doctrines :

Physiocrates believed that the agriculture alone is productive, for it yields, the subsistence of its worker, the earning of entrepreneurs and surplus (rent), while industry and trade are sterile, since no such surplus (extra income) is produced in these two sectors.

The classical economists put forth a dynamic model of growth based on accumulation of capital, Malthusian population law and law of diminishing returns.

Schultz refutes all these doctrines. He believes that these doctrines do not stand empirical tests. Schultz also refutes the doctrine of "disguised unemployment" and factor individualism.

2.2.4 Traditional Agriculture :

Traditional farming is a farming which is carried on with the factors of production used for generations. The countries,

dependent upon traditional agriculture, are poor and these countries spend much of their income on food.

Mellor's[4] model of the Economics of agricultural development is yet another significant contribution to agricultural economics. He published this model in 1966.

Accordingly to Millor, the traditional agriculture is primarily peasant farming characterised by back word primitive and labour intensive agriculture, with low productivity. These are generally small sized farms and in the absence of alternative avenues of employment, labour force employed per farm is much higher as compared to high income countries. Resource allocation is perfect and rational in these developing countries.

The land and labour are the principal inputs of traditional agriculture. Capital exists in traditional agriculture in the form of crude tools and implements, bullocks etc. which have very low productivity.

In short, traditional agriculture tends to be characterised by low level of utilisation of resources, low levels of productivity and relatively high levels of efficiency in combining resources and enterprises.

These three factors are interrelated. Collectively they suggest little scope for rapidly increasing either total production of productivity per unit of the resources within the context of a traditional agriculture, but very great scope of increasing total production and resource productivity through technological change.

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4. Millor, J. W.; (1969) ***Economics of Agricultural Development***, Bombay, Vora and Co.

Part 2 : Transformation of Traditional Agriculture to modern agriculture.

Schultz pointed out traditional agriculture is a particular type of economic equilibrium. It is an equilibrium at which agriculture gradually arrives over a long period of time, provided particular conditions prevail. This type of equilibrium is not readily subject to change.

According to Schultz, traditional agriculture can be transformed in modern agriculture such transformation depends on the following.

a. New factors of production.

b. Availability and price of non traditional (modern) agricultural inputs.

c. Modern material inputs.

d. Farm people with modern skills.

e. Investment in human capital.

Prof. Schultz has stated that, differences in land are least important, differences in the quality of material capital are of great importance and differences in the capabilities of farm people are most important in explaining the differences in the amount and rate of increase in farm production.

Hypothesis of Schultz was that “the rate at which farmers who have settled into traditional agriculture accept a new factor

or production depends upon its profit, with due allowance for risk and uncertainty and in this regard the response is similar that observed by farmers in modern agriculture".[3] He also suggested that farmers are remarkably efficient in allocating the factors at their disposal in current production. According to Schultz, there is no correlation between the size of farms and productivity.

He asserted that modern agricultural inputs must be available at reasonable rate. That will lead to investment in agricultural profitable.

According to Schultz, the investment in human capital has radical social and economic implications41. He emphasized that education is the best form of investment in human capital.

2.3 STATEMENT OF THE PROBLEM:

The statement of this research is, **The economic impact of fig production on dry land farmers in Pune District** (with special reference to Purandar Taluka, from 2005-06 to 2009-10)

2.4 SELECTION OF SUBJECT :

Dry land farming is the main subject of this research.

87 % of the cultivated area in Maharashtra is rain fed. Out of the said area, 40 percent is drought prone – area.

Agriculture is the mainstream of the state of Maharashtra. Agriculture is the main occupation of the people. Both food crops and cash crops are grown in the state. Large

area of the state has been brought under fruit cultivation. There is major proportion of area of the under irrigation.

Even after the realization of the full potential of irrigation across the river basins in the state, the problems of scarcity areas (especially those with low water balance) would continue on the agenda of the planners of agricultural sector. The drought prone area of the state is spread over 89 Talukas and cover 35.4 per cent of the Geo-graphical area of the state.

All types of fruits are produced in India. India is a continental country. The atmosphere, precipation and variation of the land favourable for cultivation of fig also exist in India. The largest area brought under the cultivation of fig is in Maharashtra State.

During 2005-06 total area under fig plantation was 1371 hectares in Maharashtra. The area under fig plantation was 466 hectares (33.92%) in Pune District in 2005-06. This is followed by 206 hectares (14.99%) in Osmanbad, 201 Hectares (14.63%) in Latur, and 195 hectars (14.19%) in Ahmednagar district

Horticulture is useful for dry land farming Maharashtra state is leading for fruit production and hence it is known as Depot of fruits.

On this background the researcher has selected this subject, other reasons are given as under:

1. In India maximum fig production is in Maharashtra and in Mahrashtra, Purandar Taluka, Dist : Pune.
2. In Purandar taluka Fig cultivation and production is concentrated in Walhe, Rajewadi, Sonori, Pimple, Guroli, Dive villages. These villages produce about 90% fig in the district. Walhe is the home town of the researcher and hence the selection.
3. For the plantation of fig production the climate should be dry, Hillslope, Medium Land i.e. slowly tempering and cooling lately is essential. This climate is observed in Purandar taluka.
4. For fig plantation purpose, the dryland is very much profitable.
5. Profit of Fig production is estimated Rs. 2.5 lacs per hectare. In other fruits this is about Rs. 1 to 1.5 lacs only.
6. In India more than 50% fig production is in Purandar Taluka and so this area is selected for study. In last some years there is Draught and even then the fig crop is existing, Familieis are steady living. Due to figs the standard of soil is maintained. Therefore this subject is choosen.

2.5 REVIEW OF RELATED LITERATURE :

The researcher has traced seventeen references for the review of related previous researches and literature. The Research material is classified into following six groups:

Table No. 2.1.

Classification of Reviewed Related Literature

Sr. No.	Literature related to	Sources	Number of researches
A.	Fig	4 books and 3 theses	7
B.	Custard Apple	1 Thesis and 1 Project	2
C.	Pomogranate	2 Articles and 1 Project.	3
D.	Ber	1 Article	1
E.	Other Fruits	2 Articles and 1 Project.	3
F.	Accounts	1 Book	1
		Total	**17**

The review of related literature is narrated as given below.

A. Research material related to the Fig :

1. Patil Ved Prakash[1] has written a book entitled **Fig Plantation after a substantial research on the Crop of fig**. This book is published in 2000 by Continental Publication, Pune. It provides useful information to the researcher for the proposed research.

2. Khaire B. A.,[2] Regional Fruit Research Centre, Pune has published book entitled as **Anjeer Baag.** This book is published in 2001 by Continental Publication, Pune. He has written about the fig and its process in detail. This

Book is helpful to the researcher while arranging the information related to origination and history of the fig.

3. Tayade B. M.[3] submitted his thesis, titled **An Economic Investigation into the production and Marketing of Figs in Pune District** to Mahatma Phule Agriculture University for the degree of Ph. D. in 1971, wherein he studied regarding the production expenditure and marketing expenditure of fig. This information was useful to researcher.

4. Bongane, Satish[4] has presented in 2009 the Ph. D. thesis entitled, **Fig Cultivation in Western Maharashtra and A study of marketing expenditure (Especially in the context of Pune District)**. He has studied the cultivation of the fig and the marketing expenditure in detail, wherein he has accepted a proficient viewpoint.

5. Regaon S. K. [5] presented in 1997 his thesis title **Marketing of Fig in Purandar Block" for the degree of M. Sc. of Mahatma Phule University at Rahuri**. He has shown that the income received by the producer of Pune district and Mumbai is 57.26 per cent and 42.74 per cent respectively.

6. Sanghavi K. U. and Katole Ravindra [6] have published a book, entitled **Fig Plantation and Process Industry**. This book is published in 2008 by Godawa Prakashan, Pune –

9. This book gives detail information of fig output. It provides secondary data for this research.

7. Raut V. G.[7] has published a book entitled **New Fig Plantation in 2005**. This book was published by Saket Prakashan, Aurangabad. This book provides details, analysis of fig plantation.

The review of four books and three theses on fig plantation is taken by the researcher. These books and research work have guided the researcher to frame out his research.

B. Research Material Related To Custard Apple:

Custard apple is produced in Purandar taluka subsequent to fig. The researches carried out in this regard are as follows:

8. Pokharkar S. A. (1996)[8] has carried out **The study of Marketing of custard apple in the district of Beed**, He has explained that for augmentation of custard apple, Rs. 2160/- has to be spent every year.

9. Jadhav Balasaheb (2007)[9] has studied **The production and marketing of custard apple in the Solapur District**. This research would be useful for the production and marketing of the fig.

Custard apple is considered as a substitute fruit to fig. These two references about the study of production,

expenditure and marketing of custard apple are helpful to the researcher to analyse the comparative study of the production, expenditure and marketing of fig fruit and non fig fruits.

C. Research Material Related to Pomogranate :

10. Pujari A. G. (1998)[10] conducted the study on the topic **Proceed and future of pomogranate and Jujube in the District of Solapur** and set forth his findings that the relation between land holding of gardens and the expenditure for raising a crop is contradictory. Similarly, albeit, the expenditure of the cultivation per acre is higher in case of the farmers belonging to a small group, the income per hectare received by them is comparatively high. This article is published in Indian Journal of Agricultural marketing.

11. Bembalkar G. K. (2001)[11] has conducted the research for his M. Sc. degree on the topic titled **Economics of the production and marketing of pomegranate in the Solapur District of Maharashtra State**. Here the cost of production of pomegranate has been analysed. This has provided important information to the researcher to analyse the cost of production of pomegranate.

12. Khunt[12] and others published an article entitled **Economics of production and marketing of**

pomegranate in 2003 in Indian Journal of Agricultural Economics.

These references are useful to the researcher to have comparative analysis of production, expenditure and marketing of fig fruits and non fig fruits in this research.

D. Research Material Related To Ber :

13. Mali B. K. and others[13] have published their article on **Marketing of Ber in Maharashtra in 1997** in Indian Journal of Bihar in Agricultural Marketing.

This article provides the information of Ber in Maharashtra State.

E. Research Material Related to Fruits:

There are two articles and one M. Sc. Research on fruits.

14. Karansingh and others[14] published in 2001 an articles entitled, **Pattern of production and marketing of fruits crops in Punjab** in Indian Journal of Agricultural marketing.

15. Deshmukh Sachin Nanasaheb Submitted a project for M. Sc. Degree, entitled **Production and marketing of fruits in Solapur District in 2004**. His finding are useful to the researcher to compare the production, expenses and marketing of fig and Non fig fruits.

16. Mukharji Ishta and Edward [16] published article, **entitled Economics of fruts marketing in Pune District** in 1993 in Artha Vidnyan Pune.

This provides secondary data for the said research.

F. Accounts of Agriculture.

17. Waghmare R. A. and Bhapkar D. A. [17] have published a book, in 1992, entitled, **Accounts of Agriculture**. This book is published by Continental Publication, Vijay Ngar, Pune. This book is useful for this research.

In this way during the present research work the researcher has referred above literature, giving due citation. This review of related researches was very useful for the researcher at every step of research from preparation of research proposal to the report writing.

2.6 IMPORTANCE OF RESEARCH.

Horticulture is important for water scarcity zone. The soil of the scarcity zone is brown to black, clacarious and with varying depth and texture. 87% of the cultivated area in Maharashtra is rain fed. But of it, 40 percent is drought prone area. Large area of the state is brought under fruit cultivation. Scarcity areas are especially with low water balance. Maharashtra Government declared 89 talukas as the scarcity zone in Maharashtra. Purandar, Baramati, Indapur, Daund,

Bhor talukas of Pune district are declared by the government of Maharashtra as drought prone talukas.

The researcher has selected Purandar taluka as the representative of the drought prone area. The main crops of this scarcity area are Jowar, cotton, wheat, ground nut and sunflower.

Fig, custered apple, pomegranate, ber are popular fruits grown in this area. Land, water, hilly area and climate are considered for Horticulture. The area under plantation in Maharashtra was 222.8 lacs hectares in 2001-02. Out of this area, 13% area was under horticultural plantation. Total area under irrigation was 16.4% or total plantation area in Maharashtra. It means 83.6 % is dry area, whereas horticulture programme is fruitful.

Due to shortage of ground water, the roots of fruit trees are in deep area. Fig and other fruits survive on limited water. Fig production is highest in Pune District, followed by Aurangabad and Ahmednagar.

Maximum area out of total 29 lakh hectares dry land in the state is to be used for horticulture such as custered apple and pomegranate etc.

The horticulture yields net profit of about Rs. 1 to 1.5 lacs per hectar. The fig plantation yields Rs. 2 to 2.5 lacs net profit

per Hectares. These fruits are very profitable from waste and Dry land to the agriculturist in the state.

For the economic development of farmers having dry and waste land the fruit plantation is useful. It may to increase exports and earn foreign currency. Hence this research of fig is very important. Fig crop is useful as it also generates employment. At present, Indian export of fruits is only 1% in International fruit market. This needs to be increased by extending plantation area under fig.

This research has separate entity. It contributes to the present research. It analyses the betterment of financial status selected farmers of Purndar Taluka. It compares financial position of fig farmers and non fig farmers. Such kind of research is unique and has separate entity.

2.7 OBJECTIVES OF RESEARCH :

Following are the objectives of research.

1. To study the impact of fig production on economic development of dryland farmers.
2. To compare the financial status of fig producer farmers and non fig producer farmers.
3. To study the impact of fig plantation on agriculture based occupations.
4. To find out the problems of fig producer farmers.
5. To suggest solutions for the problems of dry land fig producers.

2.8 HYPOTHESES OF RESEARCH.

The following hypotheses are tested in this research.

1. Fig plantation helps the producer farmers to improve their financial status.
2. Comparatively fig producer farmers are earning more than the non fig producer farmers.
3. Fig production has good effects on agriculture based occupation.
4. Farmers are not processing the figs.
5. Fig producer farmers have various problems during the fig production.

2.9 RESEARCH METHODOLOGY :

This research is based on the primary data and secondary data collected during the research .The survey method of research is used for this research work.

2.9.1 Primary Data:

The primary data are collected from the farmers. These farmers are selected by stratified random sampling method. For this research work the area (Maharashtra, Western Maharashtra, Pune District, Purandar Taluka and villages) and the farmers from the villages were selected as follows:

2.9.1.1 Selection of Maharasthra. :

In the first stage, Maharashtra state is selected. During the year 2005-06 Maharashtra State has the highest area of 1371 hectares (49.85%) under fig plantation as against 2750 hectares in India. Thus as the highest fig producing state Maharashtra was selected for this work.

2.9.1.2 Selection of Western Maharashtra

Within Maharashtra the fig production is concentrated mainly in the Konkan, Western Maharashtra, Marathwada and Vidarba. In fig plantation the Western Maharashtra has the highest area of 736 hectares (53.68%) in plantation. Therefore, Western Maharashtra was selected for this study. The division wise fig plantation is given in table No. 2.2

Table No. 2.2

Divisionwise Fig Plantation in Maharashtra.

Sr. No.	**Division**	**Area** (in Hectares)	**Percentage**
1	West Maharashtra	736	53.68
2	Marathwada	632	43.09
3	Vidarbha	03	3.23
4	Konkan	-	-
	Total	**1371**	**100.00**

Source : Agriculture Commissioner, Pune (2009-10).

From table 2.2 it is observed that West Maharashtra has the highest area of 736 Hect (53.68%) under Fig plantation.

Hence this division is selected for study. The division wise map of Maharashtra is given in Map No. 2.1

2.9.1.3 Selection of Pune District :

In Western Maharashtra, there are three divisions viz. Pune, Nashik, and Kolhapur Divisions. District wise fig plantation area is given in Table No. 2.3.

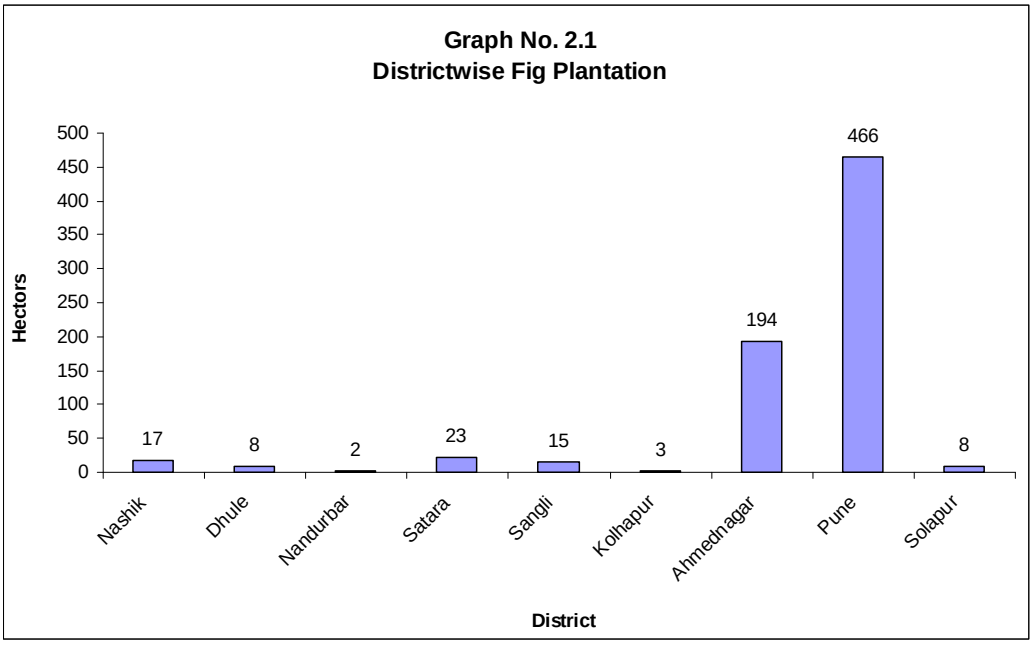
Table No. 2.3
Districtwise fig plantation in West Maharashtra.

S. No.	District	Area (in Hectares)	Percentage
A	**Nashik Division.**		
1	Nashik	17	02.30
2	Dhule	8	01.09
3	Nandurbar	2	0.28
	Total	27	3.67
B	**Kolhapur Division.**		
5	Satara	23	3.12
6	Sangli	15	02.04
7	Kolhapur	03	0.41
	Total	41	5.57
C	**Pune Division**		
8	Ahmednagar	194	26.50
9	Pune	466	63.18
10	Solapur	8	01.08
	Total	668	90.76
A+B+C	**Grand Total**	**736**	**100.00**

Ref : Agriculture commissionerate , Pune (2005-06).

It is observed from table No. 2.3 that the area under fig plantation in West Maharashtra is 736 Hectares. Out of that,

668 Hectare land (90.76%) of fig plantation area in Pune district which is highest. It is followed by Nashik Division (27 Hectares) and Kolhapur Division (41 Hectares). Hence Pune district is selected for this work as it is highest in fig production. The division wise distribution of fig plantation of Maharashtra is shown graph No. 2.1. The district wise map of Pune District is given in Map No. 2.1.



Source : Table No. 2.3

2.9.1.4 Selection of Taluka

In Pune District the taluka was selected on the basis of fig plantation area in different talukas. The fig plantation in each taluka is given in Table 2.4.

Table 2.4

Talukawise fig plantation area in Pune District.

Sr. No.	Taluka	Area (in Hectare)	Percentage.
1	Purandar	214.17	45.92
2	Bhor	90.00	19.30
3	Haveli	65.00	13.94
4	Daund	28.60	6.13
5	Junnar	19.70	4.22
6	Indapur	18.44	3.95
7	Shirur	16.00	3.43
8	Ambegaon	12.50	2.68
9	Khed	2.00	0.43
10	Baramati	-	-
11	Velha	-	-
12	Maval	-	-
13	Mulshi	-	-

Ref : Agriculture commissionerate , Pune (2005-06).

It is observed from table 2.4 that from total fig plantation area in Pune District is 466.41 hectares and out of that 90% area is in the Purandar, Bhor, Baramati, Haveli and Daund talukas. Purandar Taluka is on the top with 214.17 hectares (45.92%) area under fig production in Pune District. Therefore researcher has selected the Purandar Taluka for the purpose of this study. The taluka wise map of Pune District is given in Map No. 2.2

2.9.1.5 Selection of Villages

There are 101 villages in Purandar Taluka . It is observed from the records of agricultural officer, Purandar that there are 50 villages (Please refer Appendix 3) out of 101 villages which

are known as fig plantation villages. The average fig plantation for these 50 villages is calculated for 5 years from 2005-06 to 2010-11. This information is given in table 2.5.

Table No. 2.5

Villagewise plantation of fig in Purandar Taluka

(Only the main fig producing villages are considered)

Sr. No.	Name of the village	Area
1	Sonori	81.50
2	Pimple	29.00
3	Walhe	27.00
4	Supe Khurda	25.00
5	Kalewadi	24.80
6	Shivari	22.00
7	Jadhavwadi	20.55
8	Dive-2	16.65
9	Garholi	14.33
10	Dive -1	14.33
11	Zendewadi	13.95
12	Borhalawadi	12.00
13	Singapur	11.15
14	Waghapur	6.30
15	Somurdi	5.40
16	Bhivari	4.00
17	Lapatalwadi	2.40
18	Devadi	2.15
19	Garade	2.00
20	KJodit Budruk	2.00
21	Vanapuri	1.60
22	Pingori	1.50
23	Rakh	1.40
24	Nawali	1.20

25	Thoaptewadi	1.20
26	Walunja	1.10
27	Mandaki	1.00
28	Gulunche	1.00
29	Pimpare Khurda	1.00
30	Saswad	1.00
31	Kodit Khurda	1.00
32	Rajuri	1.00
33	Paragaon	1.00
34	Udachiwadi	0.90
35	Khalad	0.90
36	Bhivadi	0.870
37	Naygaon	0.80
38	Rajewadi	0.80
39	Pisarve	0.75
40	Pokhar	0.60
41	Sakurde	0.50
42	Jawalarjun	0.40
43	Karnalwadi	0.40
44	Jeur	0.40
45	Aambale	0.40
46	Vir	0.20
47	Nazare K. P.	0.20
48	Bhosalewadi	0.20
49	Khanwadi	0.20
50	Takrarwadi	0.15

* : Selected fig producing villages.

Source : Department of Agriculture, Purandar, 2009-10.

It is observed from table 2.5 that Sonori (81.50), Pimple (29), Supe (25), and Walhe (27) are first four villages in

Purandar, taluka having 162.50 hectare of land under fig plantation. Therefore, these four villages are selected for the purpose of study. The map of Purandar taluka indicating these four villages is given in map No. 2.3.

There are 50 villages in which fig is cultivated in Purandar Taluka, (Please refer Appenxure 3)

2.9.1.6 Selection of Farmers :

The list of farmers from selected four villages has been taken from agriculture officer, Purandar. Total fig producer farmers are 1172 in 2009-10. From the every village 25 fig producer farmers and 25 non fig producer farmers are selected by lottery method. In this way 100 fig producer farmers (Please refer Appendix 4) and 100 non fig producer (Please refer Appendix 5) are selected from four villages (Sonori, Pimple, Supe and Walhe) by using stratified random sampling method. Thus the total sample is 200 farmers.

The primary data were collected through the field work by providing questionnaire to these selected fig producer farmer and non fig producer farmers. Separate questionnaire for fig producer farmers (Please refer Appendix 1) and quastionnaire for non fig producer farmers (Please refer Appendix 2) were developed by the researcher and used for the collection of primary data.

2.9.2 Secondary Data :

The researcher has visited to the well known research centres and institutes for collection of secondary data. Mainly reference books, reference volumes, journals have been studied. History of fig fruit is collected from Mahatma Phule Agriculture University, Rahuri, Dist: Ahmednagar. The Statistical information regarding production and expenditure on fig production is collected from Marhatta Chamber of Commerce and Industries, Senapati Bapat Road, Pune and Gokhale Institute of Politics and Economics, Pune. From commissioner of Pune, the information in respect of districtwise and talukawise fig production is collected. The sub division officer, Baramati provided fig plantation data in his division. The information of villagewise fig plantation in Purandar taluka along with Sonori, Pimple, Supe and Walhe villages are collected from Talathi Offices and Circle Offices. Also reference Books, Volumes are referred from Tilak Maharashtra Vidyapeeth, Pune, Pune University, Agriculture College, Pune and and Zilla Parishad, Pune and from the library of Z. P. Internet facility is used for latest information.

2.9.3 Statistical tools

The statistical tools used in analyzing primary and secondary data are Tabulation and percentages. Similarly different types of graphs are also used for the presentation of the data.

2.9.4 Limitation of Research :

1. This research is limited to study the economic impact only.
2. The research is limited to dryland farmers only.
3. It is also limited to the dry land farmers of Maharashtra state.
4. The present research is limited to the farmers from Pune district only.
5. The sample covers four villages in Purandar Taluka.
6. The sample includes only 100 fig producer farmers and 100 non-fig producer farmers.
7. This research is also limited to the economic development of fig producer farmers in comparison to Non fig producer farmers.
8. The data collected for this research is within the period from 2005-06 to 2009-10.
9. The conclusions of this research depend on the responses of the selected farmers.

2.10 CHAPTER SCHEME.

The research report of this study includes the following five chapters.

Chapter 1 : Introduction

In this introductory chapter, the origin of fig fruit and production at the National and International level are given. The fig production in Purandar Taluka, Bhor Sub Division, Pune District and Maharashtra State are explained.

Chapter 2 : Research Methodology

In this Chapter research objectives and research hypotheses are given. The importance of this research is also explained with reference of research literature.

Chapter 3 : Geo-physical and Socio – Economic review

In this third chapter, Geo-physical and socio economic review of Pune district and of Purandar Taluka are given. The areas and production of horticulture crops in the district and Purandar Taluka are given.

Chapter 4: Analysis and Interpretation of Data.

In the chapter the primary data collected from the selected Dryland Farmers are analyzed along with the secondary data.

Questionnaire served to the fig producer famers and non fig producer farmers covers personal, family information, area of fig plantation or other fruit plantation actual expenditure, total annual income rain water, irrigation source, capital source and marketing of product.

This analysis also covers health, tours, material facilities, and problems of fig producer farmers. It gives the testing of the hypotheses. It attempts to study the application of Schultz's Theory of Transformation of Traditional Agriculture to modern Agriculture to present research.

Chapter 5: Findings and Suggestions:

This chapter is divided into four sub sections namely findings, summary, suggestions and scope for further research. The observations are based on first three chapters findings are based on fourth chapter. There are 32 observations in this chapter. Researcher has also given 23 suggestions regarding fig production, problems and solutions to overcome them.

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CHAPTER 3

GEO-PHYSICAL AND SOCIO-ECONOMIC REVIEW : PUNE DISTRICT AND PURANDAR TALUKA

3.1 INTRODUCTION :

This research studies **The impact of fig production on dry land farmers in Pune District** (with special reference to Purandar Taluka, from 2005-06 to 2009-10).

This chapter is divided into 2 sections, first section deals with Geo-Physical and Socio-economic aspects of Pune District and second section deals with Geo-physical and socio-economic aspects of Purandar Taluka.

SECTION I : GEO-PHYSICAL AND SOCIO-ECONOMIC FEATURES OF PUNE DISTRICT.

3.2 GEO-PHYSICAL FEATURES OF PUNE DISTRICT :

Pune District lies between 17^0-54' and 19^0-24' North latitude and 73^0-19' and 75^0-19' East longitude. Pune District is surrounded on the North by Ahmednagar district, on the East by Ahmednagar and Solapur districts, on the South by Solapur and Satara Districts and on the West by Raigad and Thana Districts. Total geographical area of Pune District is 15642 sq. km.

The rural area is 15021 sq. km. (96.02%) and the urban area is 621 sq. km. (3.98%).

3.3 ADMINISTRATIVE INFORMATION OF PUNE DISTRICT:

Pune District is divided into five Sub Divisions. e.g. Baramati, Haveli, Khed, Bhor and Maval.

Table 3.1 indicates the administrative divisions in Pune District.

Table 3.1
Administrative Divisions of Pune District

Sr. No.	Information	Pune District Nos.
1	Total Talukas	13
2	Total Tahasil Body (Panchayat Samiti)	13
3	Total villages	1866
4	Urban	25
5	Corporations	2
6	Municipalty	11
7	Total Grampanchayat	1401
8	Total Banks	246
	A. Scheduled	130
	B. Their Branches	573
	C. Pune District Co. Op. Bank Branches.	247

Source : Pune District Economical Social Review 2008-09.

Table No. 3.2 Indicates the distribution of 13 Talukas of Pune district in five sub divisions.

Table No. 3.2

Sub Divisionwise Distribution of Talukas in Pune District

Sr. No	Sub Divisions	Talukas Covered.
1	Baramati	Baramati Daund Indapur
2	Khed	Khed Ambegaon Junnar
3	Haveli	Haveli and Area.
4	Bhor	Bhor Purandar Velhe
5	Maval	Maval Shirur Mulshi

Source : Socio Economic Review and District Statistical Abstract, Pune 2008-09.

It is observed from table 3.2 that there are 3 talukas in Baramati Sub Division, 3 Talukas in Khed Sub Division and 1 Taluka and other area in Haveli Sub Division. 3 Talukas in Bhor sub division and 3 talukas in Maval sub division. Purandar Taluka selected for study comes under Bhor sub division.

3.4 POPULATION

Pune District is second highest in population in Maharashtra State. Urban and Rural Population of Pune District is given in Table 3.3

Table 3.3
Urban and Rural Population in Pune District
(In Lacs)

S. No.	Particulars of Population	Pune District	
		Nos.	Percentage
1	Rural	30.31	41.92
2	Urban	42.01	58.08
	Total	**72.32**	**100.00**

Source: Soc-Economic Review and District Statistical Abstract - 2008-09.

It is observed from table 3.3 that rural population is 30.31 lacs (41.92%) and Urban Population is 42.01 lacs (58.08%).

3.4.1 Sexwise Distribution of Rural Urban Population

Table 3.4 indicates Male Female distribution of Rural Urban Population in Pune District

Table 3.4
Sexwise Distribution of Rural Urban Population in Pune District
(In Lacs)

Sr. No.	Particulars	Rural		Urban		Total	
		Nos	%	Nos	%	Nos	%
A	Pune District	30.31	41.91	42.00	58.09	72.31	100.00
1	Male	15.57	21.53	22.11	30.57	37.68	52.10
2	Female	14.74	2.38	19.89	27.50	34.63	47.90

Source : Socio-Economic Review and District Statistical Abstract 2008-09.

It is observed from Table 3.4 that male Population is 37.68 lacs, (52.10%) and it is more than female members in Pune District. Female population was 34-63 lacs. (47.90%) The

sex ratio in Pune District is 919 as per 2001 census as against 922 at the state level.

3.4.2 Literacy

As per census 2001 the literacy rate in Pune District was 80.45% as against 76.9% at the state level. The literacy rate among male is 88.34% in Pune District, as against 86% at the State level. The literacy rate of females was 71.89% in Pune District as against 67% at the state level. Pune is known as Educational Hub.

a) Primary Schools

The total number of primary schools in Pune District was 4440 in 2002-03, as against 67291 in Maharashtra State in 2003-04. Total number of students enrolled in primary school in Pune district was 780000 in 2002-03, as against 1,16,89,000 in 2003-04 in State.

b) Secondary Education :

There were 1099 high schools, with 6,70,000 students in Pune District in 2002-03. This number was 17985 with 10122000 students in 2003-04 in Maharashtra State.

c) Higher Education

Total institutes imparting higher education were 810 in Pune District as against 1878 at the state level.

3.4.3 Employment

Table 3.5 indicates the employment situation in Pune District.

Table 3.5
Employment Status in Pune District.
(Figures in Lacs)

S. No.	Particulars	Male			Female			Total
		Rural	Urban	Total	Rural	Urban	Total	
1	Earning Population	8.64	11.51	20.15	6.51	2.86	9.37	29.32
2	Non Earning Population	6.53	10.59	17.12	8.22	17.02	25.24	42.20
	Total	**15.17**	**22.10**	**37.27**	**14.73**	**19.88**	**34.61**	**71.52**

Source: Soci-Economic Review and District Statistical Abstract table.

It is observed from 3.5 that out of total 71.52 lacs population 29.32 lacs population (41.11%) is employed and rest is dependent population. The ratio of employed to dependent is 41:59.

3.5 LAND

Table 3.6 indicates geographical area.

Table 3.6
Geographical land area classification in Pune District.

Sr. No.	Particulars	Area in Hectares	Percentage on Total Area
1	Net Plantation Area	940800	60.23
2	Dusota	210100	13.45
3	Area under crops	1150900	73.68
4	Forest	162300	10.39
5	Waste Land Area	248800	15.93
	Total Geographical Area	1562000	100.00

Source : Socio-Economic Review and District Statistical Abstract 2008-09.

The observations of table 3.6 are as under:

Maharashtra is important state in India. South Table Land is made by Lava. On this table Land Besalt and Granite rocks are seen. The soil of Maharashtra is made by depreciation of rocks.

The soil of Pune District is created due to effect of the above things. Black soil, Purple Soil, Rock soil are the types of soils found in Pune District. Calcium soil is found in the Purandar Taluka. The Potacium soil ratio is more and this soil is more productive such slippery land is important for fig horticulture.

Table 3.6 shows geographical area. The net plantation area is 60.23%. Dusota land is 13.45. The Crops cover the total area upto 73.68%. Waste and other uncultivated land area ratio is 15.93% and under the Forest area is 10.39.

3.6 LAND REQUIRED FOR FIG PRODUCTION.

Table 3.7 gives details of the nature of land required for fig production.

Table 3.7
Nature of Land required for fig production

S. No.	Nature	Percentage
1.	Rock Ratio	38.99
2.	Moisture Percentage	28.00
3.	Organic Things	2.80
4.	Natra Ratio	0.06
5.	Limestone	0.60
6.	Sulfure	0.28

Source : Socio-Economic Review of Pune District 2008-09

It is observed from table 3.7 that highest percentage of 38.99 is of Rock Ratio followed by moisture percentage (28%). This land is useful for Horticulture especially fig output.

In all professions or different units the education is very important unit and it is essential for selection of crops, irrigation system, Manure, Germicide, Market Rate, Transport, Agriculture Product, Sales, Third Party, Product Packing, Horticulture Management etc.

If the farmer is illiterate, having faith in, superstitions, he turns to traditional agriculture. He is not ready to adopt modern technique.

3.7 CLIMATE

Maharashtra had very special climate. At the West side Sahyadri Hills are effective for climate. It is also same climate in Pune District. Parallel Coastiline of Konkan at North South lane has effected on climate. Due to these hills, south west mansoon gives rainfall to the District.

In the summer season, climate is hot in Pune District.

3.8 TEMPERATURE

The temperature in Pune District is changing. In March, April, May and June there is summer season in the District. The annual minimum temperature is 10.50^0 and maximum temperature is 37.70^0. In the summer season May is very hot with maximum temperature ranges upto 42^0.

3.9 RAINFALL :

Generally Monsoon starts in June. Monsoon comes from Southwest. In the western part of Pune district the annual average ratio of rainfall is upto 400 cm. In Maval area rainfall is 200 to 400 cm. The average rainfall is 50-100 cm in Western side of Pune District which covers Bhor, Velha, Maval, Mulashi, Khed, Ambegaon and Junnar Talukas. The average rainfall is 1171 mm is in Junnar. From West to East rainfall ratio is less. For the East Taukas minimum average of rainfall is less than the average. It is less in the Purandar Taluka which is prominent area for the fig production.

3.10 RIVERS

Bhima river is the prime river in Pune District. It flows from Bhima Shankar in Sahyadri range and flows South East and enters into Solapur District. Velu and Ghod rivers are on left side of Bhima and Bhama. Indrayani, Mula and Mutha rivers are on its right side. These are sub rivers. On the south border of Pune District, there are Nira River. Karha, Kukadi, Pavana, Meena, Gunjavani, Pushpavati, Shivaganga. These rivers overflows in rainy days and become dry in summer. Each Taluka in Pune District has a river.

3.11 IRRIGATION

The geophysical area of Pune District is suitable for irrigation. Hence the number of small and major irrigation

projects is significant. It covers Pimpalgaon Joga, Yedgaon, Dimbe, Manik Doh, Vadaj, Chaskaman, Varasgaon, Panshet, Khadakwasla, Mulshi, Pawana, Ghod, Nazare, Ujani, Bhatghar, Nira, Deodhar.

3.12. IRRIGATION AREA IN PUNE DISTRICT

Irrigation Area in Pune District shows in table 3.8

Table 3.8

Pune District Irrigation Area.

S. No.	Types of Irrigation	Hectares	Percentage
1	Through Canal and other	94782	36.02
2	From Wells	168426	63.98
	Total irrigation Area	**263208**	**100.00**

Source - Socio Economic Review 2005-06.

It is observed from table 3.8 that the total irrigation area is 263208 hectares and out of this, higest percentage is of wells (63.98%) irrigation followed by Canal irrigation (36.02%).

3.13. CROPPING PATTERN

In the Pune District Bhor, Velha, Mawal, Mulashi, Khed, Ambegaon and Junnar Taluka are on the West side. Rice, Nachani, Sag, Pawata and other forest productions are taken. In Junnar, Ambegaon and Khed, maximum Adivasi community is settled. The climate of Purandar, Haveli, Shirur, Baramati, Indapur and Daund Talukas is hot and dry. Here the agriculture is mostly dependent in Monsson.

In Baramati, Haveli, Daund, Indapur Talukas there is canal irrigation and hence the crops are taken such as Sugar cane, grapes and other fruits, vegetable. The cropping pattern in Pune District is given in Table 3.9

Table 3.9

Cropping Pattern in Pune District in 2005-06.

S. No.	Crops	Hectares	Percentage.
1	Food grains	751000	62.26
2	Legume (Kaddhanya)	83900	7.29
3	Sugarcane	53800	4.67
4	Spice Crops	7800	0.68
5	Fig	466	0.04
6	Other fruits	15224	1.32
7	Vegetables	57900	5.03
8	Edible Oils	92200	8.01
9	Non Edible Oils	24200	5.60
10	Other Crops	64410	5.60
	Total	**1150900**	**100.00**

Source : Socio economic Review 2008-09.

It is observed from table 3.9 that the total cropped area in Pune District is 1150900 Hectares and maximum area of 65.26% is covered by food grains. It is followed by Edible oils (8.01%) Legumes (7.29%) Sugarcane (04.67%) and other crops such as Edible and Non Edible oil (5.60%) Area under fig plantation is 0.04%.

3.14 FRUITS AND VEGETABLE :

Fruits and Vegetable area is increasing in Pune District. Banana in Junnar, Grapes in Baramati, Junnar and Haveli and Pomogranate, Fig and Custerdapple in Purandar are taken. In Purandar Taluka Chilly production is taken. Tomato production is taken in Junnar, Ambegao, Haveli taluka. Lemon fruits production is taken in Daund, Baramati and Shirur taluka.

3.15 HORTICULTURE AREA :

In Pune District in different area, different fruits production has been taking i.g. Fig, Pomogranate, Grapes, Custardapple, guava, lemon, Mango etc. In Pune District different fruits plantation area is mentioned in the following table 3.10.

It is observed from Table 3.10, that total plantation area in Pune District is 1150900 Hectors. Out of total area maximum plantation of 156418 (13.59%) is in Shirur Taluka followed by Junnar (11.87) Khed (9.96%), Indapur (9.82%) Bhor (2.82%).

Total area under Fig plantation is 466.41 hectors in Pune District. Purandar taluka (45.92%) is on the top, followed by Bhor (19.30%) Haveli (13.94%). Baramati (6.13%), Daund (4.43%) and Khed Taluka (0.43%) Maval, Mulashi and Velhe Talukas and Indapur Taluka have no fig plantation.

Fig production in different Talukas in Pune District is given in Table 3.10

Table 3.10
Talukawise area under Fig Plantation

S. No.	**Taluka**	**Under Plantation Total area** (in Hectares)	**Fig Plantation Total Area** (in Hectares)	**Fig Plantation comparative ratio with total plantation area.**
1	Purandar	80852 (7.03)	214.17	0.26
2	Bhor	32459 (2.84)	90.00	0.27
3	Haveli	91907 (7.99)	65.00	0.07
4	Baramati	110292 (9.58)	28.60	0.02
5	Daund	91590 (7.96)	20.70	0.02
6	Maval	53712 (4.67)	-	-
7	Mulashi	39147 (3.40)	-	-
8	Velhe	37649 (3.27)	-	-
9	Junnar	136567 (11.87)	12.50	0.009
10	Indapur	112970 (9.82)	-	-
11	Khed	114663 (9.96)	02.00	0.001
12	Shirur	156418 (13.59)	16.00	0.01
13	Ambegaon	92674 (8.05)	17.44	0.01
	Total	**1150900 (100.00)**	**466.41(100.00)**	**0.04**

Source : Agriculture Commissionerate, Pune (2005-06)

While comparing the fig plantation with total plantation area it is seen from table 3.10 that it is 0.27% in Bhor followed by Purandar (0.26%), Haveli (0.07%) Baramati (0.02%), Daund (0.02%), Junnar (0.009), Khed (0.001), Shirur (0.01%), and Ambegaon (0.01).

3.16 TRANSPORT AND COMMUNICATION

Transport is third important place of human life. The economic development of country is depends on the transport facility.

As per 2001 statistics, fast express Ways, National High ways, State Highway and village roads are available in the District. The total length of all these roads is 13554 Km. The length of National highways is 302 Km. The National Highways i.e. Mumbai Fast Express ways, Pune Nasik, Pune Solapur, Pune Mumbai, Pune Bangalore, Pune Miraj, and Pune Solapur are available Pune is Railway Junction. The Sattelite Channels, Doordarshan, Akashwani and News papers are the important mediums of communications available in Pune District.

SECTION II

GEO-PHYSICAL AND SOCIO ECONOMIC FEATURES OF PURANDAR TALUKA IN PUNE DISTRICT.

3.17 INTRODUCTION :

The researcher has selected Purandar taluka for research as this Taluka is highest in Fig production in Pune district. The table 3.11 indicates villagewise classification of all talukas of Bhor Sub Division of Pune District.

Table 3.11

Major Fig producing villages of the Talukas in Pune District

S. No.	Taluka	Total Villages	Fig Plantation Villages	Percentage.
1	Purandar	101	50	49.50
2	Bhor	196	09	4.59
3	Haveli	160	25	15.62
4	Baramati	117	22	18.80
5	Daund	97	14	14.43
		671	**128**	**19.07**

Source : Socio Economic survey 2005-06.

It is observed from table 3.11 that, Purandar Taluka tops with 49.50 coverage of villages under fig plantation. It is followed by Baramati Taluka (18.80%), Haveli (15.62%), Daund (14.43%) and Bhor (4.59%) Hence Purandar Taluka is selected for the purpose of study.

3.18 GEO-PHYSICAL FEATURES OF PURANDAR TALUKA

Purandar Taluka lies between 18^0-17'-20" and 18^0-17'-34" North latitude and 73^0-58'-29" and East Longitude, Purandar Taluka is one of 13 Talukas in Pune District. Purandar Taluka is surrounded on the north by Haveli, and Daund Talukas on the East, on the South by Satara District and on the West by Bhor Taluka.

Total geo-graphical area of Purandar Taluka is 1099.73 sq. kilometers.

There are 2 towns viz. Saswad, Jejuri and 101 villages in Purandar Taluka.

3.19 LAND AND CLIMATE

The climate of Purandar Taluka is hot and dry. Total cultivable land in Purandar Taluka is 98059 hectares. Out of it 79048 hectares of land is net cultivated area. It comes to 71.63%. The land under horticulture is 6525 hectares. It is 6.65% of total cultivable area.

The climate of Purandar Taluka is suitable for horticulture and especially for fig fruits. The highest temperature is 39.05 Celsius and minimum temperature is 10.50 Celsius. The annual average rainfall is about 711.72 mm.

SOCIO-ECONOMIC ASPECTS.

The socio economic aspects of Purandar Taluka are divided into two parts: A) Social Aspects B) Economic Aspects.

3.20. SOCIAL ASPECTS.

The social aspects of Purandar Taluka cover population, density, rural urban population, sex ratio, castewise, Classification of population and worker population education etc.

3.20.1 Population :

Total population of Puandar taluka was 223428, out of which 174604 (78.23%) was rural population and 48824 (21.77%) urban Population.

3.20.2 Density

The density of population in Purandar taluka was 265 in 2001 as against 462 in Pune District.

3.20.3 Sex Ratio

The sex ratio of Purandar Taluka was 927 in 2001 as against 919 in Pune District.

3.20.4 Caste

Table 3.12 inicates castewise Classification of Population in Purandar Taluka

Table 3.12
Castewise classification of population

Sr. No.	Particulars	Male	%	Female	%	Total	%
1	Rural Population	88885	77.90	85799	18.47	174604	78.23
	Urban	25215	22.10	23609	21.53	48844	21.77
	Total	**114100**	**100.00**	**109328**	**100.00**	**223428**	**100.00**
2	Advanced Caste	104402	91.52	99966	91.43	204368	91.46
3	Schedule Caste	7479	7.16	7272	6.65	14751	6.60
4	Schedule Tribe	2219	2.12	2090	1.92	4309	1.94

Source : Socio Economic Survey 2005-06.

It is observed from table 3.12 that rural population is 78.23% whereas urban population is 21.77% in Purandar taluka. The advanced caste population is 91% whereas S. C.

population is 7% and S. T. population is 2% in Purandar Taluka.

3.20.5 Education

The literacy in Purandar Taluka indicates that total 150206 (77.34%) is literate. Out of them the rural literate population is 114380 (73.32%) and urban literate population is 35826 (84.60%).

The literacy rate for men in Purandar Taluka is 87.51% as against female literate 66.90%.

3.21 ECONOMIC ASPECTS

3.21.1 Land Use

The land utilization in Purandar Taluka is given in Table 3.13.

Table 3.13
Land use in Purandar Taluka

S. No.	Particulars	Land (In Hectares)	%
1	Total geographical Area	110355	100.00
2	Forest	2221	2.01
3	Non Agricultural Land	8137	7.37
4	Follow Land	11448	10.37
5	Net Area Shown (Cultivated Area)	79048	71.63
6	Cultivable Area.	98059	88.85
7	Plantation Area	80852	73.26
8	Fig Plantation Area.	214.17	0.26

Source : Socio – Economic Survey, 2005-06

It is observed from table 3.14 that total cultivable area in Purandar Taluka is 98059 hectors. Plantation area is 80852 hectares (73.26%) follow land is 1448 hectares (10.37%) which can suitably be brought under plantation.

3.21.2 Rainfall.

West side of Purandar Taluka gets ample rain which is useful to Kharip crops, i.e. Rice Jawar, Bajra, East Side of Purandar Taluka is getting less rainfall. Pea crops area usually taken here the average annual rainfall is given in table 3.14

Table 3.14
Rainfall in Purandar Taluka

S. No.	Year	Rainfall mm.
1	2004-05	707
2	2005-06	1139
3	2006-07	1480
4	2007-108	535
5	2008-09	446
6	2009-10	895
7	2010-11	738
	Average	**848**

Source : Socio Economic Review 2010-11.

It is observed from table 3.14 that Purandar Taluka gets 848 mm rainfall on an average. There was excess rainfall in 2005-06, 2006-07 and 2009-10. In the rest of the year total annual rainfall was below the average.

3.21.3 Irrigation.

Total irrigation area minus Dusota area will be net irrigated area. In Purandar Taluka out of total 83501 hectares land under cropped area, 18061 hectares land is irrigated. Out of 18061 hectares irrigated land, 16664 hectares land is under well irrigation and 825 hectares land by canal irrigation.

3.21.4 Drought prone Area.

Five talukas in Pune District are declared by the Government of Maharashtra as drought Prone Areas. These are Purandar, Daund, Baramati, Indapur, and Shirur. Out of total 104 villages in Shirur Taluka 104 villages (100%) are drought prone. Purandar taluka has 100% villages (total villages 101) covered under drought prone area. All 117 villages in Baramati Taluka and all 97 villages in Daund Taluka are drought prone. But 144 villages out of 145 villages in Indapur Taluka are drought Prone.

3.21.5 Cropping Pattern

The main crops and Horticulture products are noted in Table 3.15.

Table 3.15

Cropwise Production in Purandar Taluka (Per Hectares).

S. No.	Crop.	Production. Kg.
1	Rice	1398
2	Bajri	784
3	Maize	1450
4	Tur	1073
5	Moog	300
6	Udid	450
7	Vatana	1100
8	Ground Nut	1180
9	Sunflower	400
10	Soyabin	1100
11	Onion	45 MT
12	Jawar	830
13	Wheat	1650
14	Gram	993
15	Sugarcane	60 MT

Source : Socio economic Survey, 2005-06.

It is observed from table 3.15 that the production of wheat (1650 kg.) Maize (1450 kg.), Rice (1398 kg.), Ground Nut (1180 kg.), Green peas (1100 kg.), Soyabin (1100 kg.) and Tur (1073 kg.) per hectare in Purandar taluka.

3.21.6 Horticulture

Total geographical area of Purandar taluka is 110355 hectares and out of It area under plantation is 80852 hectares (73.26 %) The total irrigated area in Purandar Taluka is 18995 hectares. The ratio of irrigated area to total plantation is 23.49%. The fruit plantation wise area is noted in Table 3.16.

Table 3.16
Fruit plantationwise area

Sr. No.	**Crops**	**Pvt.**	**E. G. S.**	**Total**	**Living Trees** Area H.
1	Custard Apple	931.58	3800.40	4731.98	2106.50
2	Mean (Chikku)	169.65	872.80	1042.45	404.50
3	Fig	259.73	1175.50	1435.23	493.00
4	Mango	57.03	170.00	227.03	121.70
5	Pomogranate	258.53	978	1236.53	699.00
6	Tamarind	4.15	35.40	39.55	34.00
7	Lemon	2.85	11.90	14.75	58.50
8	Myrobalan	16.75	71.35	88.10	0.40
9	Guava	47.71	114.45	162.16	130.00
10	Orange	41.83	56.60	98.43	11.00
11	Mosambi	7.25	37.80	45.05	32.00
12	Grapes	2.20	0.00	2.20	4.50
13	Banana	16.60	5.70	22.30	22.30
14	Papaya	0.50	0.00	0.50	17.00
	Total	**1816.36**	**7329.9**	**9146.26**	**4134.40**

(Ref. Pvt. = Private, EGS = Employment Guarantee Scheme.)

It is observed from table 3.16 that maximum 4731.98 (51.73%) hectares land is under custard apple, followed by fig

1435.23 (15.369%), Pomogranate 1236.53 (13.55%), and mean 1042.45 (11.39%).

There are 80 villages in Purandar Taluka producing custard apple.

Total horticulture area in Purandar taluka is 1403 hectares, and total fig plantation area is 214.17 hectares (15.26%).

3.21.7 Marketing

Fruit season is September to November every year. Generally fig is sold at Rs. 15 to 20 per kg. Fruits can be processed. Generally most of fruit producers sell their product locally. Few of them sell the fruits in Mumbai market.

****

CHAPTER 4

ANALYSIS AND INTERPRETATION OF DATA

4.1 INTRODUCTION

Maharashtra has the highest area of 2242 hectares (77.34%) in India under fig plantation. Pune District is the leading region in Maharashtra regarding fig plantation. Purandar taluka tops in Pune district with 410 hectares area under fig plantation in 2007-08.

One of the objectives of this research is to study the economic impact of fig production on the Dry land farmers. The attempt is made by the researcher to compare the financial status of fig producers with non-fig producers.

The researcher has selected Purandar Taluka, as it is on the top in fig plantation in Pune district. The researcher has selected four villages viz, Sonali, Pimple, supe and Walhe.

The researcher has selected 25 fig producer farmers and 25 non-fig producer farmers from each selected villages of Purandar taluka in Pune district Thus, the total sample size is 200 farmers. The primary data are collected through field work by providing questionnaire to these selected 200 farmers.

For the analysis purpose 100 fig producer farmers are designated as **A farmers** and 100 Non Fig producer farmers are designated as **B farmers**. The analysis and interpretation of the collected data is given in this chapter.

The analysis of the primary data is classified as under

A) Personal information

B) Fig production and marketing

C) Impact of fig production on dry land farmers

D) Problems of fig producers

E) Solutions

4.2 SELECTION OF RESPONDENTS

Table 4.1 indicates the selection of the respondents

Table No. 4.1

Selection of Respondents

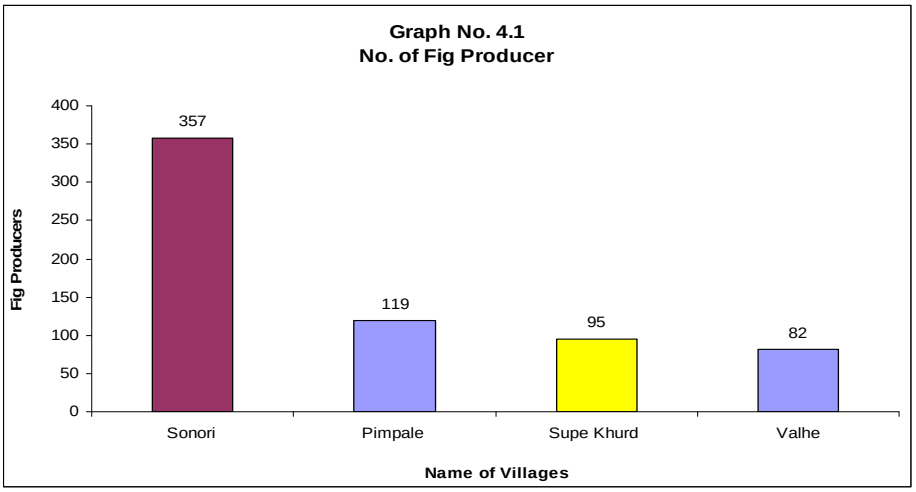
Sr. No.	Name of selected village	Total		Selected Farmers		Total
		Fig producers	Non fig producer	Fig producer farmers	Non fig producer farmers	
1	Sonori	357	869	25	25	50
2	Pimple	119	367	25	25	50
3	Supe Khurd	95	269	25	25	50
4	Walhe	82	619	25	25	50
	Total	**653**	**2123**	**100**	**100**	**200**

Source : Field Work.

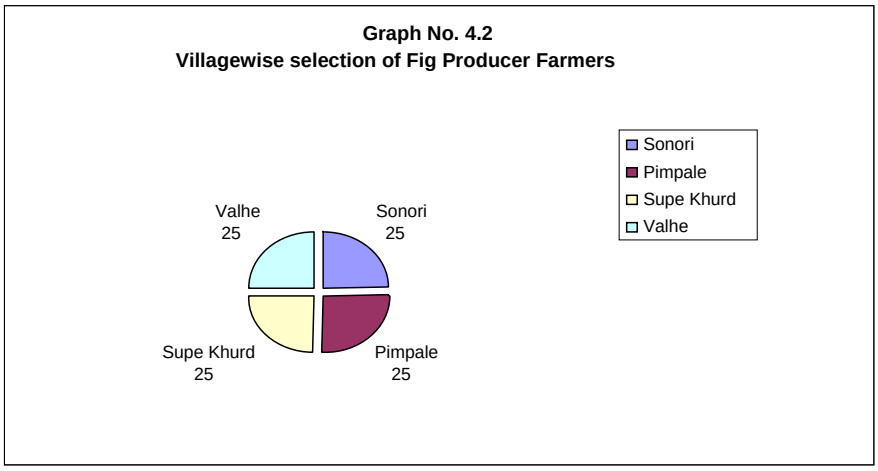
It is observed from Table 4.1 that out of 653 fig producers the researcher has selected 100 respondents (15.31%).

Out of total 2123 Non fig producers the sample of 100 Non fig producers is selected. (4.71%).

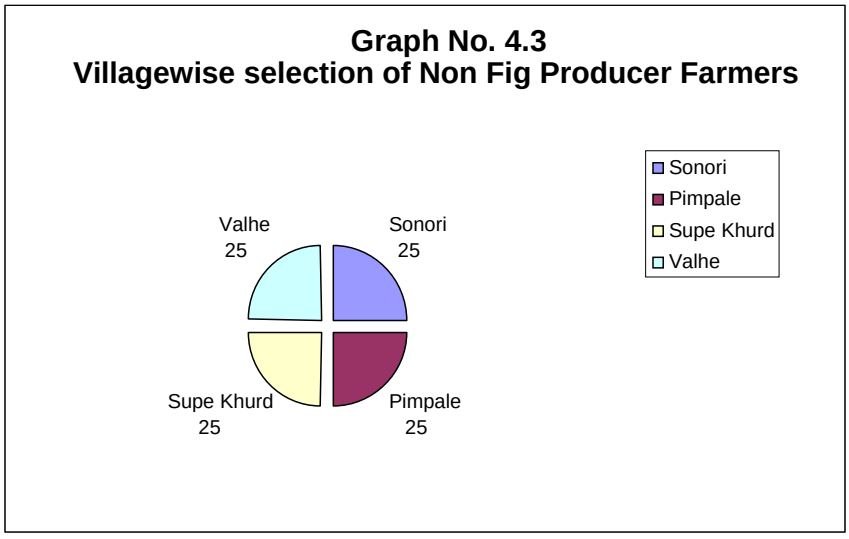
This is also represented in graph No. 4.1, 4.2 & 4.3.



Source : Table No. 4.1



Source : Table No. 4.1



Source : Table No. 4.1

4.3 PERSONAL INFORMATION

The personal information of the respondents is divided into social aspects and economic aspects. For the purpose of analysis the fig producer farmers are designated as A farmers and Non Fig producers farmers as B farmers.

4.3.1 Social Aspects

The social aspects cover Residence, Types of Family, size of family, Education, Religion and Caste of the respondents.

4.3.1.1 Residence

Table 4.2 indicates types of residence wise classification of the respondents.

Table No. 4.2

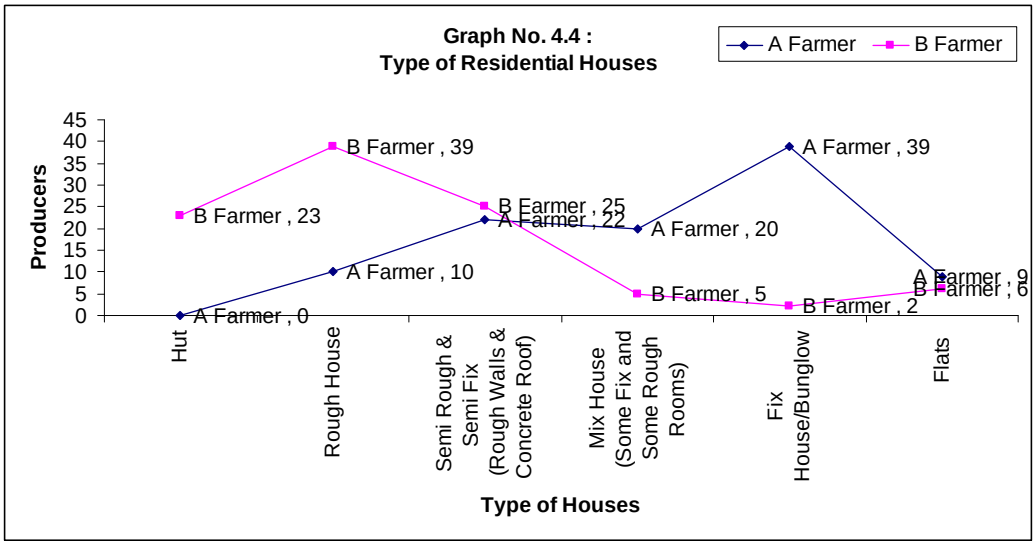
Types of Residence of A Farmers and B Farmers

Sr.No	Name of selected village	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	Hut	-	-	23	23.00
2	Rough House	10	10.00	39	39.00
3	Semi Rough & Semi Fix (Rough Walls & Concrete Roof)	22	22.00	25	25.00
4	Mix House (Some Fix and Some Rough Rooms)	20	20.00	05	05.00
5	Fix House/Bunglow	39	39.00	02	02.00
6	Flats	09	09.00	06	06.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work
(Note - Each member gave more than one choice hence total may not tally)

It is observed from Table 4.2 that A farmers are not residing in Huts but 23 (23%) from B farmers are residing in Huts. It leads us to

state that A farmer are residing in good house due to income from Fig Production. A farmers residing in Good House or Bunglow are 39 (39%) and 2 (2%) from B farmers. It also leads us to state that, their standard of living is increased. 39 B farmers (39%) reside. In Rough Houses alongwith 24 A farmers (24%). The Fig producer Farmers are economically developed due to fig production.



Source : Table No. 4.2

4.3.1.2 Types of Family

Table 4.3 indicates the types of family wise classification of A farmers and B farmers.

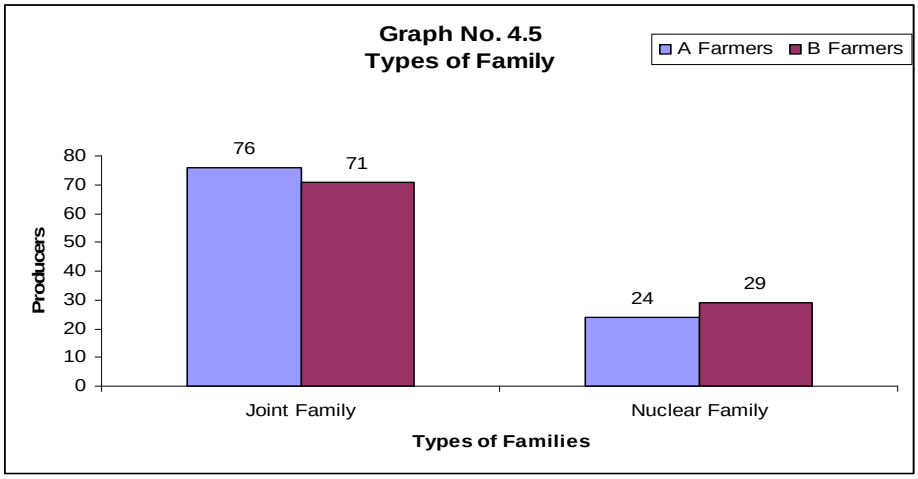
Table 4.3
Types of Family

Sr. No.	Name of selected village	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	Joint Family	76	76.00	71	71.00
2	Nuclear Family	24	24.00	29	29.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work

It is observed from Table No. 4.3 that 76 (76%) A farmers and 71 (71%) B farmers have joint families and 24 (24%) A farmers and 29 (29%) B farmers have nuclear families.

It leads us to conclude that both A farmers and B farmers are joint families. This is expanded with help of Graph No. 4.5.



Source : Table No. 4.3

4.3.1.3 Size of family

Table 4.4 indicates the size of family wise classification of A farmers and B farmers.

Table No. 4.4

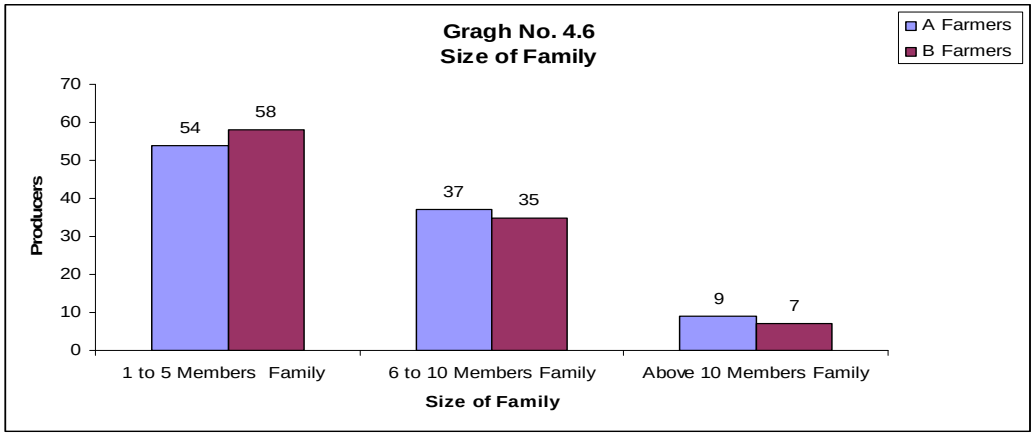
Size of Family

Sr. No	No. of family members	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	1 to 5 Members Family	54	54.00	58	58.00
2	6 to 10 Members Family	37	37.00	35	35.00
3	Above 10 Members Family	09	9.00	7	7.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field work.

It is observed from Table 4.4 that maximum 54 (54%). A farmers and 58 (58%) B farmers have 1 to 5 members size in their family.

There are 37 (37%) A farmers and 35 (35%) B farmers have a size of a family with 6 to 10 members. Only 9 (9%) A farmers and 7 (7%) 'B' farmers have more than 10 members in their family. This is given in graph No. 4.6



Source : Table No. 4.4

4.3.1.4 Education

The educationwise classification of A and B farmers is given in Table 4.5.

Table 4.5

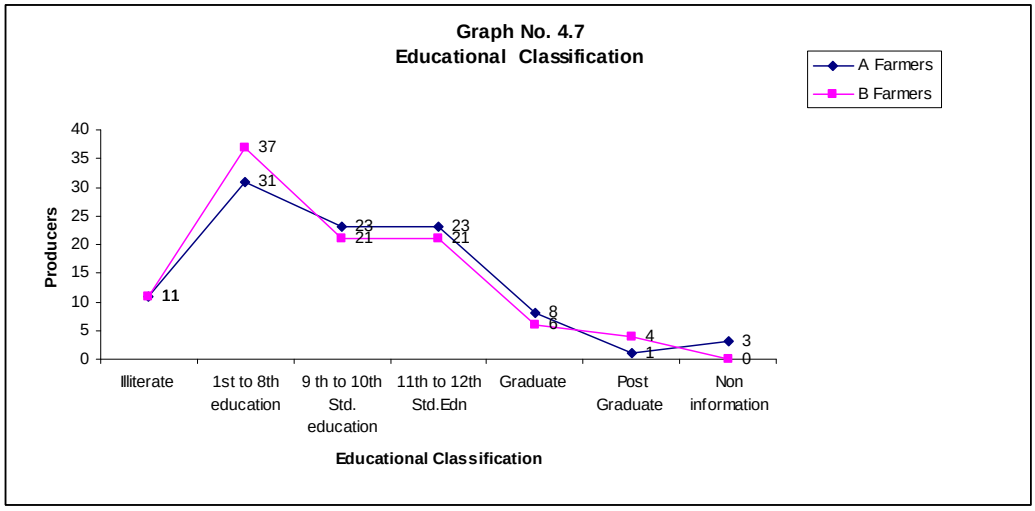
Educationwise Classification of A and B farmers

Sr. No.	Name of selected village	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	Illiterate	11	11.00	11	11.00
2	1st to 8th education	31	31.00	37	37.00
3	9 th to 10th Std. education	23	23.00	21	21.00
4	11th to 12th Std.Edn	23	23.00	21	21.00
5	Graduate	08	08.00	06	6.00
6	Post Graduate	01	01.00	04	4.00
7	Non information	03	03.00	-	-
	Total	100	100.00	100	100.00

Source : Field work

It is observed from Table 4.5 that maximum 31 (31%) A farmers and 37 (37%) B farmers have taken their primary education. It is followed by 23 (23%) A farmers and 21 (21%) B farmers who completed their secondary education. Other 23 (23%) A farmers and 21 (21%) B farmers have studied higher secondary level. 9 (9%) A farmers and 10 (10%) B farmers are graduate and post graduate . But 11 (11%) A farmers and B farmers each are illiterate. This information is explained in graph No. 4.7

It leads us to conclude that maximum A and B farmers are educated.



Source : Table No. 4.5.

4.3.1.5 Children's education

Table 4.6 indicates the education wise classification of children of A and B farmers.

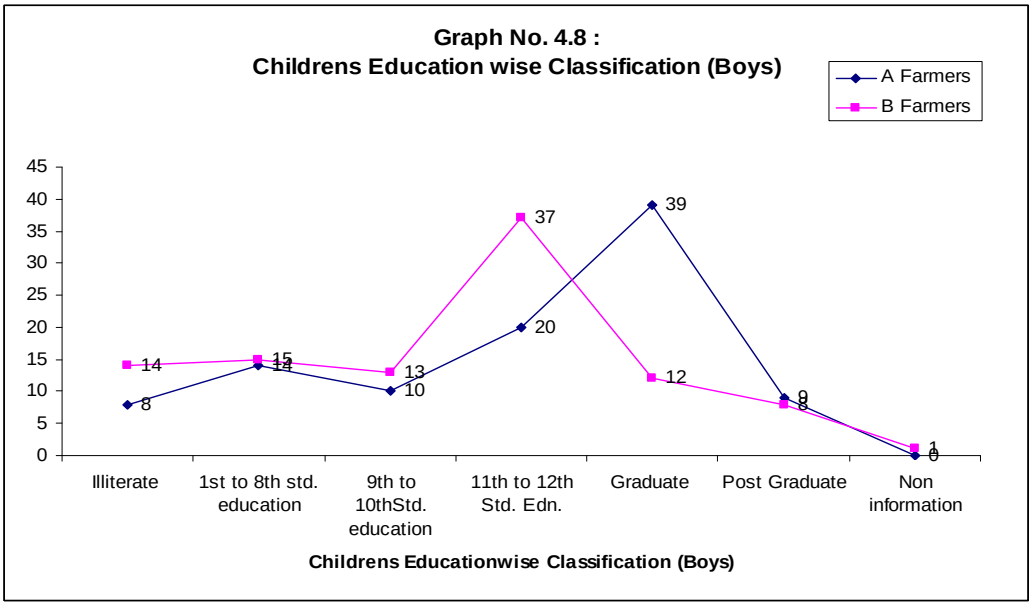
Table 4.6
Children's Educationwise Classification

Sr. No	Particulars	Fig Producers					Non fig Producers				Total
		Boys	%	Girls	%	Total	Boys	%	Girls	%	
1	Illiterate	8	8%	19	19	27	14	14	28	28	42
2	1st to 8thstd. education	14	14%	24	24	38	15	15	18	18	33
3	9th to 10thStd. education	10	10	17	17	27	13	13	12	12	25
4	11th to 12th Std. Edn.	20	20	21	21	41	37	37	21	21	58
5	Graduate	39	39	06	02	18	12	12	07	07	19
6	Post Graduate	09	09	07	06	12	08	8	08	08	16
7	Non information	00	00	06	06	06	01	1	06	06	07
	Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**200**

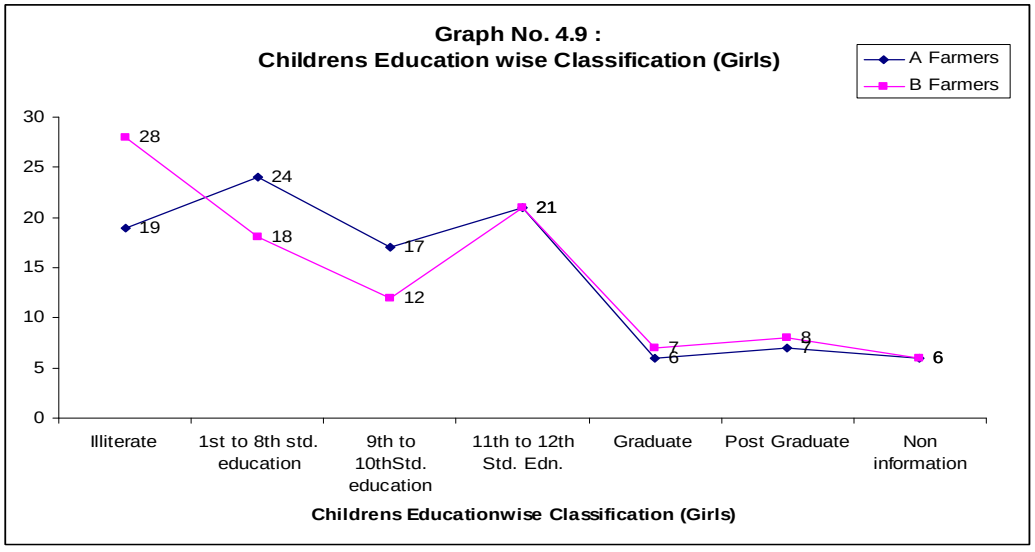
Source : Field Work

It is observed from Table 4.6 there are 42 illiterate children of B farmers as against 27 illiterate children of A farmers. There are 38 children of A farmers as against 33 children of B farmers who got primary education. The number of children who completed secondary education is 27 children of A farmers and 25 children of B farmers. There are 41 children of A farmers and 58 children of B farmers who got higher secondary level education. 45 children of A producer and 19 children of B farmers are graduate. There are 16 children of A farmers and 16 children of B farmers who completed post graduation. This information explained in Graph No. 4.8 and 4.9.

It leads us to conclude that children of both A and B producer farmers are educated.



Source : Tabel No. 4.6



Source : Table No. 4.6

4.3.1.6 Religion

Table 4.7 indicates the religionwise classification of A farmers and B farmers.

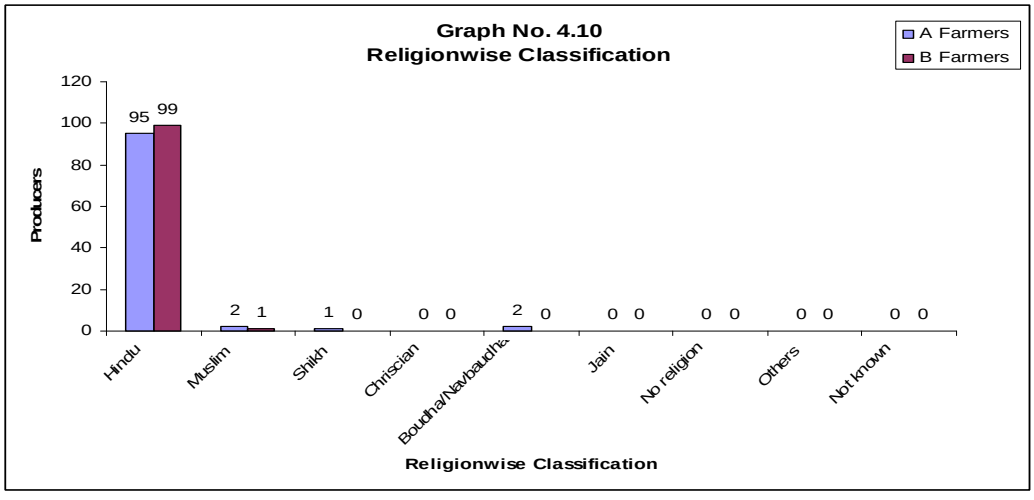
Table No. 4.7

Religionwise Classification of A farmers and B farmers

Sr. No.	Particulars	Fig Producer		Non fig producer	
		No of farmers	%	No. of farmers	%
1	Hindu	95	95.00	99	99.00
2	Muslim	02	02.00	01	01.00
3	Shikh	01	01.00		
4	Chriscian	-	-		
5	Boudha/Navbaudha	02	02.00		
6	Jain	-	-		
7	No religion	-	-		
8	Others	-	-		
9	Not known	-	-	-	-
	Total	**100**	**100**	**100**	**100**

Source : Filed Work

It is observed from Table 4.7 that 194 farmers are Hindu and thereafter 3 are Muslims, 1 Shikha and 2 are Navbauddh. It leads us to conclude that, majority of A & B farmers are Hindus. It is shown in graph No. 4.10.



Source : Table No. 4.7

4.3.1.7 Caste

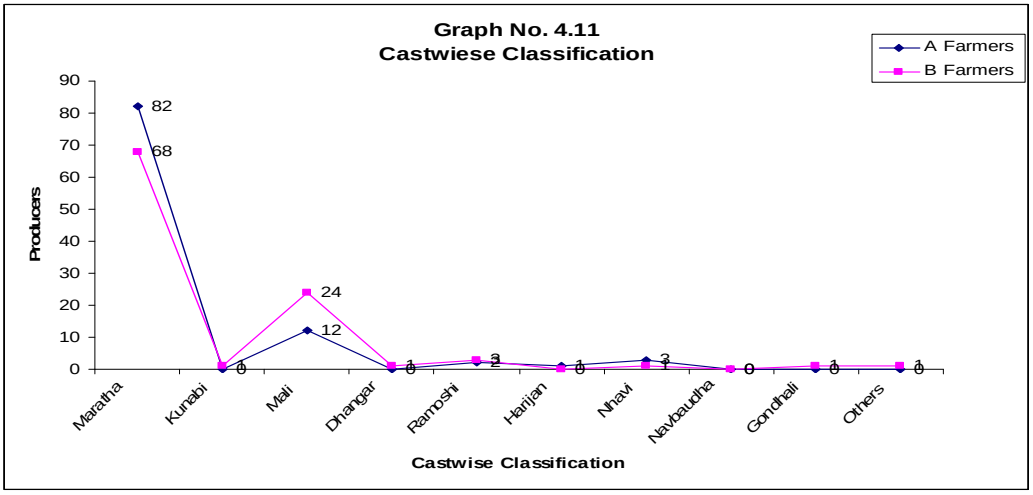
The castewise classification of A and B producer farmers is given in Table 4.8.

Table No. 4.8
Castewise Classification of farmers.

Sr. No	Particulars	Fig Producer		Non fig producer		Total	
		No of farmers	%	No. of farmers	%	Nos.	%
1	Maratha	82	82.00	68	68.00	150	75
2	Kunabi	-	-	01	01.00	1	1
3	Mali	12	12.00	24	24.00	36	18
4	Dhangar	-	-	01	01.00	1	1
5	Ramoshi	02	02.00	03	03.00	5	2
6	Harijan	01	01.00	-	-	1	1
7	Nhavi	03	03.00	01	01.00	4	2
8	Navbaudha	-	-	-	-	-	-
9	Gondhali	-	-	01	2.00	1	
10	Others	-	-	01	01	1	
	Total	**100**	**100.00**	**100**	**100**	**200**	

Source : Field Work

It is observed from Table 4.8 that 150 members (75%) are from Maratha Caste out of them 82 (41%) are A farmers and 68 (34%) B farmers . There are 36 (18%) are from Mali Caste out of them 24 (12%) from A farmers and 12 (6%) B farmers. It leads us to conclude majority of A farmers and B farmers belong to Maratha & Mali caste. This information explained in Graph No. 4.11.



Source : Table No. 4.8

4.3.2 Economic Aspects

The economic aspects cover occupation profession, land holding subsidiary business, income, expenditure, bank deposits, loan and repayment of loan.

4.3.2.1 Occupation

The occupationwise distribution of A farmers and B farmers is given in Table 4.9

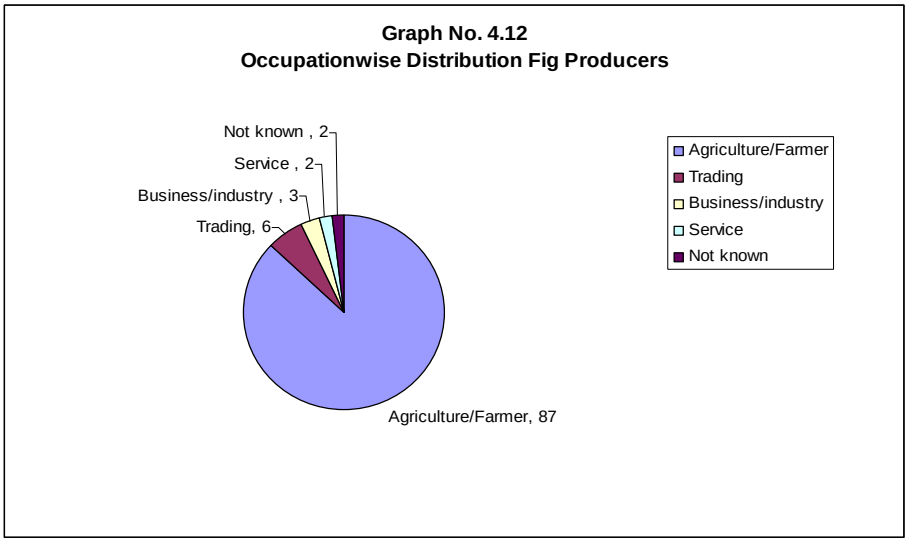
Table No. 4.9

Occupationwise distribution of Fig Producers and Non Fig Producers

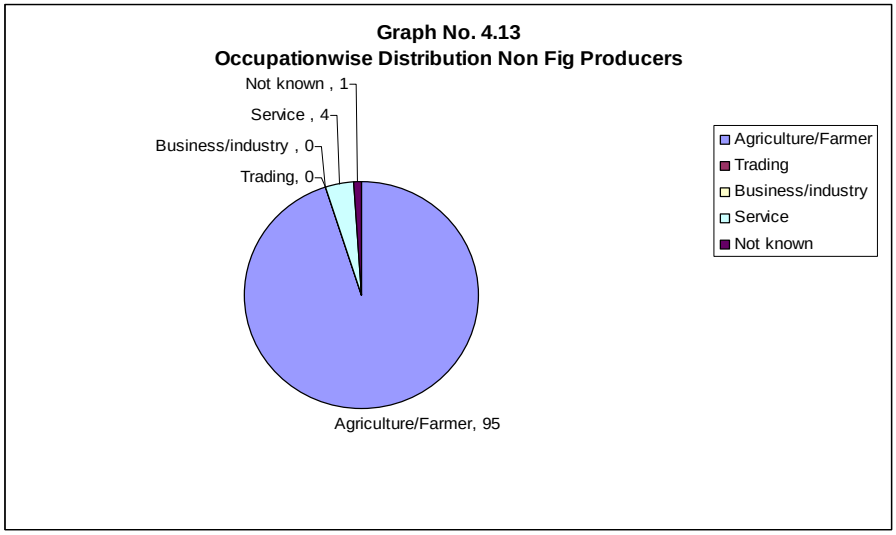
Sr. No	Particulars	Fig Producer		Non fig producer		Total	
		No of farmers	%	No. of farmers	%	Nos.	%
1	Agriculture/ Farmer	87	87.00	95	95.00	182	91
2	Trading	06	06.00	-	-	06	3
3	Business /industry	03	03.00	-	-	03	1.5
4	Service	02	02.00	04	04.00	06	3
5	Not known	02	02.00	01	01.00	03	1.5
	Total	**100**	**100.00**	**100**	**100**	**200**	**100**

Source : Field Work

It is observed from Table 4.9 that 182 (91%) members are Farmers. Out of them 95 (47.5%) from B farmers and 87 (43.5%) from A farmers. There are 6 (3%) producters who are in Trading and 3% A farmers in business and 2 (2%). A farmers and 4 members (4%) of B farmers are in service. This is explained with the help of Graph No. 4.12 and 4.13



Source : Table No. 4.9



Source : Table No. 4.9.

4.3.2.2 Land holding

The Table 4.10 indicates land holding position of A farmers and B farmers.

Table No. 4.10

Land Holding Position.

Sr. No	Particulars	Fig Producer		Non fig producer		Total	
		No of farmers	%	No. of farmers	%	Nos.	%
1	Upto 2.5 Acres	37	37.00	46	46.00	83	41.5
2	Above 2.5 & upto 5 Acres	47	47.00	41	41.00	88	44
3	Above 5 & upto Acres	10	10.00	08	08	18	9.0
4	Above 10 & upto 15 Acres	02	02.00	01	01	03	1.5
5	Above 15 & upto Acres	02	02.00	01	01	03	1.5
6	Above 20 Acres	02	02.00	03	03	5	2.5
7	No Answer		-	00	00	0	0
	Total	**100**	**100.00**	**100**	**100.00**	**200**	**100**

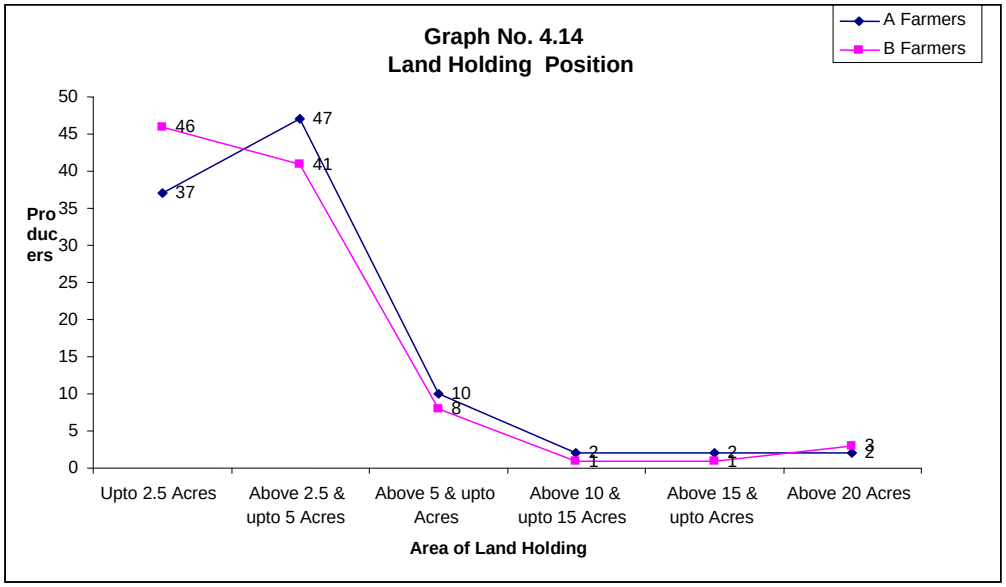
Source : Field Work.

It observed from Table 4.10 that maximum 88 members (44%) have land between 2.5 and upto 5 Acres. Out of them 47 members (47%) are from A farmers and 41 members (41%) from B farmers. It is followed by 83 farmers (41.5%) who hold land upto 2.5 Acres. Out of them 37 members (37%) are form A farmers and 46 (46%) members from B farmers.

18 members (9%) hold land between 5.10 Acres. Out of them 10 farmers are from A farmers and 8 farmers (8%) from B farmers. 3 members have 10 to 15 acres land each out of them 2 members (1%) from A farmers and 1 (0.5%) from B farmers.

There are 13 members (6.5%) of B producer category who hold land between 5 to 20 acres. There are only16 members (8%) in A category who hold same size of land.

It leads us to state that marginal farmers (upto 2.5 Acres) and small farmers (2.5 Acre-10 Acre) are in majority in the sample size. This is shown in graph No. 4.14



Source : Table No. 4.10

4.3.2.3 Subsidiary Occupation

Table 4.11 indicates subsidiary occupationwise classification of A farmers and B farmers.

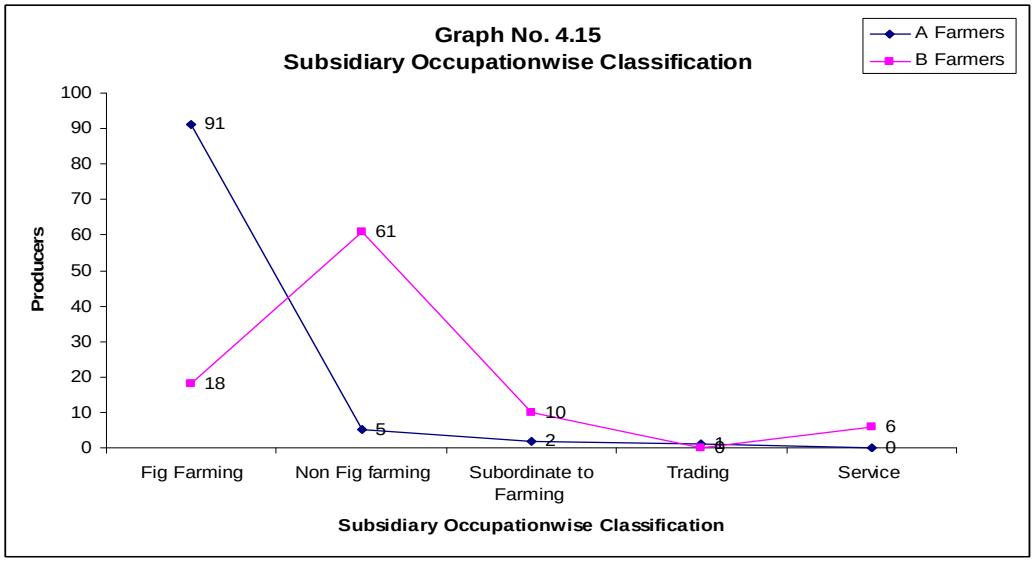
Table 4.11

Subsidiary Occupation of the farmers

Sr. No	Particulars	Fig Producer		Non fig producer		Total	
		No of farmers	%	No. of farmers	%	Nos	%
1.	Fig Farming	91	91.00	18	18.00	109	54.5
2.	Non Fig farming	05	05.00	61	61.00	66	33
3.	Subordinate to Farming	02	02.00	10	10.00	12	6
4.	Trading	01	01.00	-	-	01	0.5
5.	Service	-	-	06	06.00	06	03
6.	Others	01	01.00	05	05.00	06	03
	Total	**100**	**100.00**	**100**	**100.00**	**200**	**100**

Source : Field Work.

It is observed from Table No. 4.11 that maximum members of 109 (54.5%) farmers Members are Fig Farmers. Out of them 91 (45.5%) are A producer Farmers and 18 (9%) from B Producer Farmers. Further out of 66 (33%) Members, 61 B producer Members are Non Fig Farmers doing farming and 5 (2.5%) from A producer Members non-fig product farmers and other 12 (6%) members doing subsidiary to farming. Out of them 10 (5%) are from B producer Farmers and 2 (1%) from A producer Farmers. 6 (3%) Members are doing service from B producer Farmers. It leads us to conclude that percentage of Fig Farmers is more than 50%. The graph 4.15 explains subsidiary occupationwise classification of the respondents.



Source : Table No. 4.11

4.3.2.4 Monthly Expenditure

The classification of monthly expenditure of A farmers and B farmers is given in table 4.12

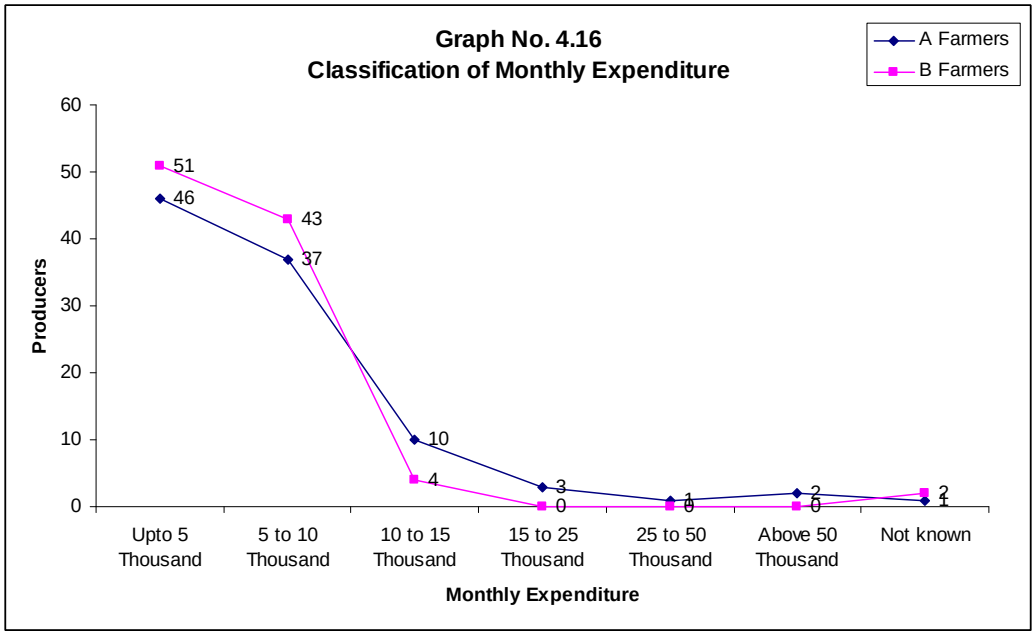
Table No. 4.12

Classification of Monthly expenditure of A and B farmers

Sr. No	Particulars	Fig Producer		Non fig producer	
		No of farmers	%	No. of farmers	%
1.	Upto 5 Thousand	46	46.00	51	51.00
2.	5 to 10 Thousand	37	37.00	43	43.00
3.	10 to 15 Thousand	10	10.00	04	04.00
4.	15 to 25 Thousand	03	03.00	-	-
5.	25 to 50 Thousand	01	01.00	-	-
6.	Above 50 Thousand	02	02.00	-	-
7.	Not known	01	01.00	02	2.00
	Total	**100**	**100**	**100**	**100.00**

Source : Field Work.

It is observed from Table 4.12 that maximum number of 46 A farmers (46%) and 51 B farmers (51%) have monthly expenditure upto Rs. 5 thousand. Other 37 A farmers (37%) and 43 (43%) B farmers spent between Rs. 5 to 10 thousand per month. Other 10 A farmers (10%) and 4 B farmers (4%) spend in the range of Rs. 10 to 15 thousand per month. Other 7 A farmers (7%) have spent between Rs. 15 to50 thousand per month. A farmers adopted fig plantation. Hence their monthly expenditure increased. Which is due to their standard of living. Graph 4.15 explains this classification.



Source : Table No. 4.12

4.3.2.5 Bank deposits

It is observed in the field work that 91 A farmers and 94 B farmers opted to bank accounts. It leads us to conclude that there is no difference between A farmers and B farmers regarding opening the bank account. This is good habit.

These A farmers and B farmers had deposits in the bank. The details are given in Table 4.13.

Table No. 4.13

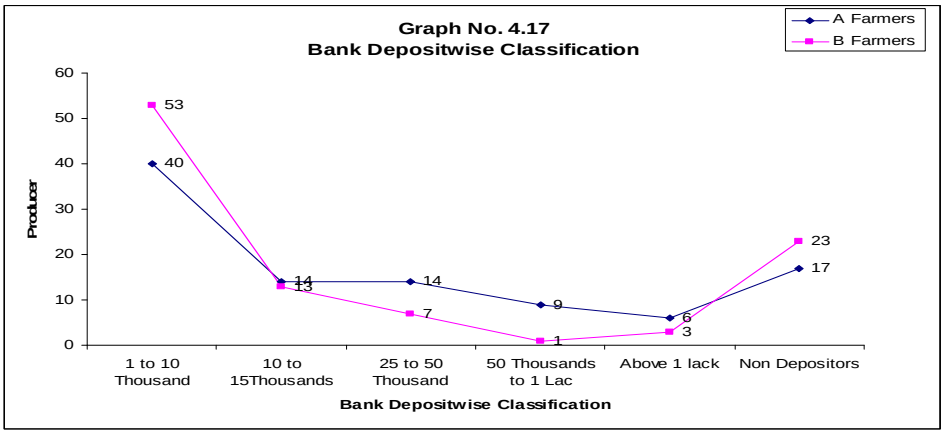
Bank depositwise Classification of A and B Producer farmers.

Sr. No	Particulars	Fig Producers		Non fig producers	
		No of farmers	%	No. of farmers	%
1.	1 to 10 Thousand	40	40.00	53	53.00
2.	10 to 15Thousands	14	14.00	13	13.00
3.	25 to 50 Thousand	14	14.00	07	07.00
4.	50 Thousands to 1 Lac	09	09.00	01	01.00
5.	Above 1 lack	06	06.00	03	03.00
6.	Non Depositors	17	17	23	23.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : field work

It is observed from Table 4.13 that maximum number of 40 A producer farmers (40%) and 53 B producer farmers (53%) have deposited in the banks the amounts in the range upto Rs. 10 thousands. It is followed by 14 depositors (14%) of A farmers and 13 depositors (13%) of B farmers who deposited in the bank in the range of Rs. 10-25 thousands. Another 14 depositors (14%) of A farmers and 7 depositors (7%) of B farmers deposited in the bank in the range of Rs. 25-50 thousands 9 depositors of A farmers (9%) and one depositor (1%) of B producer have deposited in the bank in the range of Rs. 50,000- 1,00,000. There are 6 depositors (6%) of A farmers and 3 depositors (3%) of B farmers who deposited more than Rs. One lakh. It leads us to conclude that initially there were 53 depositors of B farmers as against 40 depositors of A producer who deposited upto

Rs. 10000. But as deposits increases, the strength of a producer (57) was more than B farmers (31). Thus A farmers got more money from fig plantation than B farmers who did not opt to fig plantation. Graph explains bank diposit wise classification of respondents.



Source : Table No. 4.13

4.3.2.6 Sources of Loan

The table 4.14 indicates sources of loanwise classification of A farmers and B farmers.

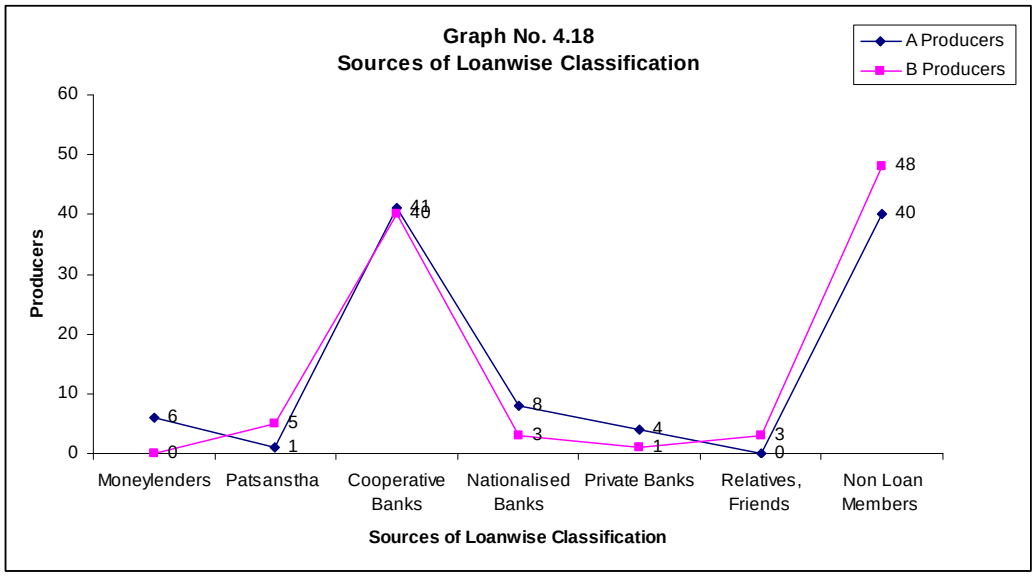
Table No. 4.14
Sources of Loan

Sr. No	Particulars	A farmers		B farmers	
		Nos	%	Nos	%
1.	Moneylenders	06	06.00	-	-
2.	Patsanstha	01	01.00	05	05.00
3.	Cooperative Banks	41	41.00	40	40.00
4.	Nationalised Banks	08	08.00	03	03.00
5.	Private Banks	04	04.00	01	01.00
6.	Relatives, Friends	-	-	03	03.00
7.	Non Loan Members	40	40.00	48	48.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work

It is observed from Table 4.14 that maximum number of 41 A farmers members (41%) and 40 B farmers Members (40%) availed the

loan from Co-operative Banks. It is followed by 40 A farmers members (40%) and 48 B producer members who did not avail any kind of loan. Marginally 11 A farmers members (11%) and 12 B producer members (12%) approached moneylenders, patsanstha and relatives and private banks. Thus it leads us to conclude that the cooperative bank is the major source for loans to them. The borrowing capacity of A farmers opting to fig plantation increased rapidly. The classification of respondents is given in graph No. 4.17



Source : Table No. 4.14

4.3.2.7 Amount of loan

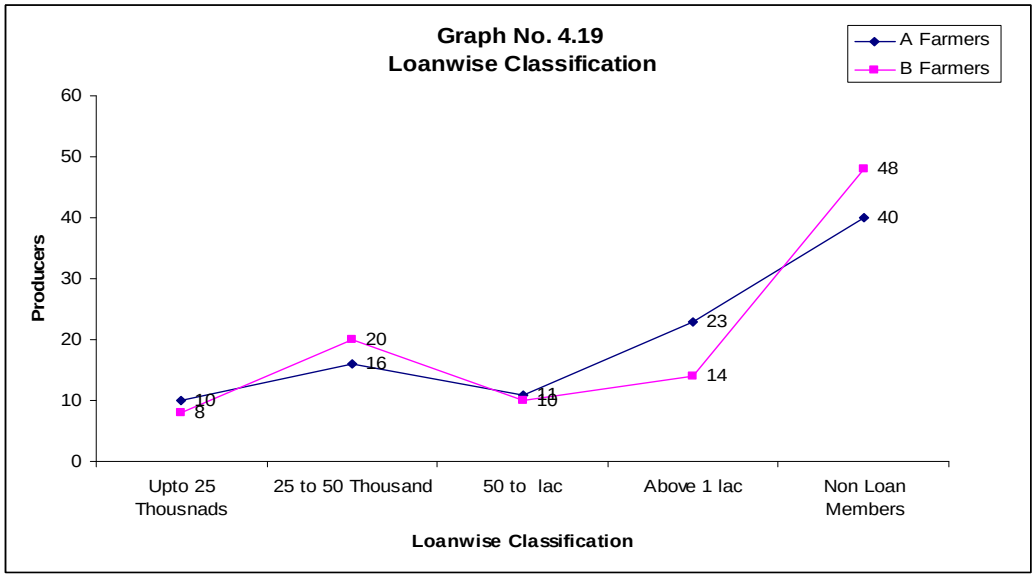
Amount of loanwise classification of A farmers and B farmers is given in table 4.15

Table 4.15
Loanwise classification

Sr. No	Particulars	(A Producer)		(B Producer)	
		Nos	%	Nos	%
1.	Upto 25 Thousnads	10	10.00	08	08.00
2	25 to 50 Thousand	16	16.00	20	20.00
3	50 to lac	11	11.00	10	10.00
4	Above 1 lac	23	23.00	14	14.00
5	Non Loan Members	40	40.00	48	48.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work

It is observed from Table 4.15 that 40 A farmers (40%) and 48 B farmers (48%) did not avail loan maximum 23 A farmers (23%) and 14B farmers had loan above Rs. One Lakh Due to fig plantation borrowing capacity of A farmers is improved. Graph 4.18 explains these details.



Source : Table No. 4.15

4.3.2.8 Refund of Loan

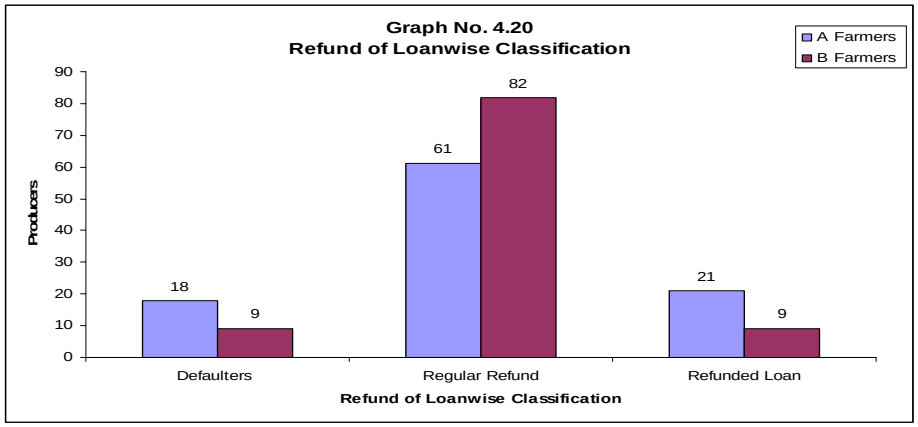
Table 4.16 indicates refund of loanwise classification of A and B producer farmers.

Table No. 4.16
Refund of Loan

Sr.No	Particulars	A Farmers		B Farmers	
		Nos	%	Nos	%
1.	Defaulters	18	18.00	09	09.00
2.	Regular Refund	61	61.00	82	82.00
3.	Refunded Loan	21	21.00	09	09.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work.

It is observed from Table No.4.16 that 61 (61%) Members from A farmers and 82 (82%) Members from B farmers have refunded Loan regularly. Then 21 (21%) from A farmers 18 (18%) Members and 9 (9%) from B farmers had not refunded the Loan regularly. It leads us to conclude that 82 A farmers (82%) and 91 B farmers (91%) are punctual in repayment of the loan.



Source : Table No. 4.16

4.4 FIG PLANTATION

In this section the researcher has made an attempt to cover the encouragement to opt for fig plantation, yearwise fig plantation, irrigation sources, irrigation system, year and acrewise expenditure, processing of fig, marketing of fig, satisfaction, effects of fig plantation, employment generation and use of agricultural implements.

4.4.1 Encouragement

The table 4.17 gives the sourcewise classification of encouragement to fig producers.

Table 4.17

Sourcewise classification of encouragement to Fig producers

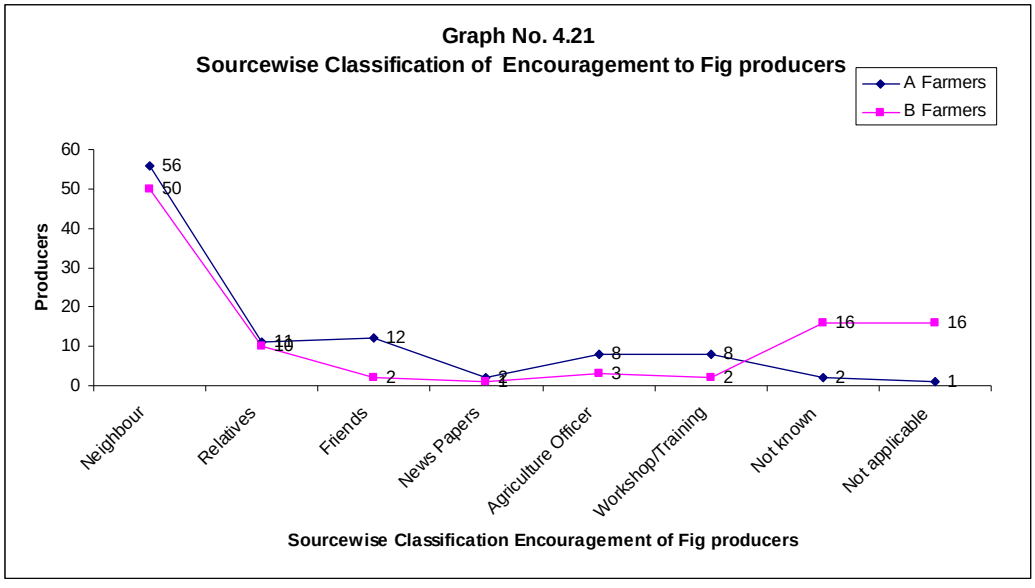
Sr. No	Particulars	A Farmers		B farmers	
		Nos	%	Nos	%
1.	Neighbour	56	56.00	50	50.00
2.	Relatives	11	11.00	10	10.00
3.	Friends	12	12.00	02	02.00
4	News Papers	02	02.00	01	01.00
5	Agriculture Officer	08	08.00	03	03.00
6	Workshop/Training	08	08.00	02	02.00
7	Not known	02	02.00	16	16.00
8	Not applicable	01	01.00	16	16.00
	Total	100	100.00	100	100.00

Source : Field work

(NB – Total may not tally as each one has opted more than options)

It is observed Table No. 4.17 that Fig Producer and Non-Fig prodoctor are imitating the farming techniques from their Neighbors. 56 (56%) from A Farmer and 50 (50%) from B Farmer started the Fig Production due to encouragement from Neighbours, further 12 (12%) from A Farmer and 2 (2%) B Farmer got inspiration from friends and thereafter 11 (11%) from A Farmer and 10 (10%) from B Farmer got encouragement from relatives and 16 Members encouraged from Agriculture Officer and training.

It leads us to conclude that 80% Fig Farmers and Non fig Farmers are encouraged by Neighbourers and Relatives and Friends for fig plantation. Graph 4.19 gives details.



Source : Table No. 4.17

4.4.2 Yearwise Fig and Non Fig Plantation Area

Table 4.18 indicates yearwise fig and non fig plantation areawise classification of A Farmers and B farmers.

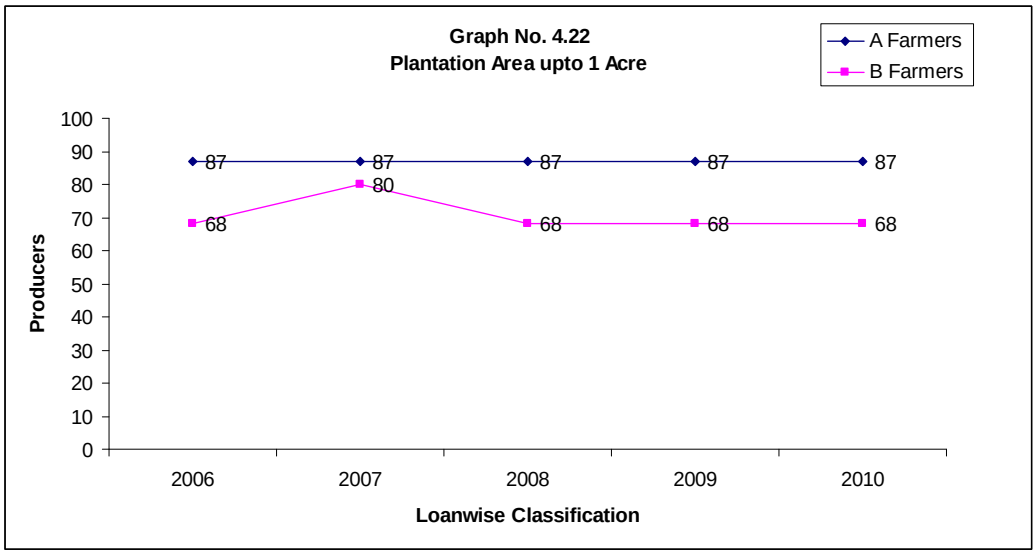
Table No. 4.18

Acre wise Fig Plantation and Non Fig plantation in Purandar taluka

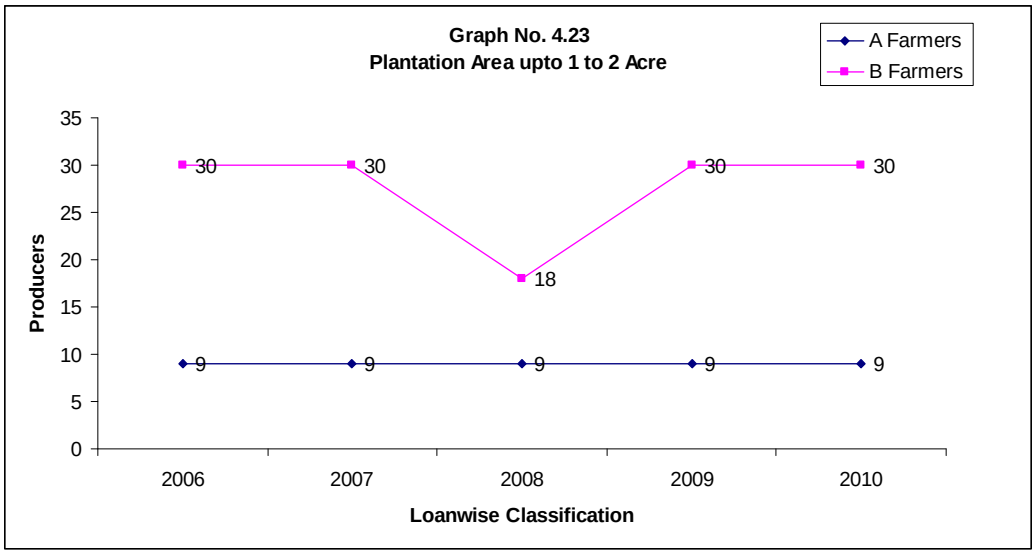
Year	Fig Plantation Area																
	Upto 1 Acre				1 to 2 Acre				2 to 3 Acre				3 to 4 Acre				Total
	A		B		A		B		A		B		A		B		
	No.	%	No	%	No.	%	No	%	No	%	No	%	No	%	No.	%	No
2006	87	87	68	68	9	9	30	30	3	3	1	1	1	1	1	1	200
2007	87	87	80	80	9	9	30	30	3	3	1	1	1	1	1	1	200
2008	87	87	68	68	9	9	30	30	3	3	1	1	1	1	1	1	200
2009	87	87	68	68	9	9	30	30	3	3	1	1	1	1	1	1	200
2010	87	87	68	68	9	9	30	30	3	3	1	1	1	1	1	1	200

Source : Field Work

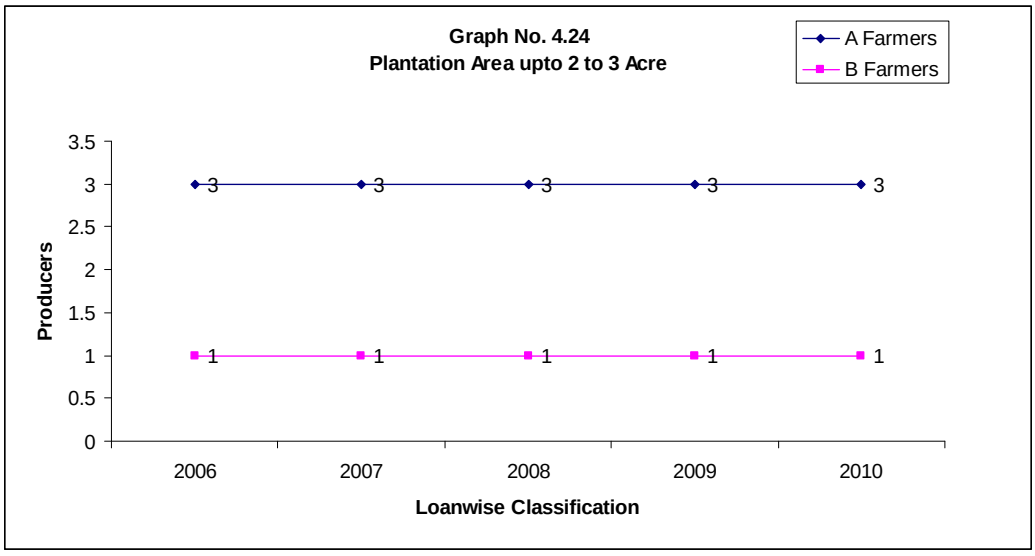
It is observed from 4.18 that in the year 2006 to 2010 there is no change in plantation of Fig production. Upto 1 Acre the number of A Farmers were 87 members. But B Farmers are 68 in 2006 and in the year 2007 it upto 80. Also 1 to 2 Acres Area A Farmers there is no change in the year 2006 -10 they are 9 members. No change in B Farmers which was 30. But 3 A Farmers and 1 B farmer have 2-3 acres fig plantation area in 2006-2010. Only one farmer each from A and B groups has 3 to 4 acres of fig plantation area in 2006-2010. It means there is no change in the plantation of Fig farming. Main reasons were employment, shortage of water supply, change of climate, diseases etc. Grah 4.20 to 4.23 gives explanation.



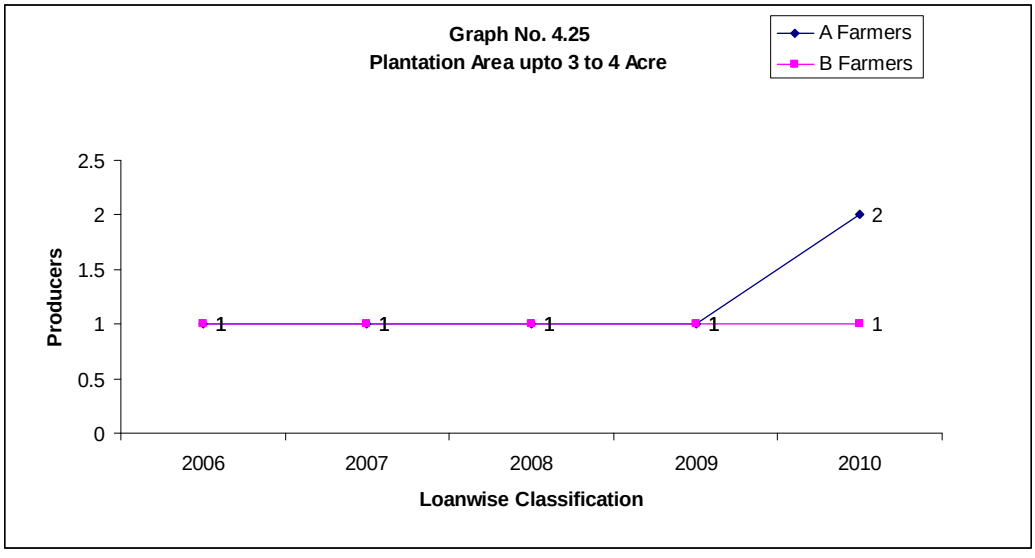
Source : Table No. 4.18



Source : Table No. 4.18



Source : Table No. 4.18



Source : Table No. 4.18

4.4.3 Sources of Water

Table 4.19 indicates the sources of waterwise classification of A Farmer and B Farmer.

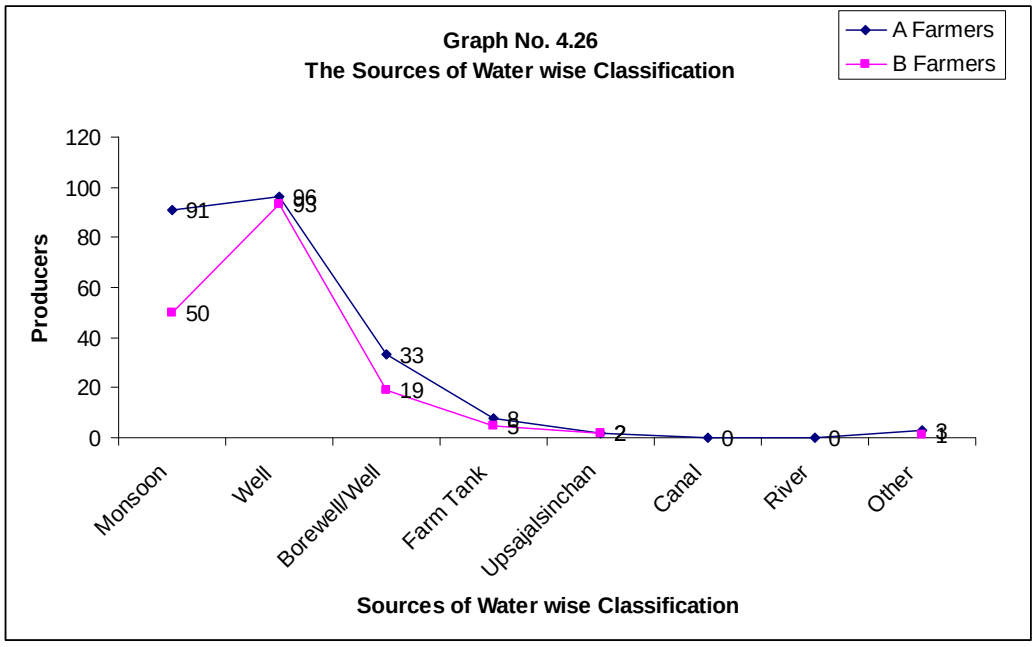
Table No. 4.19

Water Sourceswise classification of A Farmers and B Farmers

Sr.No	Particulars	A Farmers		B Farmers	
		Nos	%	Nos	%
1.	Monsoon	91	91.00	50	50.00
2.	Well	96	96.00	93	93.00
3.	Borewell/Well	33	33.00	19	19.00
4.	Farm Tank	08	8.00	05	5.00
5.	Upsajalsinchan	02	2.00	02	2.00
6.	Canal	-			
7.	River	-			
8.	Other	3	3.00	1	1.00

Source : Field Work
(NB **–** As each respondent opted more than one total may not tally)

It is observed from table 4.19 that 91 A Farmers (91%) and 86 B Farmers (86%) rely on mansoon for water supply. Other 96 A Farmers 96% and 93 B Farmers (93%) depend on well for supply of water. Borewell is the convenient source of water to 33 A Farmers 33% and 19 B Farmers 19% farm tank is the source of water to 8 A produces 8% and 5B Farmers 5% This leads us to conclude that mansoon is most important source of water. Indian agriculture depends on vegeries of nature. All the year irrigation through river and canal is not available to fig Farmers. Graph 4.24 explains water source wise classification of respondences.



Source : Table No. 4.19

4.4.4. Irrigation System

Table 4.20 indicates that the irrigation systemwise classification A Farmers and B Farmers.

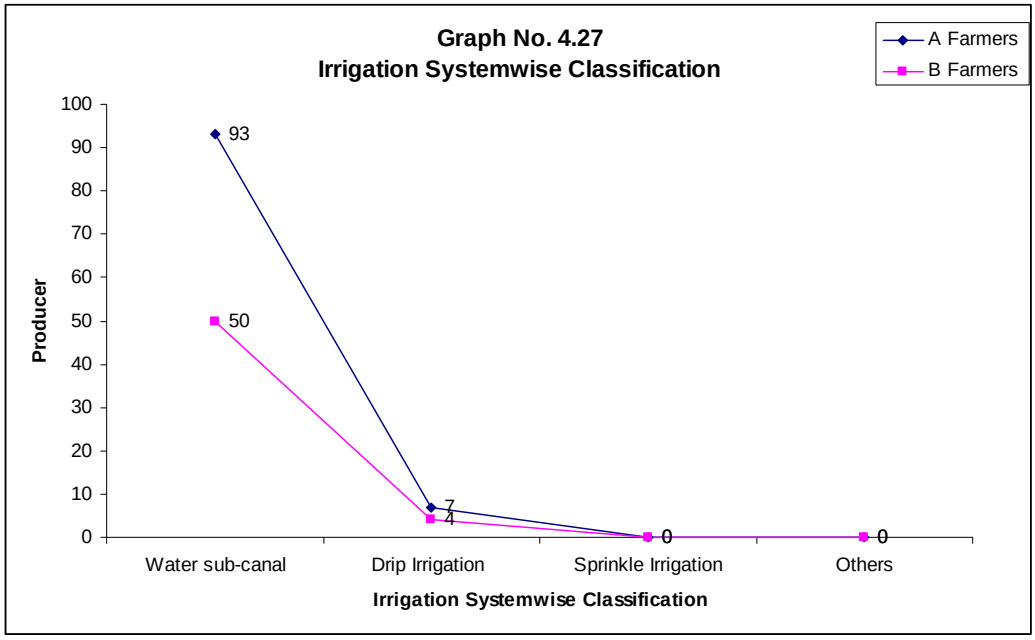
Table 4.20

The irrigation systemwise classification of A Farmers and B Farmers

Sr.No	Particulars	A Farmers		B Farmers	
		Nos	%	Nos	%
1.	Water sub-canal	93	93.00	96	96.00
2.	Drip Irrigation	07	07.00	04	04.00
3	Sprinkle Irrigation	-	-	-	-
	Total	100	100	100	100

Source : Field Work

It is observed from table 4.20 that 93 A Farmers (93%) and 96 B Farmers (96%) use sub canal water. The drip irrigation is used by 7 A Farmers (7%) and 4 B Farmers (4%). This leads us to conclude that there is still scope for farmers to use drip irrigation and sprinkle irrigation. The Graph 4.25 shows this information.



Source : Table No. 4.20

4.4.5 Annual Cost of production of Fig and Non Fig Farmers during the period from 2006-2010. (Per Acre)

Table 4.21 indicates the year wise fig and non fig production expenditure wise classification of A Farmers and B farmers.

Table No. 4.21

Yearwise fig and non fig production cost classification

Years	Rs. 10 to 20 thousands.				Rs.20 to 30 thousands				Rs. 30 to 40 thousands.				Rs. 40 to 50 thousands.				Rs. 50 to 60 thousand.				Total Farmers
	A		B		A		B		A		B		A		B		A		B		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
06	4	4	66	66	12	12	23	23	25	25	02	02	32	32	06	06	27	27	3	3	100
07	3	3	60	60	12	12	22	22	17	17	11	11	13	13	4	4	5	5	3	3	100
08	2	2	53	53	11	11	27	27	13	13	13	13	11	11	3	3	63	63	4	4	100
09	2	2	42	42	6	6	21	21	9	9	19	19	13	13	12	12	65	65	4	4	100
10	3	3	41	41	6	6	21	21	9	9	19	19	13	13	12	12	69	69	7	7	100

Source : Field Work.

It is observed from Table 4.21 that per acre annual cost of fig production is in the range of Rs. 10000 to Rs. 50000.

The annual cost of Non Fig Farmers was between Rs. 10000 to Rs. 40000 it means fig production cost is more than Non fig production.

It is observed from table 4.21 during the period 2006-2010 annual cost of Rs. 10000-20000 was incurred by minimum 2 and maximum 4 fig farmers.

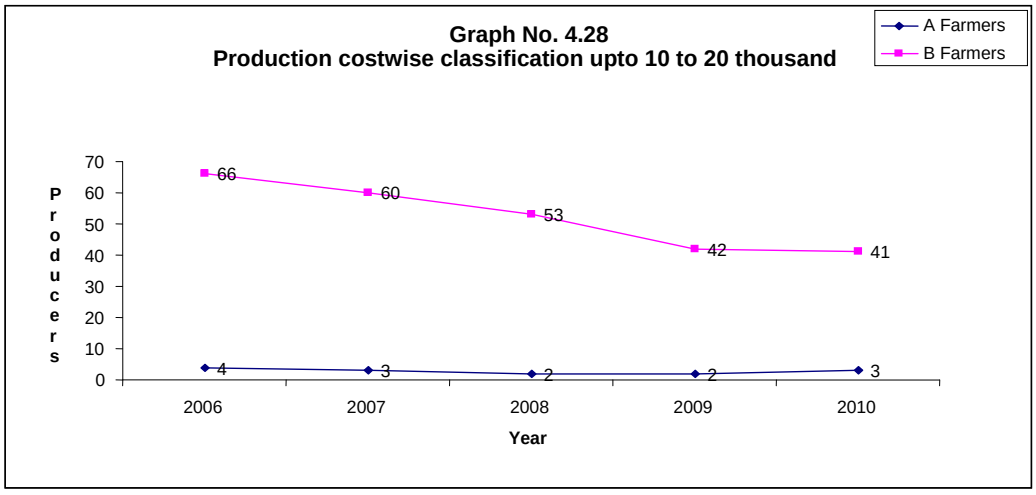
During the period from 2006-2010 the annual cost for Non Fig output per acre was Rs. 10000-20000 and it was incurred by minimum 41 Non Fig Farmers and maximum 66 farmers.

Non Fig farmers spend Rs. 20000 to 30000 per Acre per annum and fig farmers also spent to the same amount but there were 23 Non fig farmers as against 12 fig farmers in 2006 and 21 non fig farmers and 6 fig farmers in 2010.

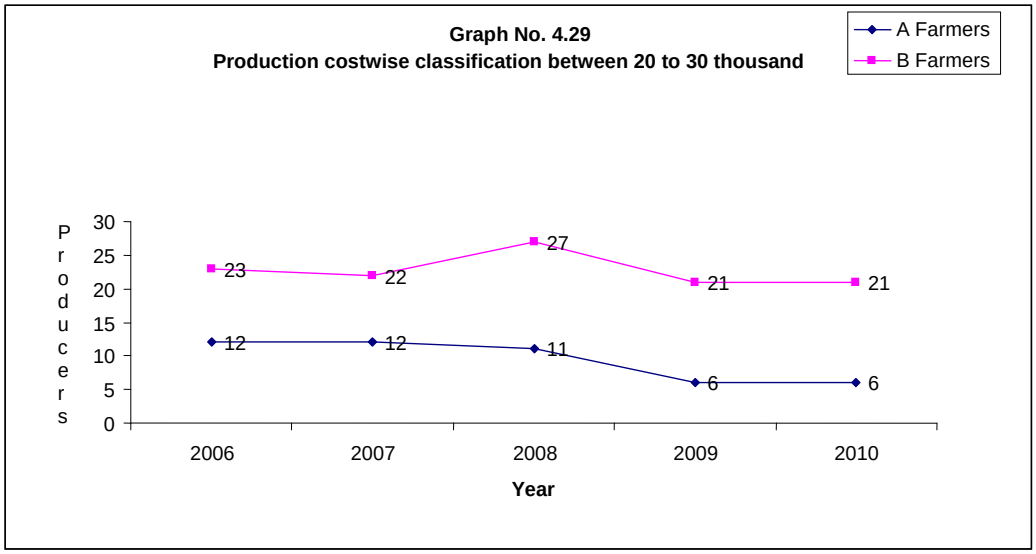
Further there were 25 fig farmes and 2 non fig farmes spending in the range of Rs. 30000 to Rs. 40000 in 2006. There were 17 fig farmes and 11 Non Fig Farmers in 2007. Finally 9 fig farmers and 19 non Fig farmers spent same amount in 2010.

During the period 2006 to 2010 majority of fig farmers spent Rs. 40000-50000 per annum per acre there was very few non fig farmer in this category.

This indicates that fig farming is costilier than Non fig farming.



Source : Table No. 4.21



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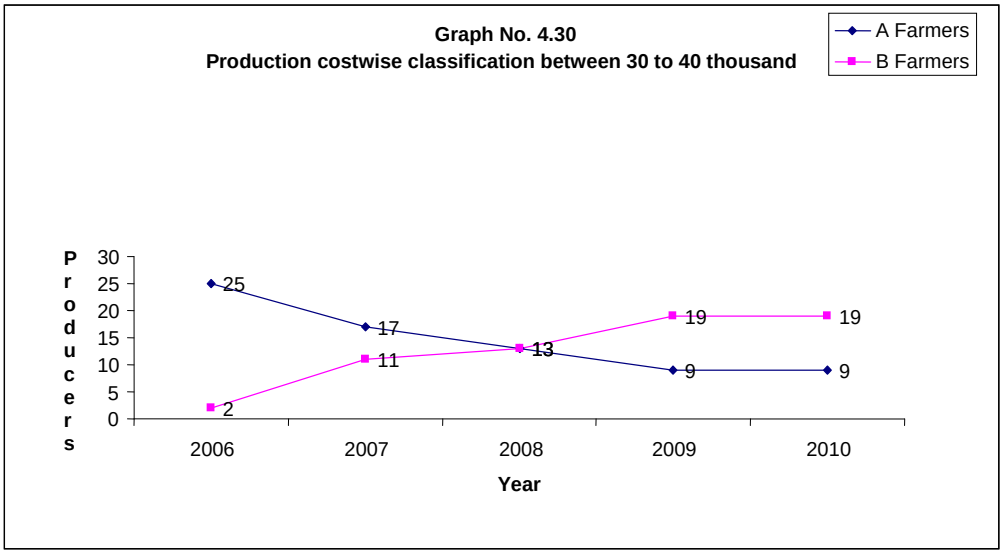

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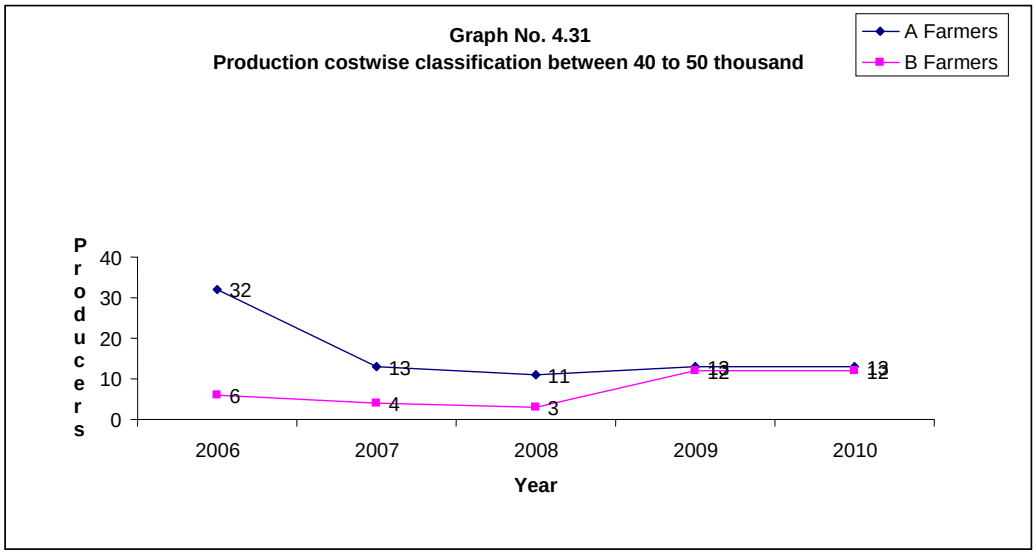

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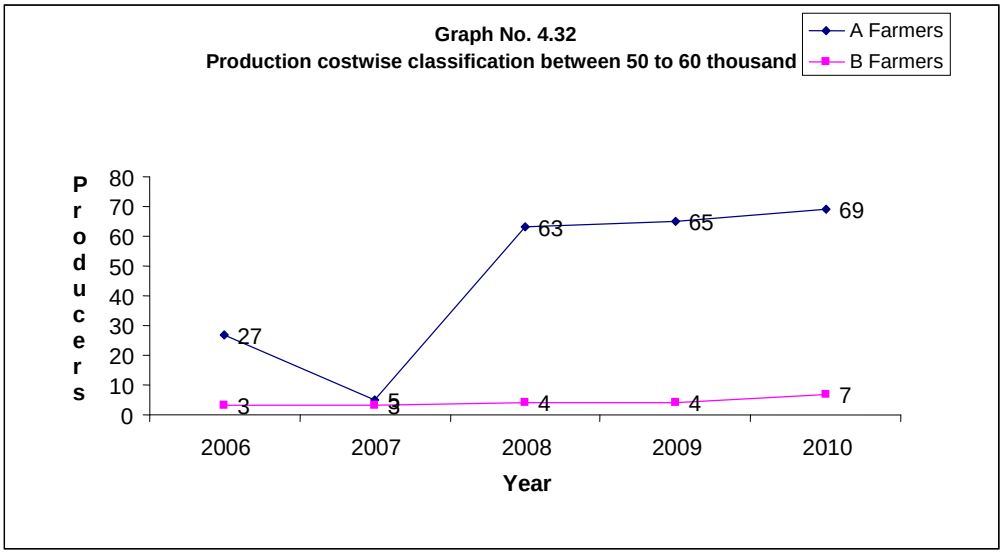


Source : Table No. 4.21

4.4.6 Annual Income of Fig and Non Fig Farmes during the period from 2006-2010 (Per Acre).

The incomewise classification of A Farmers and B Farmers is given in Table 4.22

Table 4.22

Incomewise classification of A Farmers and B farmers

Farmers category	Year	Upto Rs. 1 lac	Rs. 1 lac to Rs.2 lacs	2 lacs - 3 lacs	3 lacs above	Total
Fig producers	2006	29	62	08	01	100
	2007	16	74	09	01	100
	2008	10	74	14	02	100
	2009	8	73	17	02	100
	2010	7	68	24	01	100
Non fig producers	2006	99	01	0	0	100
	2007	98	02	0	0	100
	2008	97	02	01	0	100
	2009	97	02	0	01	100
	2010	96	03	00	01	100

Source : Field Work

One of the objectives of this research work is to have comparitive analysis of annual income of Fig Farmers and Non Fig Farmers. The hypothesis is that, comparitively fig producer farmers are earning more than non fig producer farmers. This can be tested positively with the help of table 4.22. The number of fig producer farmers earning per Acre the Income upto Rs. 1 lacs were 29 % in 2006. This trend of fig producer farmers decreased to 16 (16%) in 2007, 10 (10%) in 2008, 8 (8%) in 2009, 7 (7%) in 2010. This is due to increasing income of these fig producer farmers.

That Non fig producer farmers earning upto Rs. 1 Lac per acre per annum were in the range of 96 to 99 in 2006-2010.

Fig producer farmers earning Rs. 1 Lac to 2 Lacs were per annum and per acre were 62 (62%) in 2006, remnaing constant to 74 in 2007-2008, 73 (73%) in 2009 and 68% (68%) in 2010.

This is significant numbers of fig producer farmers earning upto Rs. 2 lacs per acre.

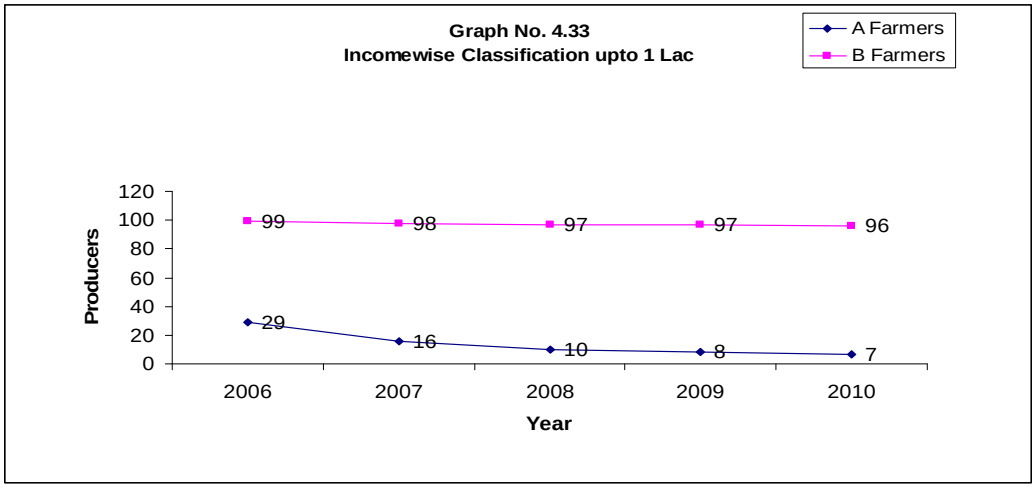
During the same period from 2006 to 2010 hardly 3 Non fig producer farmers could get same income.

Further 8 fig producer farmes earned Rs. 2 Lacs – 3 Lacs in 2006, 9 fig producer farmers in 2007, 14 fig producer farmes in 2008, 17 fig producer farmes in 2009 and 24 fig producer farmers in 2010 had annual income Rs. 2 Lac – 3 Lac per acre.

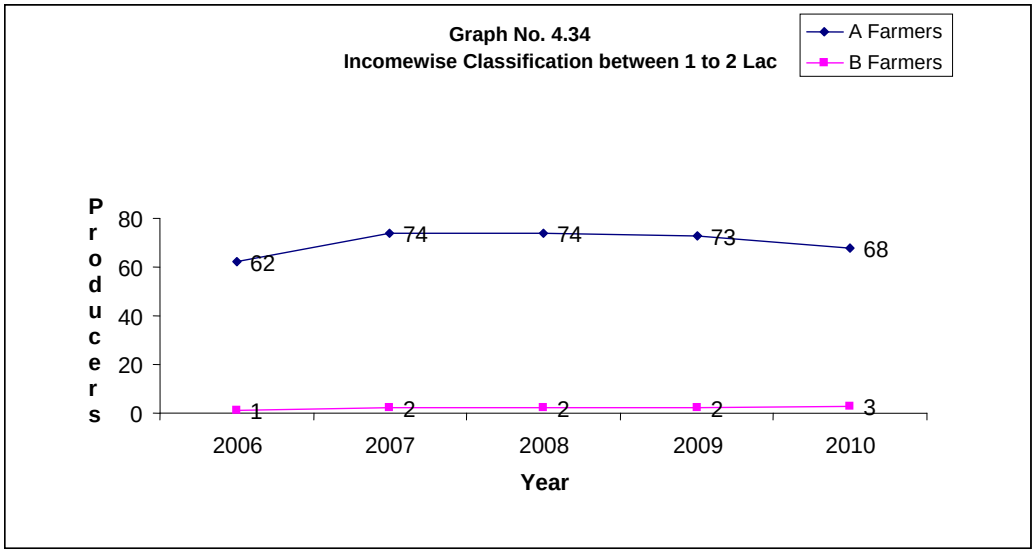
During the period 2006-2010 only a single non fig producer farmer could achiee this income Rs. 2 Lacs – 3 Lacs in 2008.

It is more significant from the fact that during 2006, 2007 and 2010. 1 fig producer farmer and during 2008 and 2009, 2 fig producer farmers had their income more than Rs. 3 Lacs and above per year per acre.

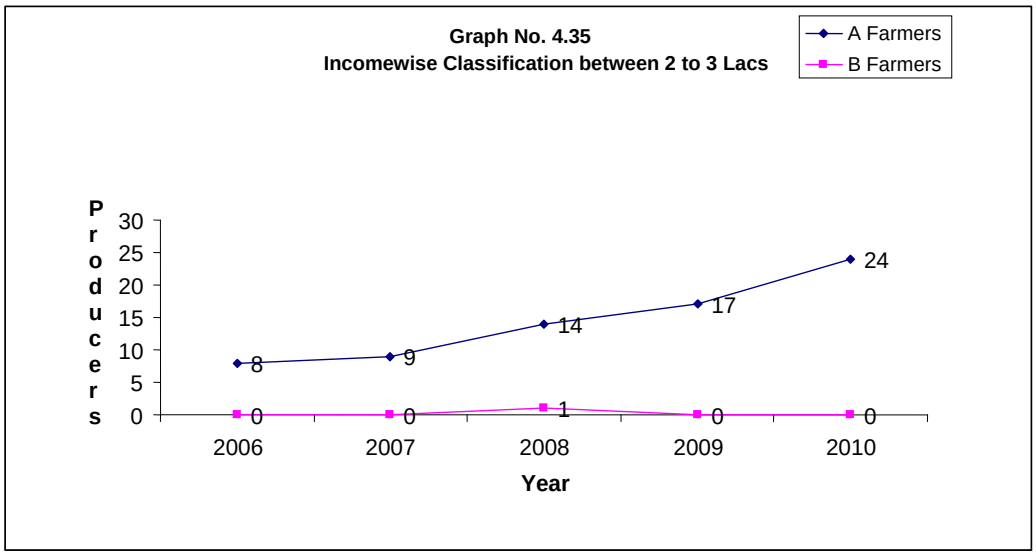
Therefore, the **hypothesis is that, comparitively fig producer farmers are earning more than non fig producer farmers is positively tested and accepted.**



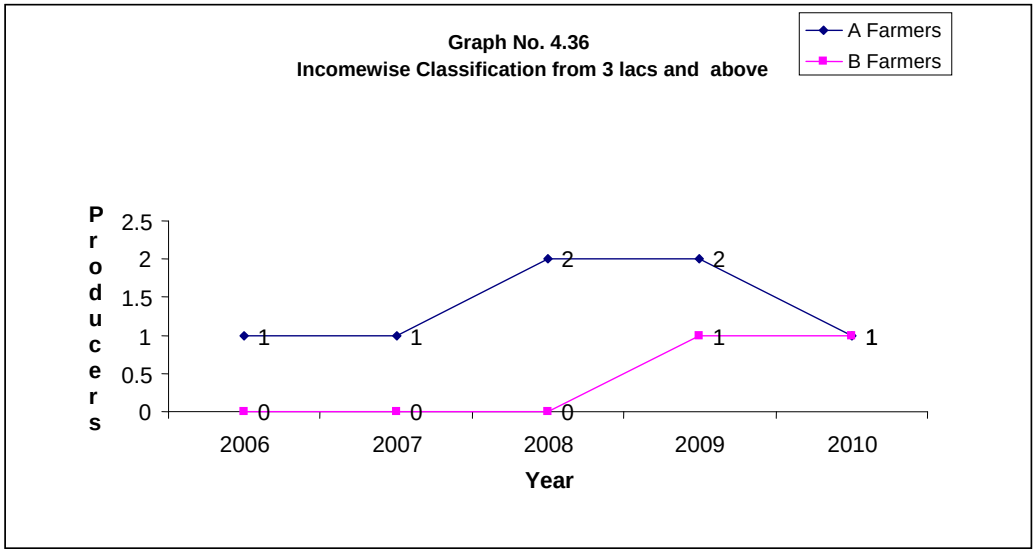
Source : Table No. 4.22



Source : Table No. 4.22



Source : Table No. 4.22



Source : Table No. 4.22

4.4.7 Profitwise classification of A Farmers and B Farmers.

The annual profit wise classification of A Farmers and B farmers is given in Table 4.23

Table No. 4.23

Profitwise classification of A Farmers and B Farmers

Years	Upto Rs 50000				Upto 50000 to 1 lac				Rs. 1 lac to 1.5 lacs				Rs. 1.50 lacs and above				Total Farmers
	A		B		A		B		A		B		A		B		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2006	14	14.00	91	91.00	51	51.00	8	8.00	29	29.00	1	1.00	6	6.00	-	-	100
2007	21	21.00	95	95.00	31	31.00	-	-	42	42.00	2	2.00	6	6.00	3	3.00	100
2008	14	14.00	96	96.00	30	30.00	-	-	43	43.00	-	-	13	13.00	5	5.00	100
2009	42	42.00	95	95.00	41	41.00	2	2.00	14	14.00	1	1.00	3	3.00	2	2.00	100
2010	15	15.00	93	93.00	24	24.00	5	5.00	46	46.00	-	-	15	15.00	2	2.00	100

Source : Field Work.

It is observed from table 4.23 that the profit earned upto Rs. 50000 by 14 fig farmers in 2006, 21 fig farmers in 2007, 14 fig farmers in 2008, 42 fig farmers in 2009 and 15 fig farmers in 2010. There were 91 Non Fig farmers earning the same profit in 2006, 95 Non fig farmers in 2007, 96 Non fig farmers in 2008, 95 Non Fig farmers in 2009 and 93 fig farmers in 2010.

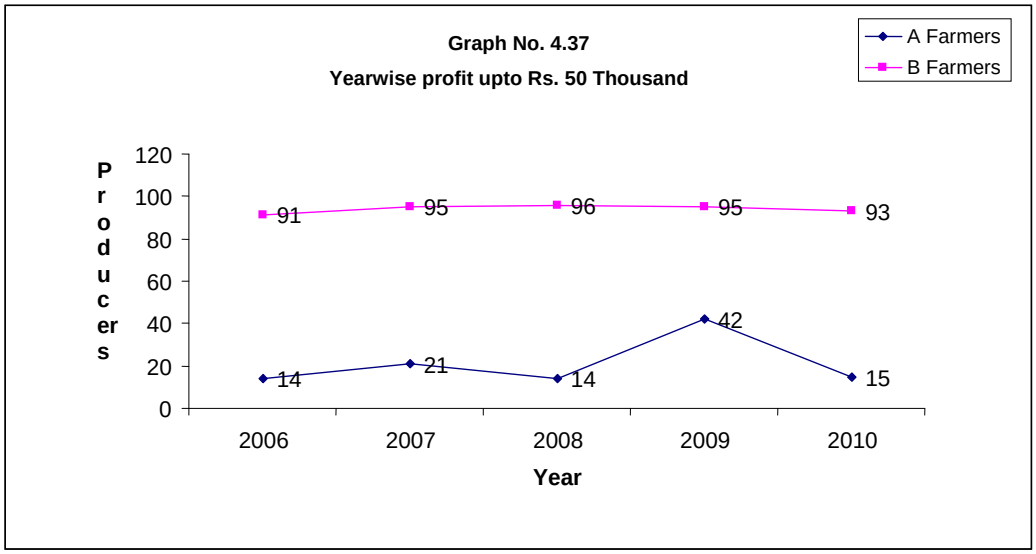
It means non fig farmers were more than fig farmers earning profit upto Rs. 50000.

There were 51 fig farmers who earned profit between Rs. 50000 to Rs. 100000 as against 8 non fig farmers in 2006, there were 41 fig farmers in 2009 and 2 non fig farmers in 2009 earning the same profit. There were 24 fig farmers and 5 non fig farmers earning the same profit in 2010. It means that fig farmers were more than Non fig farmes who earned profit between Rs. 50000 to Rs. 100000.

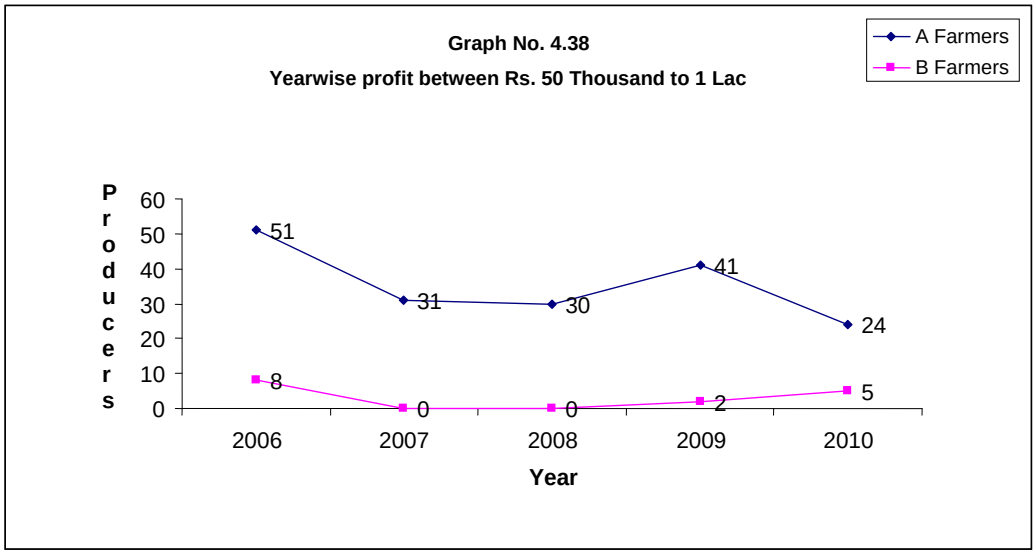
Same is the case of fig farmers earning profit in the range of Rs. 1 Lac and 1.5 lacs there were 29 fig farmers in 2006, 42 fig farmers in 2007, 14 fig farmes in 2009, 46 fig farmers in 2010 who earned profit Rs. 1 Lac to Rs. 1.5 lacs as against 2 non fig farmers in 2007 and 1 Non Fig farmers in 2009 it means fig farmers are more than non fig farmers earning the profit in the range of Rs. 1 lac to 1.5 lacs.

There were 6 fig farmers in 2006 and 2007, 13 fig farmers in 2008, and 15 fig farmers in 2010 who earned profit more than 1.5 lacs. There were 3 non fig farmers in 2007, 4 non fig farmers in 2008, and 2 non fig famers in 2010 who earned same profit. It means fig farmers are more than Non fig farmers who earned more profit than Non fig farmers to the extent of more than Rs. 1.5 lacs.

The **hypothesis of this research is that fig production helps the producer farmers to improve their financial status.** The table 4.13 concludes that fig production is resutling in improvement of financial status of fig producer dry land farmers. **Therefore, this hypothesis is positively proved.**



Source : Table No. 4.23



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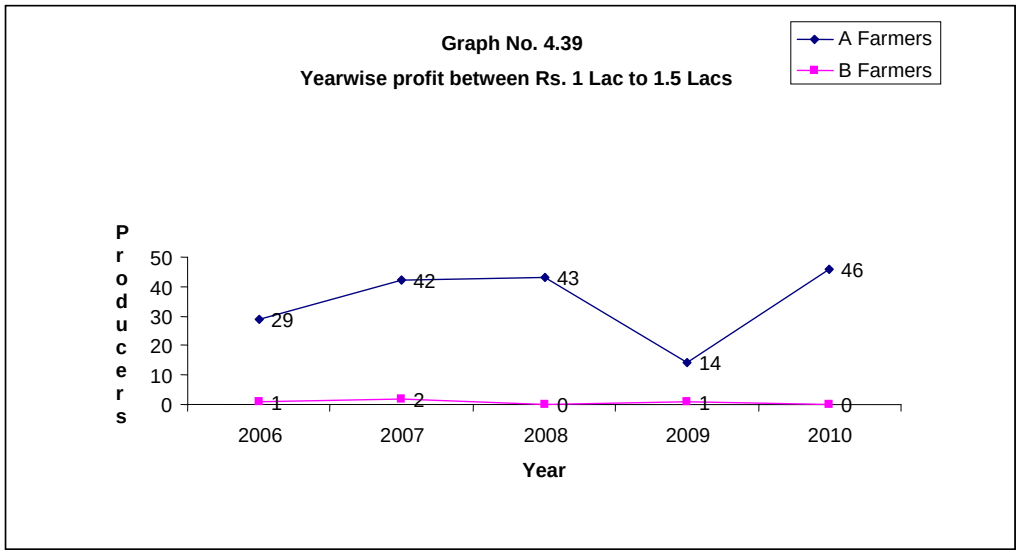

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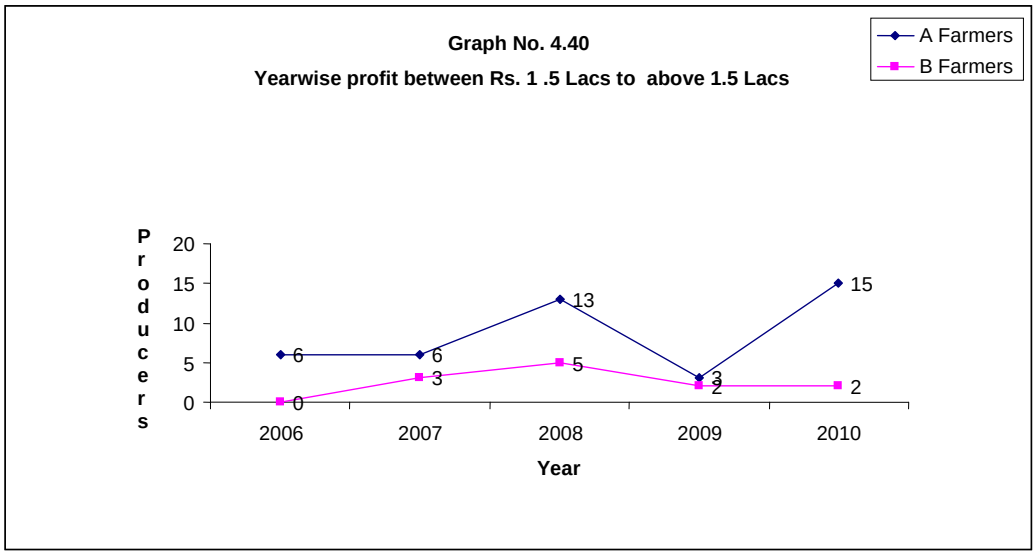


Source : Table No. 4.23

4.4.8 Processing of Fig.

Researcher has selected 100 'A' Farmers who opted fig production. All of there are not processing their own fruits. But there is still scope to have processing unit and earn good profit. They can process fig fruits. Dry fruits, chocolate, juice, pulp, powder ice cream,

jam, and jelly, candy, Milkshake, fig lether, toffy packed tins, khir, coffee, wine etc. This is profitable business.

In the table No. 4. 24 fig Farmer members fruit process wise classification is given.

Process on Fig Crops :

In this research the fig farmers are not processing the their production this fact is clarified by Researcher and it is found as per table No. 4.24.

Table No. 4.24

Process on fig Production

S. No.	Particulars	Nos.	Percentage
1	Yes	00	00
2	No	100	100.00
	Total	100	100%

It is clear from the table No. 4.24 that the Fig Farmers are not processing any thing on their production.

In this connection it is recommended that Fig producers may process the Fig Production by starting their process Units and earn the good profit. In processing fig the fig producer may get Dryfruits, Choclate, Juice, Pulp, Powder, Icecream, Jam and Jelly, Candy, Milshake, Fig Leather, Toffy, Packed Tins, Khir, Coffy, Wine etc. This may add to their income.

4.4.9 Marketing of Fig.

Table 4.25 indicates market wise classification of A Farmers and B Farmers.

Table 4.25

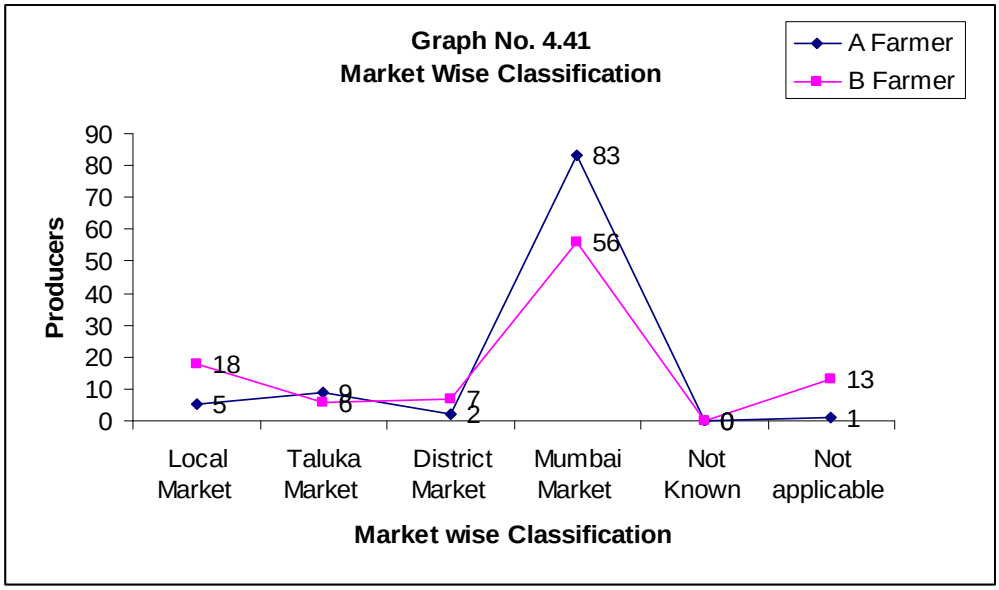
Marketwise classifictaion of A farmers and B farmers.

S. No.	Particulars	Fig Producers		Non Fig prodcutors.	
		Nos.	**Percentage.**	**Nos.**	**Percentage.**
1	Local Market	05	0.5	18	18.00
2	Taluka Market	09	09.00	06	06.00
3	District Market	02	02.00	07	07.00
4	Mumbai Market	83	83.00	56	56.00
5	Not Known	-	-	-	-
6	Not applicable	1	01.00	13	13.00
		100	**100.00**	**100**	**100.00**

Source : Field work.

It is observed from table 4.25 that 5 (5%) fig Producers members are selling fig production in local market and 9 (9%) fig Producerss in Taluka Market 2 (2%) in district Market and 83 (83%) fig farmers members are selling their fig production in Mumbai Market. On the other hand 18 (18%) from Non Fig farmers are selling their fruits in local market, 6 (6%) in Taluka Market, 7 (7%) in District Market and 56 (56%) selling in Mumbai Market. It is noticed that fig product and other Non fig product are not marketed their products at National and International Market. Maximum sale is Mumbai Market only.

It is recommended that fig producers must sale their product in International market and for that they should be trained. They must be given grants, guidance and other related facilities and help them to export their fruit products.



Source : Table No. 4.25

4.4.10 Agriculture Based Occupation.

The fig fruit production helped the fig producers to be economically well off. They also started the agriculture based occupation to supplement their income.

Table 4.26 indicates the position of Fig producer and Non Fig producer farmers in establishing agriculture based occupation.

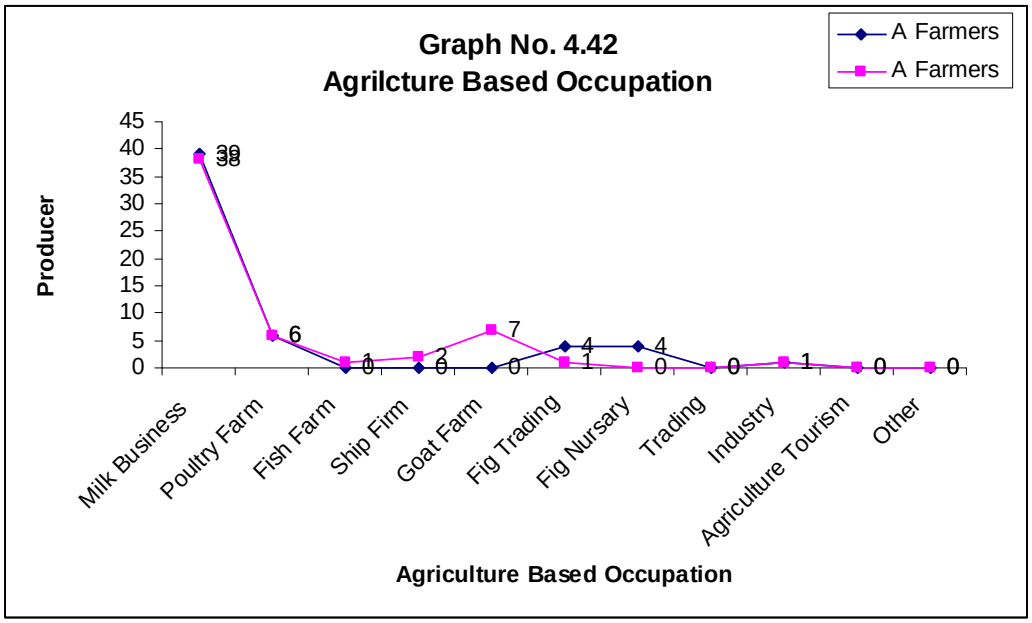
Table 4.26
Agriculture Based Occupations of Farmers

S. No.	Particulars	Fig Producers		Non Fig Producers		Total
		Nos.	%	Nos.	%	
1	Milk Business	39	39.00	38	38.00	100
2	Poultry Farm	06	06.00	06.00	06.00	100
3	Fish Farm	-	-	01	01.00	100
4	Ship Firm	-	-	02	02.00	100
5	Goat Farm	-	-	07	07.00	100
6	Fig Trading	04	04.00	01	01.00	100
7	Fig Nursary	04	04.00	-	-	-
8	Trading	-	-	-	-	-
9	Industry	01	01.00	01	01.00	100
10	Agriculture Tourism	-	-	-	-	-
11	Other	-	-	01	01.00	100

Source : Field Work.

It is observed from table 4.26 that 39 (39%) Fig producers started milk business, 6 (6%) members started poultry farm, 4 (4%) fig trading, 4 (4%) fig plant Nursary and 1(1%) is the industrialist.

It is recommended that, the fig producers may be encouraged to take up new agriculture based occupations instead of traditional farming. There is ample scope for modern agriculture based occupations such as sub food production, such as Fish Farming, Agriculture implement manufacturing, export, agriculture tourism, etc. the graphs 4.34 shows these details.



Source : Table No. 4.26

4.4.11 Farmer's Satisfaction

Table 4.27 indicates how far the fig producers Farmer's are satisfied.

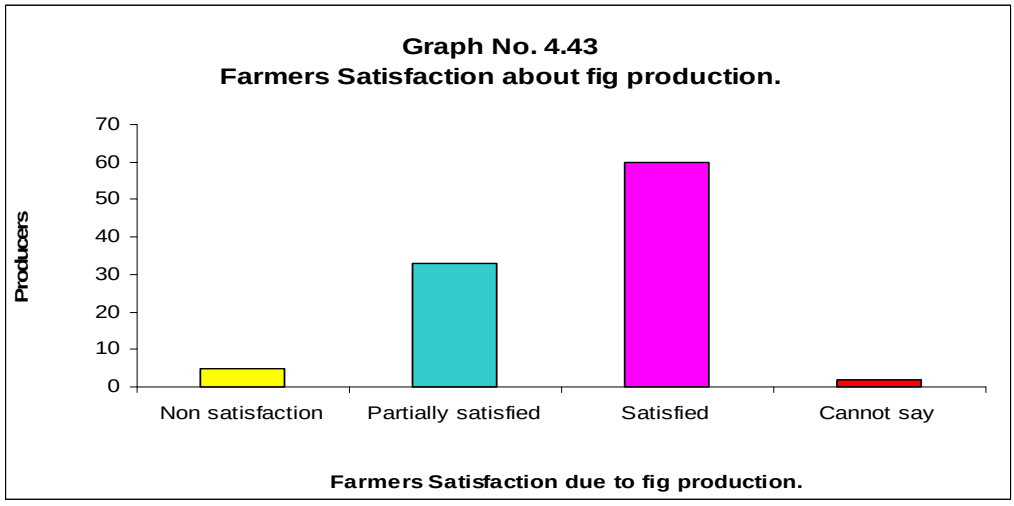
Table 4.27
Farmer's Satisfaction about fig production.

S. No.	Particulars	A Farmers	
		Nos.	Percentage.
1	Non satisfaction	05	05.00
2	Partially satisfied	33	33.00
3	Satisfied	60	60.00
4	Cannot say	02	02.00
	Total	**100**	**100.00**

Source : Field work :

It is observed from table 4.27 that 60 (60%) fig producers are satisfied. Five fig producers (5%) are not satisfied. 33 fig producers are partially satisfied.

It lead us to state that about 93% fig producers are satisfied as fig has yielded maximum returns to them. Graph 4.43 indicates the satisfaction level of respondents.



Source : Table No. 4.27.

4.5 EFFECTS OF FIG PRODUCTION ON OTHER FARMING.

Table 4.28 indicates the effects of fig production on other farming.

Table 4.28
Effects of Fig production on other farming.

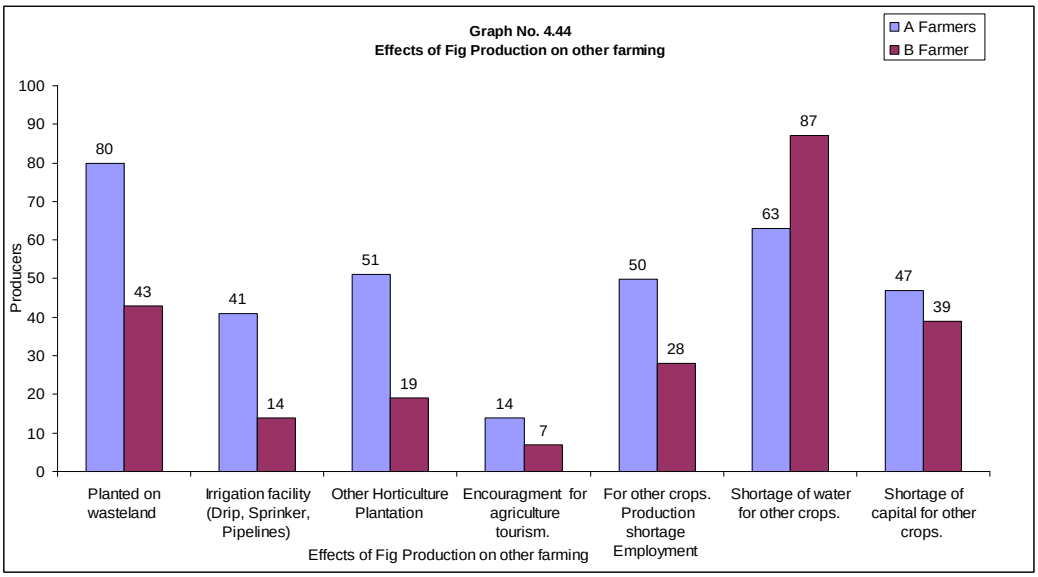
S. No.	Particulars	A Producers		B. Prodcutors.	
		Nos.	%	Nos.	%
1	Planted on wasteland	80	80.00	43	43.00
2	Irrigation facility (Drip, Sprinker, Pipelines)	41	41.00	14	14.00
3	Other Horticulture Plantation	51	51.00	19	19.00
4	Encouragment for agriculture tourism.	14	14.00	07	07.00
5	For other crops. Production shortage of Employment	50	50.00	28	28.00
6	Shortage of water for other crops.	63	63.00	87	87.00
7	Shortage of capital for other crops.	47	47.00	39	39.00

Source : Field Work.

It is observed from table 4.28 that the first major effect of fig production is on bringing the waste land under plantation. The number of 80 A producers (80%) and 43 B producers (43%) have confimed it may helped them to increase their income due to extension in area under fig plantation.

Then 51(51%) from A producers and 19 (19%) B producers have extended horticulture due to fig production and 50 (50%) from A Farmers and 28 (28%) B Farmers told that there is shortage manpower due to fig production. Also 63 (63%) from A Farmers and 87 (87%) B Farmers told that there is shortage of water for other crops

due to fig production and 47 (47%) from A Farmers and 39(39%) B Farmers have told about shortage capital due to fig plantation. 41 (41%) from A Farmers and 14 (14 %) B Farmers have opted water saving system i.e. Drip irrigation, Sprinker, pipeline, etc. due to fig plantation. 14 (14%) A Farmers and 7 (7%) B Farmers informed that due to fig plantation the agriculture tourism is encouraged. Graph 4.44 indiates the effects of fig production.



Source : Table No. 4.28.

4.5.1 Generation of Employment

Table 4.29 indicates generation of employment as the effect of fig farmes.

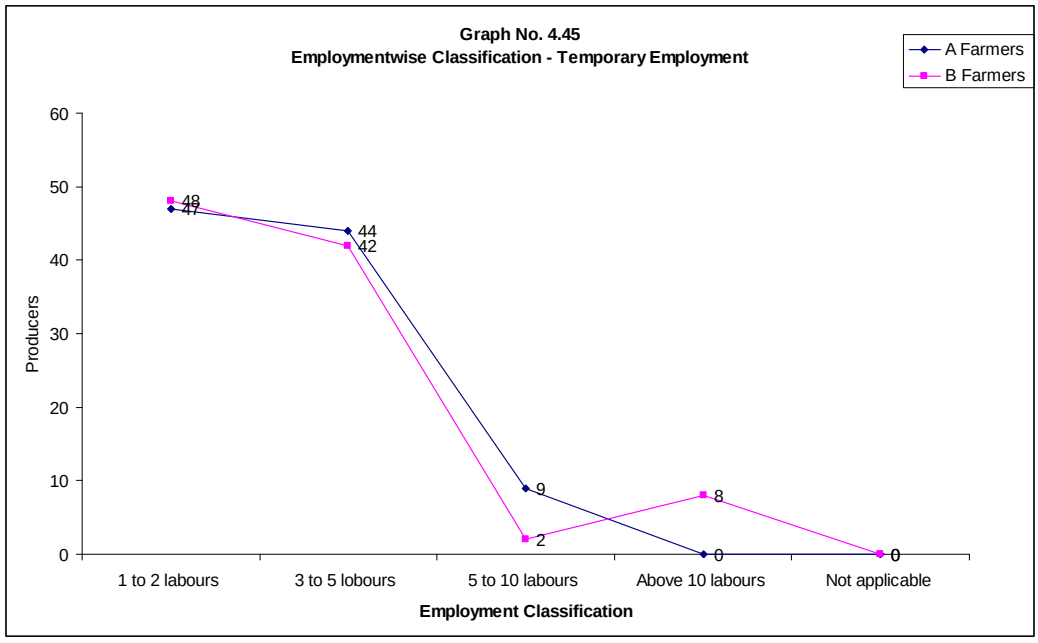
Table No. 4.29
Generation of Employmentwise classification of A Farmers and B Farmers.

S. No.	Particulars	Temporary Employment				Permanent employment.			
		A Farmers		B Farmers		A Farmers		B Farmers	
		No	%	No.	%	No.	%	No.	%
1	1 to 2 labours	47	47.00	48	48.00	14	14.00	34	34.00
2	3 to 5 lobours	44	44.00	42	42.00	17	17.00	21	21.00
3	5 to 10 labours	09	09.00	02	02.00	01	01.00	-	-
4	Above 10 labours	-	-	08	08.00	19	19.00	-	-
5	Not applicable	-	-	-	-	49	49.00	45	45.00
	Total	**100**	**100.00**	**100**	**100**	**100**	**100**	**100**	**100**

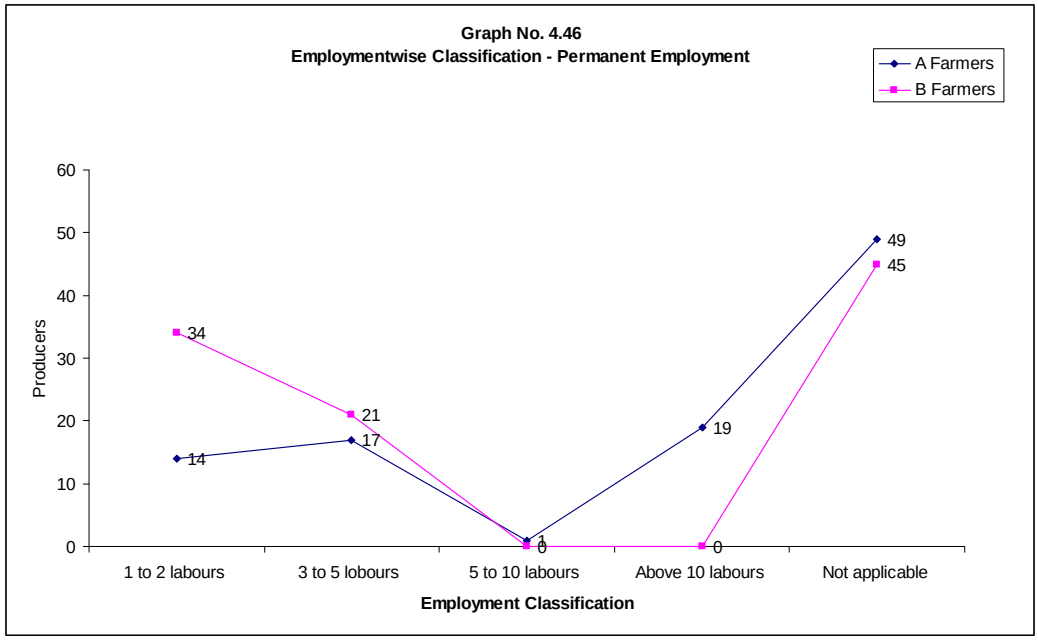
Source : Field Work.

It is observed from table 4.29 that due to fig production temporary and permanent employment have been generated. 47 (47%) A producers and 48 (48%) from B producers told that 1 to 2 man power temporary employment are generated and 14 (14%) from A producers and 34 (34%) B producers told that 1-2 labour permanent employment is generated. 44 A producers (44%) and 42 B producers (42%) told that employment is temporarily generated for 3 to 5 laboures. But 17 A producers (17%) and 21 B producers (21%) told that permanent employment is generated to 3 to 5 labours.

It leads us to conclude that fig production has capacity to generate employment. This information is recorded in graph No.4.45 to 4.46.



Source : Table No. : 4.29



Source : Table No. : 4.29

4.5.2 Agricultural Implements

Table 4.30 gives the agricultural implementwise classification of A and B producers farmers.

Table 4.30

Agricultural implementwise classification of producer farmers.

S. No.	Particulars	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	Bullcart	87	87.00	56	56.00
2	Tractor	28	28.00	13	13.00
3	Jeep	10	10.00	04	04.00
4	Tempo	05	05.00	05	05.00
5	Truck	04	04.00	02	02.00
6	JCB	06	06.00	06	06.00
7	Medicine Spray, Petrol Pump,	19	19.00	29	29.00
8	Others	15	15.00	07	07.00

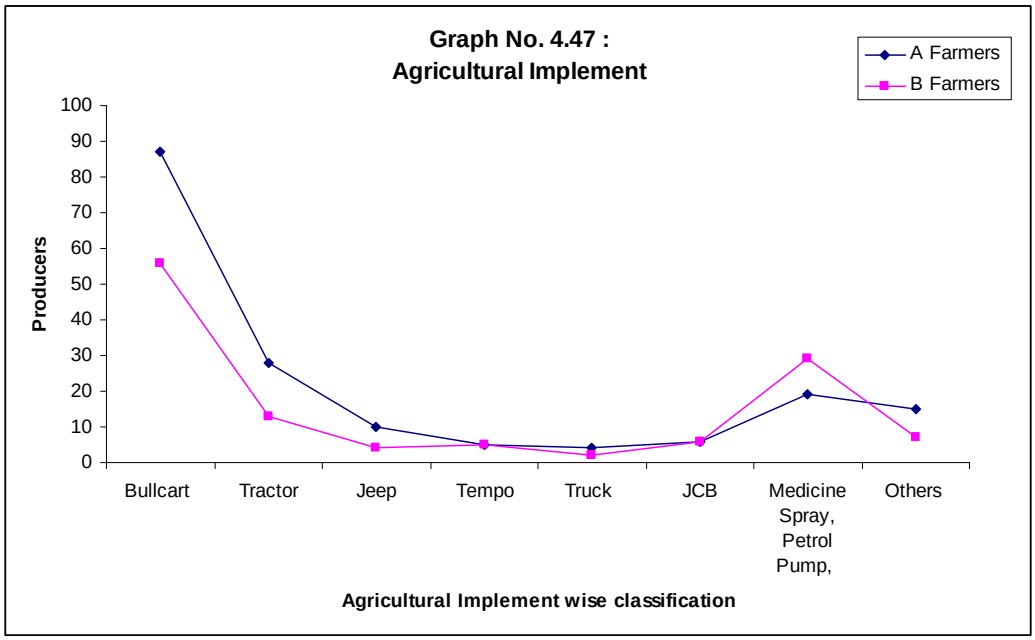
Source : Field Work.

It is observed from table 4.30 that maximum 87 A Farmers and 56 B Farmers have used Bullcart for agriculture production. Other 28 A Farmers and 13 B Farmers used Tractor and 19 A Farmers and 29 B Farmers used Petrol Pump spray for medicine JCB is used by 6 A Farmers and 6 B Farmers tractor is used by 5 members are from A and B Farmers. But 15 A Farmers and 7 B Farmers used other agriculture instruments.

It leads us to conclude that the traditional fig Farmers are more, but modern agriculture instruments i.e. tractor, truck, JCB etc are used by 47 (47%) a Farmers and 24 (24 %) from B Farmers. It means

that due to fig production the farmers encouraged for modern technics for agricultures.

Graph 4.47 indicates agricultural implement wise classification of Farmers.



Source : Table No. 4.30

4.6 HEALTH

Table 4.31 indicates classification of A Farmers and B Farmers on basis of health facilities provided to them.

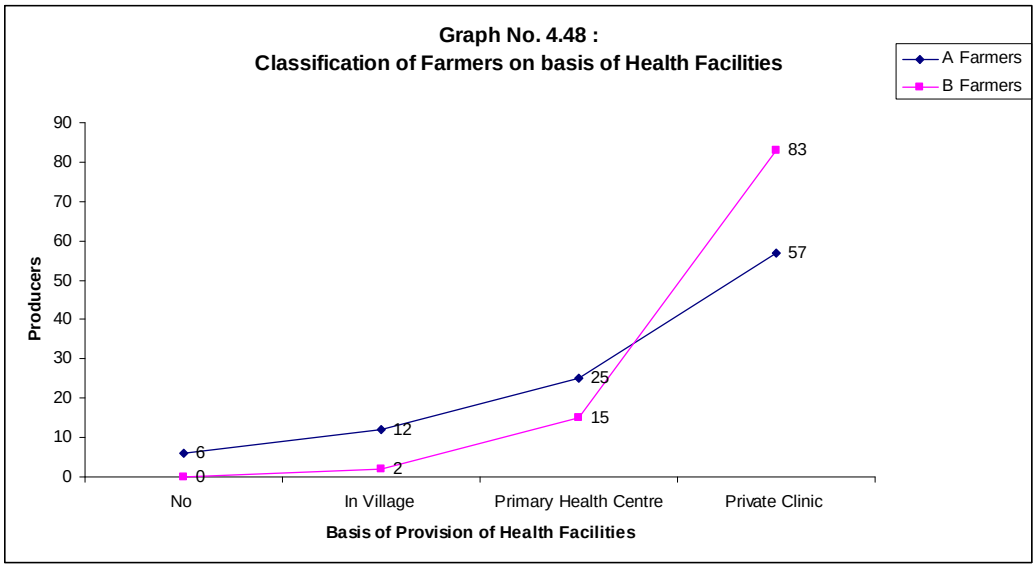
Table No. 4.31

Classification of A Farmers and B Farmers on basis of provision of health facilities

S. No.	Particulars	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	No facility	06	06.00	-	-
2	In Village	12	12.00	02	02.00
3	Primary Health Centre	25	25.00	15	15.010
4	Private Clinic	57	57.00	83	83.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field Work.

It is observed from table 4.31 that 6 (6%) from A Farmers do not get health facility. 57 (57%) members of A Farmers have taken health facility in Private Clinic. Contrary 25 (25%) A Farmer members have taken health facility from Primary Health centre and 83 (83%) B Farmers get health facility from private clinic. And 15 (15%) member availed the primary Health facility. So it is clear that A Farmers and B Farmers have taken private health facility instead of Govt. Healthy facility, it means due to increasing in income of A Farmers they have availed private health facility instead of Govt. Health facility.



Source : Table No. 4.31

4.7 TOURS

Due to fig plantation the A Farmers earn more than B Farmers. They were asked about tours, responses are recorded in Table 4.32.

Table No. 4.32

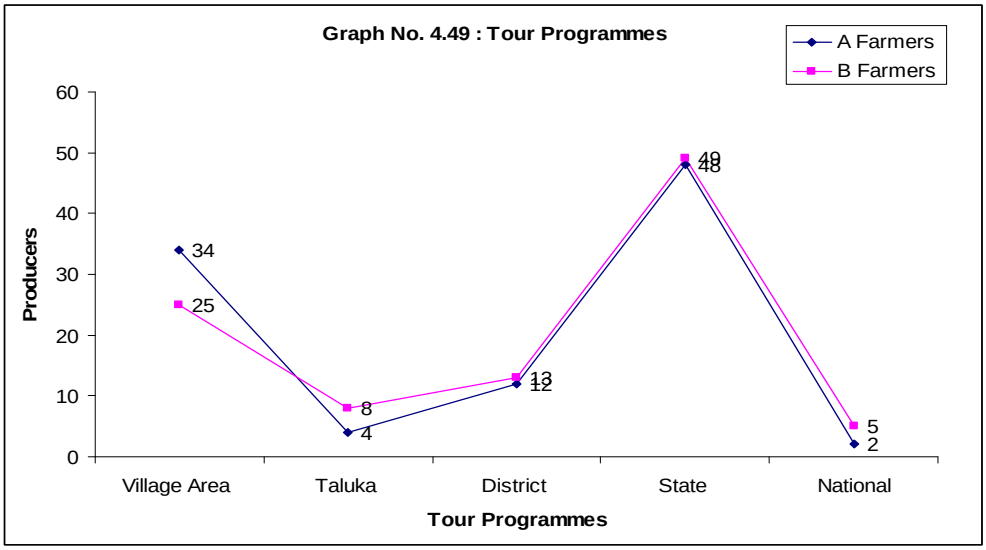
Tour programmes of A Farmers and B Farmers.

S. No.	Particulars	A Farmers		B Farmers	
		Nos.	Percentage.	Nos.	Percentage.
1	Village Area	34	34.00	25	25.00
2	Taluka	04	04.00	08	08.00
3	District	12	12.00	13	13.00
4	State	48	48.00	49	49.00
5	National	02	02.00	05	05.00
	Total	**100**	**100.00**	**100**	**100.00**

Source : Field work.

It is observed from table No. 4.32 that the maximum members have enjoyed the State level Tourism i.e. 48 (48%) from A Farmers and 49 (49%) are from B Farmers. Other 34 (34%) from A group and 25 (25%) from B group members had tours in village area. Further 12 (12%) members from A group and 13 (13%) from B group member have enjoyed the District level. Other 4 (4%) members from A group and 8 (8%) members from B group enjoyed the Taluka level Tour. But 2 members from A group and 5 from B group members had enjoyed tour at National Level.

So it is clear that A group and B Group Farmers members are taking experience within their area to collect additional information for fig cultivation. Graph 4.40 indicates tour programmes of the respondents.



Source : Table No. 4.32

4.8 MATERIAL FACILITIES.

Table 4.33 indicates the classification of A and B producer farmers in respect of material facilities they enjoyed.

Table 4.33

Classification of A Farmers and B Farmers getting material facilities

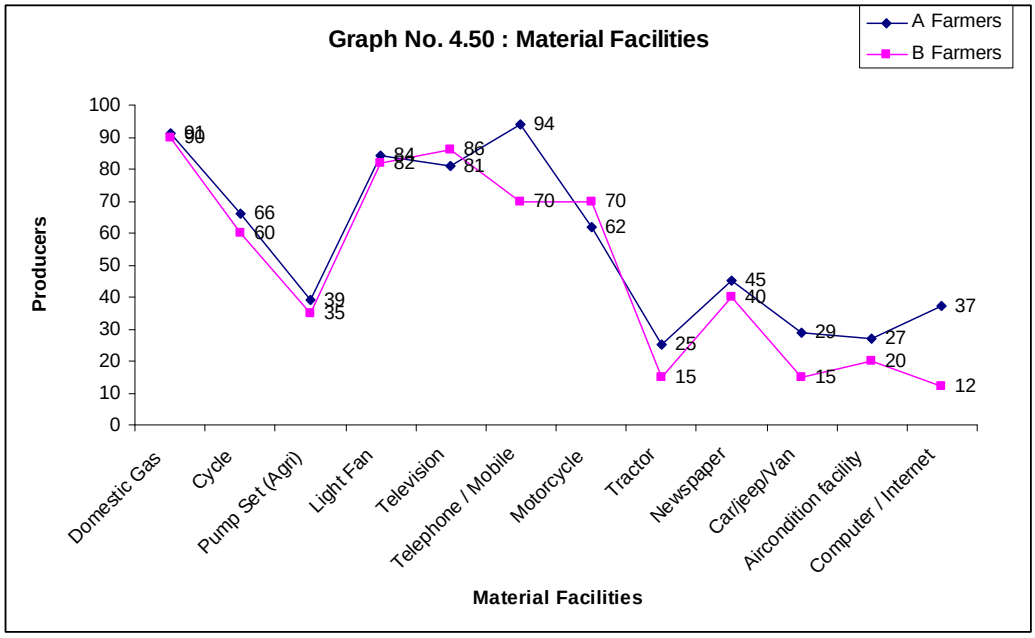
S. No.	Particulars	A Farmers		B Farmers	
		Nos.	%	Nos.	%
1	Domestic Gas	91	91.00	90	90.00
2	Cycle	66	66.00	60	60.00
3	Pump Set (Agri)	39	39.00	35	35.00
4	Light Fan	84	84.00	82	82.00
5	Television	81	81.00	86	86.00
6	Telephone / Mobile	94	94.00	70	70.00
7	Motorcycle	62	62.00	70	70.00
8	Tractor	25	25.00	15	15.00
9	Newspaper	45	45.00	40	40.00
10	Car/jeep/Van	29	29.00	15	15.00
11	Aircondition facility	27	27.00	20	20.00
12	Computer / Internet	37	37.00	12	12.00

Source : Field Work.

(N.B.- As each member opted to more than one it may not tally.)

It is observed from Table 4.33 that there is no difference in the basic needs of A and B Farmers. These are essential things i.e. Domestic Gas (For cooking) cycle, Pumpset, Fan, Television, Telephone, Mobile and Motorcyle these things have both Producerss. But tractors, Car, Jeep, Van Air Condition, Facility, Computer and internet these high prices material things are double in quantity with A Farmers than B Farmers.

It leads us to conclude that, the Fig producers have more purchasing capacity than Non fig farmers and hence they could purchase high priced luxurious commodities. Graph 4.50 indicates material facilitywise classification of respondents.



Source : Table No. 4.33.

4.9 PROBLEMS OF FIG PRODUCERS.

Table 4.34 indicates the problem wise classification of fig producing farmers.

Table 4.34

Problems of Fig producers

S. No.	Difficulties	Fig Producers	
		Nos.	%
1	No Training	50	50.00
2	Climate	72	72.00
3	Shortage of Water	73	73.00
4	Increase in Disease on fig crop.	94	94.00
5	Shortage of capital	73	73.00
6	Shortage of storage (AC house)	50	50.00
7	Catagories and Classification	48	48.00
8	Shortage of market facility	71	71.00
9	Market Rate	88	88.00
10	No export	49	49.00

Source : Field Work.

It is observed from table 4.34 that for the fig production, the main difficulties are the changing in climate, water supply, capital shortage, employment and diseases. The analysis is as follows.

1. Increase in diseases of Fig production :

Total 94% fig Producers have difficulties of heavy diseases of fig production. Main diseases for fig plant are as Tembera, Pandhari Bhushi, Thipake, Phalkuj, spots on leaves, Phulkide,

Mawa, Khodkida, etc. are the main disease and so the expenditure on medicine are burden on income from the same.

2. Shortage of Labourers :

80% fig Producers have shortage of labourers.

3. Shortage of Water supply :

73% fig Producerss have water shortage difficulty. Actually it is told that 500 ml to 625 ml (20 to 25 Inch) Monsoon is essential for the same. In Sept and Oct. Monsoon must be stoped. This crop is to be taken at 1200 mtrs from sea level and table land area. But that area is deep valley climate area and it is cool so decrease the production.

4. Climate :

For fig production the climate is required Light winter, light summer and light monsoon. High Winter, mist, hailstone are damaging to fig Trees. Due to more Winter Climate process of preparation of sugar is stopped. 72% Fig Producers are of the opinion that the bad climate is difficulty.

5. Non Education/Training

50% fig Producers told that due to lack of education and absence of training the fig farmers could not get maximum output.

6. Shortage of Capital :

73% fig Producers told that due to shortage of capital the production is not come out. For the Modernisation, Irrigation

facility, Process industries, Storage, AC House, Transport facilities are required heavy capital.

For agriculture purpose minimum interest loan is not provided for the capital, so Government should give more low interest capital and grant to fig farmers.

7. Market Management :

In the view of Market management fig producer's difficulties are shortage of storage capacity, gradation and classification shortage of Market facility. The specifications are as under:

i) Market Rate :

No reasonable market rate is fixed for fig production according to 88% fig Producers. When there is large number of production rates will collapses. Production is decreased due to diseases and hence farming of fig production is not profitable. Therefore Govt. may give the minimum market rate for fig production.

ii) Shortage of Market Facilities :

71% fig Producers says that there are no facilties of the market and this is main difficulties.

Now fig fruits producers depend on local market. Some may sell it at Mumbai but there is no marketing in the country and international Market, there should be good transport facility, gradation and classification of products.

Training, Study tourism, transport facilities may be increased for the fig producers.

iii) **Storage Facility :**

In the opinion of 50% fig Producers, there is no cold storage facility. Due to storage difficulty, the fig fruits are being sent to local market. The fluctuations in market rate can not give more benefit to the fig farmers therefore of storage facility is essential.

iv) **Gradation and Standardisation :**

The fig production must be graded and standardised for getting better price. But it is fact that 48% fig fruits are not graded and standardised.

For the purpose gradation and standarisation, training, and staderdised production is essential. This may help fig producers to export their product.

v) **No export of fig production :**

49% producers complained that there is no proper management for export. The fig fruits can be exported to America. England, Arebean Contries, Africa, Europe. For the export there should be the quality fruits. There packaging must be light, attractive and cold storage is also essential for export.

4.10 SOLUTIONS TO THE PROBLEMS OF FIG PRODUCERS.

The solutions suggested by the fig producer farmers are recorded in Table 4.35

Table 4.35

Solutions to problems of fig producers

S. No.	Difficulties	Nos.	%
1	Training	65	65.00
2	Community Farming	39	39.00
3	Irrigation Facilities	76	76.00
4	Modernisation	52	52.00
5	Minimum Interest Loan	73	73.00
6	Federation of fig producers.	60	60.00
7	Process industry (Value added)	50	50.00
8	Reasonable Market Rate	72	72.00
9	Transport facility	55	55.00
10	Govt Grant	72	72.00
11	Study Tours	38	38.00
12	Research of minimum sugar and durable plants	47	47.00
13	Interest fre loan	70	70.00
14	Grant	73	73.00

Source : Field work.

The suggestions given by fig producer farmers are recorded as under:

i) **Training :**

65% fig farmers want training so that they can get more production. It needs to be graded, standardised and properly packed for export. For this purpose Government and different NGO's may provide the training to the farmers at their local areas.

ii) **Community Farming:**

According to 35% fig Producers support storages, export, process industry, irrigation, transport, modernization. Their difficulties can be solved through the community farming.

Due to community farming maximum profit can be earned. Common Medicine spray, Modernisation in agriculture, Cold storage, storage, process industries, Raw Materials and availability of Capital are the favourable for community farming system. For that purpose farmers group, Govt. and N.G.O.'s should take the lead and enlighten to farmers.

iii) **Irrigation Facilities :**

According to 76 (76%) of fig Producers, the irrigation facilities may be enhanced, and the government should help to the lift irrigation. The grants and minimum interest rate loan may also be provided.

iv) **Modernisation :**

52 (52%) fig Producer farmers told that if the modernization is done in the agriculture, the productivity also will be increased and 48 % members told that there is no need of modernization. The modernization must be done but for that purpose govt. must provide the loan with minimum interest along with grant.

v) **Minimum Interest Loan.**

73% fig Producers says that Govt. may provide the loan with minimum interest rate and 28% fir Producers have no complaint about the interest.

If Govertment provide the special capital for crops and minimum interest loan for fruit cultivation in dryland area, it will help for solving the problems. Process industry should be started to ehance export.

vi) **Federataion of Fig Producers:**

60% Fig Producers wants to make fig producers Sangh, because fig Producers Sangh is constituted to solve the problem of Fig Producers.

Encouragment for constituting the Fig Producers Sangh should be given by the Govt. and enlight for the same. Help to the Sangh, automatically the Fig Producers Production will be increased.

vii) **Establishment of process industries (Value added process):**

50% fig Producer gave good response for process industries.

Process industry is established for the Jam, Chocklate, Dryfruits, Burfy, Milkshake, Packed Tin Figs, Powder etc. such sub products may be prepared. This may help to increase profit by 3 to 4 times.

viii) **Reasonable Market Rate :**

72% fig Producerss wish to earn reasonable market rate. Fig production expenditure is more, so if they do not get the reasonable rate, they will not earn the good profit. Many times other fruits are coming in market that affects sale of fig. And some times due to different deseases production is less and that time no profit is earned by the fig Producers.

For that government should give surety of minimum rate to fig producers and if it is done the it will be safety.

ix) **Goverment Grants:**

72% fig Producerss feels that the Govt. may provide the grant to the fig production and 28% fig Producerss said that there is no need of grant. They have self-sufficient capacity on themselves.

Dryland agriculture is developing, poor agriculturist to selfsufficient and some percent unemployment problem is solving. Govt. may give the grant for fruit cultivation.

x) **Study Tours :**

Out of the fig Producerss 39 % farmer members feels that study toors may be arranged and 62% fig Producerss member have no importance for the same.

If study tours of farmers are arranged, the farmers can learn the different research and implement modern agriculture, irrigation facilities, export capacity, figs and process industry

knowledge and for the development they can start their own process industries.

So Co-operative Society, NABARD, Agriclture Department, Federation of Farmers may arrange study tours of socities and for that purpose grant and free trous and concessions may be provided.

xi) **Research on fig :**

47% fig Producers members feels that the research must be done on fig crops. And 53% members have no importance for the same.

Due to research minimum sugar fruits production will be taken by producers and due to lack of water facilities minimum water require plants should be introduced by research.

Fig production research is conducted in Agriclture University and Government may give the grants for the same. Then the export quality figs can be produced.

xii) **Exemption in Loan :**

73% fig Producer members wants the exemption in Loan. And 27% members not responded for exemption.

After getting the loan exemption, farmers have sufficient capital and the fig production will be increased and farmers may enter in the fig process industry.

4.11. HYPOTHESES TESTING

Five hypotheses were decided for this research work. After the analysis of collected data these hypothesis are tested as follows:

Hypothesis No. 1

Fig plantation helps the producer farmers to improve their financial status.

This hypothesis is tested with the help of data given in the table No. 4.21 to 4.23 in respect of income of fig producer farmers, their earning of profit, their residence available to them and health.

A. Income of Fig producer farmer :

Table 4.22 explains that maximum number of 62 farmers had the annual income in the range of Rs. 1 Lac to 2 Lacs in 2006. This number is increased to 68 in 2009 who earn the same income.

Secondly table 4.22 explains that there were 2 fig farmers earning more than Rs. 3 Lacs per annum in 2008-2009.

B. Profit :

Table 4.23 indicates that the fig farmers had more profit per hectore than the Non Fig farmers.

C. Residence :

It is observed by the researcher that fig farmes earn more income and hence they could afford to reside in bungalow, concrete house, this is explained in table 4.2.

Thus the hypothesis No. 1 is positively proved and accepted. Fig plantation helps the producer farmers to improve their financial status.

Hypothesis – 2

Comparatively fig producer farmers are earning more than the non fig producer farmers.

This hypothesis is tested on the basis of data given in table 4.22. Maximum numbers of 74 fig farmers earn Rs. 1 Lac to 2 Lacs in 2008 but only 2 Non fig farmers earn the same amount further 'A' fig producer increased from 8 in 2006 to 24 in 2010 to earn income Rs. 2-3 lacs whereas there was not a single non fig producer earning the same.

Considering the profit there were 51 A farmers earn profit Rs. 50000 – 1 Lac whereas 8 B farmers earn the same amount. In 2010, 46 'A' farmers earn Rs. 1 -1.5 lacs and 24 A farmers eearned profit Rs. 50000 -1 lac it indicate fig farmers are earning more than B non fig farmers. In this way hypothesis No. 2 is positively tested and accepted. Comparatively fig producer farmers are earning more than the non fig producer farmers.

Hypothesis – 3

Fig production has good effects on agriculture based occupation.

This hypothesis is tested with the help of the data given in the table 4.27

The major effect of fig production is to bring waste land under plantation which is confiemd by 80 A farmers and 43 B farmers. Further fig production is extended fruit cultivation.

It is told by 51 A Farmers and 19 B Farmers there is shortage of capital, shortage of water and shortage of man power due to fig production but 41 A Farmers and 14 B Farmers have opted water saving system i.e. sprinkler, pipeline.Thus the hypotheses No. 3 is positively tested and accepted. Fig production has good effects on agriculture based occupation.

Hypothesis – 4

Farmers are not processing the figs.

This hypothesis is tested on the basis of data given in table 4.24 In this table not a single fig producer is processing his fruits. (100% fig producers are not processing their fruits). Therefore, hypothesis No. 4 is is positively tested and acceted. Farmers are not processing the figs.

Hypothesis – 5

Fig producer farmers have various problems during the fig production.

This hypothesis is tested with the help of the data given in the table 4.34. It indicates that the main problems for fig production are the climate change, water supply (scarcity of water), capital shortage, employment and fruit dieseases. As the fig producer farmers are faced above problems during the fig production the hypothesis No. 5 is positively testd and accepted.

Fig producer farmers have various problems during the fig production.

4.12 Application of Schultz theory to present research.

According to Schultz the transformation of Traditional Agriculture in modern agriculture depends on the following :

a. New factors in production.

b. Availability and price of non traditional (Modern) agricultural inputs.

c. Modern Material inputs.

d. Farm people with modern skills.

e. Investment in human capital.

Schultz theory may be considered in the context of this research, which studies the impact of fig plantation on Dry land farmers in Pune District.

1. Traditional Agriculture

It is primarily peasant farming, characterised by back world, primitive and labour intensive agriculture, with low productivity. Indian economy is agrarian in character. There are generally small sized farms. The land and labour are principal inputs of traditional agriculture. But there is great scope for increasing total production and resource productivity through technological change.

Total are under cultivation in Pune district is 1150900 hectares (73.68% of total area), total area under cultivation in Purandar Taluka is 98059 hectares (88.85%) of total area).

2. Transformation to modern agriculture.

Government of Maharashtra declared five Talukas of Pune District as drought prone area. Horticulture is important for water scarcity zone with low water balance. The fruit plantation is useful for the economic development of farmers having waste land. The area under plantation in Purandar Taluka is 80852 hectares (73.26% of total geographical area).

Fig, custerred apple, pomegranate, bear are popular fruits grown in this area. Land, water, hilly area and climate are in favour of horticulture in Purandar Taluka. The horticulture yields net profit of about Rs. 1 to 1.5 lacs per Acre, whereas the fig plantation yields Rs. 2 to 2.5 lacs net profit per Acre.

Fig plantation in Purandar Taluka can be considered as transformation of traditional agriculture to modern agriculture.

3. New factors of Production.

Prof. Schultz pointed out that the traditional farmers accept new factors of production considering its profit.

Fig plantation was accepted by the farmers in Purandar taluka as they were encouraged by Neighbourers, friends, and agricultural officers. (P. 102 of thesis)

Moreover the hypothesis of this research is that, “Fig plantation helps the producer farmers to improve their financial status”. This hypothesis is positively proved as income of fig producer farmers increased and they earned profit. (P. 145).

Secondly hypothesis of the research was that “comparatively fig producer farmers are earning more than the non fig producer farmers”. This hypothesis is positively proved. (P. 146.)

4. Modern Material inputs.

Prof. Schultz asserted that modern agricultural inputs must be available at reasonable rate. That will lead to investment in agriculture. Irrigation, better seeds, better manures and fertilizers, plant protection, use of mechanisation are various aspects of agricultural inputs.

A. Drip Irrigation.

The filed work indicates that 93% fig producer farmers used such Sub canal water. 7% fig producer farmers used the drip irrigation. Hence it is concluded that there is still scope for farmers to use drip irrigation. (P. 108),

76 % fig producers insisted on extension of irrigation facilities and the government should help to the lift irrigation. The grants and minimum interest rate loan may be also being provided.

B. Market Facilities.

Reasonable market rate for fig is to be fixed. 71% fig producers complained that there are no facilities in market. There should be good transport, facilities, gradation and classicization of products.

C. Fig processing Unit:

Though at present there is no fig processing unit in Purandar Taluka, it is the demand of fig producer to have such processing unit. It will increase profit to fig producer (Page No. 121).

d. Farm people with modern skills.

50% fig producers told that due to lack of education and absence of training the fig farmers could not get maximum output (P. 137) training is essential for gradation of fig production 39% fig produce felt that study tours may be arranged. (P. 143) Maximum farmers have taken experience of tour at local state and national level.

5. Investment in human capital.

Literacy rate in Purandar taluka is 77.34% these farmers want training. This can be given by government and different Non Government Organisations. They should arrange seminars, workshops, orientations, field visits and interviews of successful fig farmers. This will be useful for the farmers to improve their knowledge and skills regarding the fig production, which directly affects the quality and yield of the fig. It will be exported to earn more foreign exchange.

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CHAPTER 5

FINDINGS AND SUGGESTIONS

This research was focused on the the study of the economic impact of Fig Production on Dry Land Farmers in Pune District with special reference to Purandar Taluka from 2005-06 to 2009-10.

This chapter is divided into seven parts.

5.1. Observations

5.2. Findings

5.3 Hypothesis Testing.

5.4. Conclusions

5.5. Recommendations

5.6 Schult'z Theory.

5.7 Scope for further research

5.1 OBSERVATIONS

I. Introduction.

Agriculture is an engine of economic growth and development. Agriculture constitutes the main source of employment of the majority of the world's poor. Agriculture in India has a long history, dating back to ten thousand years. Today India ranks second the world in respect of Farm output. India is the largest producer of fresh fruits. India holds the first

position in the world in producing papaya, Mango, Sapota and Banana.

The area under fruits production in India increased; therefore the production of fruits is also increased. India has atmosphere, precipitation and variation of land favourable for cultivation of fruits.

Fig is an important fruit, which has been under cultivation since ancient time. Fig contains minerals such as iron, copper and calcium in a large quantity and plenty of various vitamins. Food items like dry fig, sweetmeat, fig milkshake etc. are made from fig. Due to all these reasons, fig has become a significant fruit. In the Ayurved science, fig fruit is used as powerful medicine on blood defect, cancer disease, constipation, anemic disease. Fig fruit is very important in food standard. Considering the demand for the processed fig in the state and the country, it is essential to cultivate fig, which is suitable to be processed, on a large scale. Grants are being made available through various schemes under National Fruit Production Programme for making various types of food items from the processed fig and for the grading, packaging, storage and sale of such food items. Every fig producer should take the maximum advantage of these schemes to enhance the production. It is noticed that one person in one lac population knows fig, one person in three lacs population have tested it,

and one in ten lacs enjoys it regularly. This indicates that there is wide scope for fig plantation. Fig is important to earn foreign exchanges.

Fig belongs to Umbar Family which is known as Moraceae. There are four types of fig. viz. Capri Fig, Smirna Fig, White San Pedro and Adriatic Common Fig. Renowned expert of Fig Mr. Bobane said that there are 52 breeds of fig found in Portuguese.

The breeds of Fig under cultivation in India and Maharashtra are Poona Fig, Marsels, Dienna, Dinkar, Black Khia, Brown Tukrye, Coimbture Fig, Conadriya and Excel.

There are different references of fig in Bible. This fig fruit is spared in Mediterranean Sea to other Areas in the world. Fig is very famous fruit since 3000 years. It is said that the origin of fig is from South Arabstan before 3000 years. Mughal Badshaha Mohemmed Tughlak has shifted his Capital from Delhi to Daulatabad in 1338. At that time peoples shifted from Middle Asia and Kabul and they brought fig plantation to Daulatabad Area. State of Ahmednagar gave Grants to the Christian Missionary to come to Ahmednagar from Aurangabad in 1550. He planted figs in Ahmednagar.

First fig was planted in 1904 at Jadhavwadi near Divegaon in Purandar Taluka. This fig plantation was spread to Khed Shivapur, Shirval and Khandala. The plantation of figs

main was done in villages nearby the boundary of Nira River Valley i.e. Khed Shivapur, Shirval, Khandala was covered. Fig plantation increased at Purandar, Saswad and Jejuri area. Purandar Taluka is leading in fig plantation in Pune District. Specifically Gurholi, Waghpur, Singapur, Rajewadi, Walhe, Dive, Zendewadi, Kalewadi, Sonori, Banpuri, Pimple, Supe, Pisarve, Garade, Hivare, Risepise and Malshiras etc. villages have large share in the production of figs.

Within Maharashtra there was 300 Hectares fig plantation in 1990. Then in 1990-91 under fruit Plantation programme was implemented, on near about 650 hectares with the help of Employment Guarantee Scheme. Thus the plantation under this programme was extended to 800 to 850 hectares Area. Maharashtra government had constituted Maharashtra State Fig Plantation Federation in Pune on 2nd Aug, 2006. Pune District is leading for fig plantation in the Maharashtra State. The Figs planted in Pune district is famous in International Market.

II. Research Methodology

1. Statement of the Problem

The Statement of the Problem is "**The economic impact of fig production on dry land farmers in Pune District** (with special reference to Purandar Taluka, from 2005-06 to 2009-10)"

A comparative study of the production and the cost of production of fig producing farmers and non fig producing farmers with dry farming is carried out in the present research.

2. Selection of subject :

Going through the available literature it is observed that, such type of study is not done in the past. It is unique study as it considers production and expenditure of fig producers and Non fig producers. Maharashtra is leading for Horticulture which is useful for dry land agricultural development. Total area under fig plantation is 1374 hectars in Maharashtra in 2005-06. Pune district has the highest area of 466 hectares (33.92%) followed by Osmanabad district 206 hectares, or (14.99%) Lature District 201 hectares (14.63%) and Ahmednagar District 195 Hectars (14.19%).

3. Reasons for selection of this subject area as under:

a. Maharashtra is on the top in fig production in India and Puradnar taluka is first in Maharashtra in this respect.

b. The fig Plantation is mainly found in near about 50 (57.42%). Villages in Purandar Taluka. Out of them Sonori, Pimple, Supe, and Walhe produces

maximum fig fruits. Walhe is home town of the researcher. Hence this village is selected.

c. The climate should be dry with Hillslope, Medium Land i.e. slowly tempering and cooling lately is essential for plantation of fig production, this climate is available in Purandar Taluka.

d. Estimated profit is Rs. 2.5 lakh per hectare for fig as against hectares to other crops where it is 1.5 lacs.

e. Highest fig production is in Purandar taluka. Even though there is drought in the last four years the fig crop supported the farmers. Therefore this subject is selected.

4. Review of related literature:

The researcher has traced seventeen references for the review of related previous researches and literature. These researches are divided in six groups. The researches in this groups are related to Fig, Custard apple, Pomogranate, Ber, other fruits and accounts regarding fruit production.

1. Literature related to Fig (4 Books and 3 thesis)
2. Literature related to Custard apple (1 Project and 1 Thesis)
3. Literature related to Pomogranate (2 Articles and 1 Project)
4. Literature related to Ber (1 Article)
5. Literature related to other fruits (2 Articles and 1 Project)

6. Accounts regarding fruit production (1 Book)

A special mention can be made of Schultz's theory of Transformation of Traditional Agriculture to Modern Agriculture. The researcher has made an attempt to apply this theory to the present research.

During the present research work the researcher has referred the related literature, giving due citation. This review of related literature was very useful for the researcher at every step of research.

5. Importance of the research study.

Horticulture Department is established in 1981 in Pune. Total area under plantation in Maharashtra was 222.8 lacs in 2001-02. 16.4% of this area is under irrigation and 83.6% area is dry area. The Horticulture programme is fruitful in such dry area. In Maharashtra Fig production is mainly in Pune, Aurangabad and Ahmednagar districts. The fig production yields Rs. 2 to 2.5 lacs net profit per hectare. This plantation is very profitable in Waste and Dry Land area in Maharashtra.

For the economic development of Farmers, dry, waste land must be brought under fig plantation which can be exported to earn foreign currency. Fig needs to be processed. At present Indian share is 14% only international fruit market. It needs to be increased.

In this connection, this study is important for the above reasons. It is observed from the available material, that this research is completely separate as it contributes to economic development of fig Farmers of Purandar in Pune. It also compares the production and expenditure of fig producers with non fig produces in Purandar Taluka. This research has its own entity.

6. Objectives of Research

Following are the objectives of research.

1. To study the impact of fig production on economic development of dryland farmers.
2. To compare the financial status of fig producer and non fig producer farmers.
3. To study the impact of fig plantation on agriculture based occupations.
4. To find out the problems of fig producer farmers.
5. To suggest solutions for the problems of dry land fig producers.

7. Hypotheses

The following hypotheses are tested in this research.

1. Fig plantation helps the producer farmers to improve their financial status.
2. Comparatively fig producer farmers are earning more than the non fig producer farmers.

3. Fig production has good effects on agriculture based occupation.
4. Farmers are not processing the figs.
5. Fig producer farmers have various problems during the fig production.

8. Collection of Data

The present research is based on Primary data and secondary data collected through the survey.

i) Primary Data:

a. Selection of Maharasthra: The Maharashtra is on the top in respect of fig production in India (49.85%). Hence the Maharashtra is selected for research.

b. Selection of District: Pune District is on the top of fig production in Maharashtra with 63.18 % share in fig production. Hence Pune District is selected.

c. Selection of Taluka: Purandar Talukas is on the top (45.92%) of fig production in Pune District. Hence Purandar Taluka is selected for study.

d. Selection of Villages: Walhe, Sonori, Pimple, supe are the villages having maximum fig production in Purandar Taluka. Their share is 50%. Hence these villages are selected.

e. Selection of Farmers: The researcher has selected 25 fig producers and 25 Non fig producers from each

village. Total sample size is 200 farmers. The selection of farmers is made through lottery system.

ii) Secondary Data

Secondary data are collected from following institutions

1. Mahatma Phule Agricultural University, Rahuri, Dist. Ahmednagar.
2. Maratha Chamber of Commerce and Industries, Pune.
3. Gokhale Institutes of Politics and Economics, Pune.
4. The commissioner, Pune.
5. Sub Divisional Officer, Baramati.
6. Zilla Parishad, Pune.
7. Agricultural College, Pune.
8. University of Pune, Pune.
9. Tilak Maharashtra Vidyapeeth, Pune.

9. Statistical Tools

The statistical tools used in analyzing primary and secondary data are Tabulation and percentages. Similarly different types of graphs are also used for the presentation of the data.

10. Limitations of Research:

1. This research is limited to economic impact only.
2. The research is limited to dry land farmers only.

3. It is also limited to the dry land farmers of Maharashtra state.
4. The present research is limited to the farmers from Pune districts only.
5. The sample is selected only from four villages in Purandar Taluka.
6. The sample includes only 100 fig producer farmers and 100 non-fig producer farmers.
7. This research is also limited to the economic development of fig producer farmers.
8. The data collected for this research is within the period from 2005-06 to 2009-10.
9. The questionnaire is developed by the researcher.
10. The conclusions of this research are depends on the responses of the farmers to the questionnaire.

III. GEO-PHYSICAL AND SOCIO-ECONOMIC REVIEW: PUNE DISTRICT:

- **Section I : Geo Physical And Socio Economic Features of Pune District:**

Pune District lies between 17^0-54' and 19^0-24' North latitude and 73^0-19' and 75^0-19' East longitude. Total geographical area of Pune District is 15642 sq. km. The rural area is 15021 sq. km. (96.02%) and the urban area is 621 sq. km. (3.98%).

Pune District is divided thirteen talukas and five sub divisions into Baramati, Haveli, Khed, Bhor and Maval. There talukas in Baramati Sub Division, 3 Talukas in Khed Sub Division and 1 Talukas and other area in Haveli Sub Division, 3 talukas in Bhor Sub Division and 3 talukas in Maval Sub Division. Purandar taluka selected for study comes under Bhor Sub Division.

1. **Population:** Pune district is second highest in population in Maharashtra State. Rural population is 30.31 lacs (41.92%) and Urban Population is 42.01 lacs (56.08%).

   Male Population is 37.68 lacs, (52.10%) and Female population was 34.63 lacs. (47.90%) The sex ratio in Pune District is 919 as per 2001 census 922 at the state level.

2. **Literacy:** As per census 2001 the literacy rate in Pune District was 80.45%. The literacy rate among male is 88.34% in Pune District. The literacy rate of females was 71.89%.

3. **Employment:** Out of total 71.52 lacs population 29.52 lacs population (41.11%) is employed and rest is dependent population. The ratio of employed to dependent is 41:59.

4. **Land:** The soil of Maharashtra is made by depreciation of Besalt and Granite rocks.

The soil of Pune District is created due to effect of the above things. Black soil, Purple Soil, Rock soil is the types of soils found in Pune District. Calcium soil is found in the Purandar Taluka. The Potacium soil ratio is more and this soil is more productive such slippery land is important for fig horticulture. The net plantation area is 60.23%. Dusota Crops cover the total area upto 73.68%. Waste and other uncultivated land area ratio is 15.93% and under the Forest area is 10.39.

5. **Climate:** Maharashtra had very special climate. At the westside Sahyadri Hills are effective for climate. Same climate is there in Pune District. Due to these hills, south west mansoon gives rainfall to the District. In the summer season, climate is hot in Pune District.

6. **Temperature:** The temperature in Pune District is changing. In March, April, May and June there is summer season in the District. The annual minimum temperature is 10.50^0 and maximum temperature is 37.70^0. In the summer season May is very hot with maximum temperature gone upto 42^0.

7. **Rainfall:** Generally Monsoon starts in June. Monsoon comes from Southwest. In the western part of Pune

district the annual average ratio of rainfall is upto 400 cm. In Maval area rainfall is 200 to 400 cm. The average rainfall is 50-100 cm in Western side of Pune District which covers Bhor, Velha, Maval, Mulashi, Khed, Ambegaon and Junnar Talukas. The average rainfall is 1171 mm is in Junnar. From West to East rainfall ratio is less. For the East Taukas minimum average i.e. rainfall is Less rainfall is in the Purandar Taluka which is prominent area for the fig production.

8. **Rivers:** Bhima River is the prime river in Pune District. Velu and Ghod rivers are on left side of Bhima and Bhama. Indrayani, Mula and Mutha rivers are on its right side. These are Sub Rivers. On the south border of Pune District, there are Nira River, Karha, Kukadi, Pavana, Meena, Gunjavani, Pushpavati, Shivaganga. These rivers overflow in rainy days and become dry in summer. Each Taluka in Pune District has a river.

9. **Irrigation:** The geophysical area of Pune District is suitable for irrigation. Hence the number of small and major irrigation projects is significant. It covers Pimpalgaon Joga, Yedgaon, Dimbe, Manik Doh, Vadaj, Chaskaman, Varasgaon, Panshet, Khadakwasla, Mulshi, Pawana, Ghod, Nazare, Ujani, Bhatghar, Nira and Deodhar.

The total irrigated area Pune District is 263208 hectors and out of this, higest percentage is of wells (63.98%) irrigation followed by Canal irrigation (36.02%).

10. **Cropping pattern:** Total cropped area in Pune District is 1150900 hectares and maximum area of 65.26% is covered by food grains. It is followed by Edible oils (8.01%) Legumes (7.29%) Sugarcane (04.67%) and other crops such as Edible and Non Edible oil (5.60%) Area under fig plantation is 0.04%.

11. **Fruits and Vegetable:** Fruits and Vegetable area is increasing in Pune District. Banana in Junnar, Grapes in Baramati, Junnar and Haveli and Pomgranate, Fig and Custerdapple are taken in Purandar. In Purandar Taluka Chilly production is taken. Tomato production is taken in Junnar, Ambegao and Haveli taluka. Lemon fruits production is taken in Daund, Baramati and Shirur taluka.

12. Horticulture area: Diferent fruits are produced in different talukas of Pune district. These fruits are Fig, Pomgranate, Grapes, Custarapple, guva, leman, Mango etc.

Total plantation area in Pune District is 1150900 Hectors. Out of total area maximum plantation of 156418 (13.59%) is in Shirur Taluka followed by

Junnar (11.87) Khed (9.96%), Indapur (9.82%) Bhor (2.82%).

Total area under Fig plantation is 466.41 hectors in Pune District. Purandar taluka (45.92%) is on the top, followed by Bhor (19.30%) Haveli (13.94%). Baramati (6.13%), Daund (4.43%) and Khed Taluka (0.43%) Maval, Mulashi and Velhe Talukas and Indapur Taluka have no fig plantation.

13. Transport and Communication: As per 2001 statistics, fast express Ways, National High ways, State Highway and village roads are available in the District. The total length of all these roads is 13554 KM. The length of National highways is 302 KM. The National Highways i.e. Mumbai Fast Express ways, Pune Nasik, Pune Solapur, Pune Mumbai, Pune Bangalore, Pune Miraj, Pune Mumbai and Pune Solapur are available Pune is Railway Junction. The Sattelite Channels, Doordarshan, Akashwani and News papers are the important mediums of communications available in Pune District.

- **Section II : Geo-Physical And Socio-Economic Features Of Purandar Taluka.**

The researcher has selected Purandar taluka as this Taluka is top in Fig production in Pune district. Purandar Taluka tops with 57.42% coverage of villages

under fig plantation. It is followed by Baramati Taluka (18.80%), Haveli (15.62%), Daund (14.43%) and Bhor (4.59%) Hence Purandar Taluka is selected for the purpose of study.

I. Geo-Physical Features of Purandar Taluka : Purandar Taluka lies between 18^0-17'-20" and 18^0-17'-34" North latitude and 73^0-58'-29" and East Longitude, Purandar Taluka is one of 13 Talukas in Pune District.

A. Land and Climate : The climate of Purandar Taluka is hot and dry. Total cultivable land in Purandar Taluka is 98059 hectors. Out of it 2790 hectors of land is net cultivated area. It comes to 80.61%. The land under horticulture is 6525 hectors. It is 6.65% of total cultivable area.

The highest temperature is 39.05 Celsius and minimum temperature is 10.50 Celsius. The annual average rainfall is about 711.72 mm. The climate of Purandar Taluka is suitable for fruits plantation and special for fig fruits.

B. Population : Total population of Puandar taluka was 223428, out of which 174604 (78.23%) was rural population and 48824 (21.77%) urban Population.

The density of population in Purandar taluka was 265 in 2001 as against 462 in Pune District. The sex ratio of Purandar Taluka was 927 in 2001 as against 919 in Pune District.

Rural population is 78.23% whereas urban population is 21.77% in Purandar taluka. The advanced caste population is 91% whereas S. C. population is 7% and S. T. population is 2% in Purandar Taluka.

C. Education: The literacy in Purandar Talukas indicates that total 150206 (77.34%) is literate. Out of them the rural literate population is 114380 (73.32%) and urban literate population is 35826 (84.60%). The literacy rate for men in Purandar Taluka is 87.51% as against female literate 66.90%.

D. Land Use : Total cultivable area in Purandar Taluka is 98059 hectors. Plantation area is 80852 hectors (73.26%) follow land is 1448 (10.37%) which can suitably be brought under plantation.

E. Rainfall : West side of Purandar Taluka gets ample rain which is useful to Kharip crops, i.e. Rice Jawar, Bajra, East Side of Purandar Taluka is getting less rainfall. Purandar Taluka gets 848 mm rainfall on an average.

F. Irrigation : Total irrigation area minus Dusota area will be net irrigated area. In Purandar Taluka out of total 83501 hectares land under cropped area, 18061 hectores land is irrigated. Out of 18061 hectores irrigated land, 16664 hectores land is under well irrigation and 825 hectors land by canal irrigation.

Five talukas in Pune District are declared by the Government of Maharashtra as drought Prone Areas. These are Purandar, Daund, Baramati, Indapur, and Shirur. Purandar taluka has 100% villages total villages 101) covered under drought prone area.

G. Cropping Pattern : The production of wheat (1650 kg.) Maize (1450 kg.) Rice (1398 kg.), Ground Nut (1180 kg.) Green pease (1100 kg.) Soyabin (1100 kg.) and Tur (1073 kg.) per hectare in Purandar taluka.

H. Horticulture : Total geographical area of Purandar taluka is 110355 hectors and out of It area under plantation is 80852 (73.26 %) The total irrigated area in Purandar Taluka is 18995 hectors. Maximum 4731.98 hectare land is under custard apple, followed by fig 1435.23, Pomogranate (1239). There are 80 villages in Purandar Taluka producing custard apple. Total horticulture area in Purandar taluka is 1403

hectors, and total fig plantation area is 214.17 hectares.

I. Marketing: Fruit season is September, November every year. Generally fig is sold at Rs. 15 to 20 per kg. Fruits can be processed. Generally most of fruit producers sell their product locally. Few of them sell the fruits in Mumbai market.

5.2 FINDINGS:

The researcher has selected Purandar Taluka, as it is on the top in fig plantation in Pune district. The researcher has selected four villages viz, Sonori, Pimple, supe and Walhe.

The researcher has selected 25 fig producer farmers and 25 non-fig producer farmers from each selected villages of Purandar taluka in Pune district Thus, the total sample size is 200 farmers. The primary data are collected through field work by providing questionnaire to these selected 200 farmers.

For the analysis purpose 100 fig producer farmers are designated as **A farmers** and 100 Non Fig producer farmers are designated as **B farmers**.

A. Social Aspects

The social aspects cover Residence, Types of Family, size of family, Education, Religion and Caste of the respondents.

1. **Residence:** Maximum number of A farmers are residing in good houses or Bunglows than B farmers. This is due to more income from Fig Production. (Table No. 4.2).

2. **Types of Family:** 76% A farmers and 71% B farmers have joint families and 24 % A farmers and 29% B farmers have nuclear families. Most of the A farmers and B farmers are joint families. (Table No. 4.3).

3. **Size of family:** Maximum 54% A farmers and 58% B farmers have 1 to 5 members size in their family. While Only 9% A farmers and 7% farmers have more than 10 members in their family. (Table No. 4.4).

4. **Education:** 31% A farmers and 37% B farmers have taken their primary education. 23%) A farmers and 21% B farmers were completed their secondary education. Only 9% A farmers and 10% B farmers are graduate and post graduate. But 11% A farmers and 11% B farmers are illiterate. Maximum A farmers and B farmers are educated. (Table No. 4.5)

5. **Children's Education :** 38% A farmers and 33% children of B farmers' children have completed their primary education. The number of children who completed secondary education is 27% children of A farmers and 25% children of B farmers. 45% A farmers and 19% B farmers' children are graduate. There are 16% A farmers

and 16% B farmers' children completed their post graduation. Children of both A farmers and B farmers are educated. (Tabel No.4.6).

6. **Religion:** Out of 200 farmers, 194 farmers are Hindu and thereafter 3 are Muslims, 1 Shikha and 2 are Navbauddh. Majority of A farmers and B farmers are Hindus. (Tabel No.4.7)

7. **Caste:** 150 farmers (75%) are from Maratha Caste out of them 82 (41%) are A farmers and 68 (34%) B Farmers. There are 36 (18%) are from Mali Caste out of them 24 (12%) from A farmers and 12 (6%) B Farmers. Majority of A farmers and B farmers belong to Maratha and Mali caste. (Table No. 4.8)

B. Economic Aspects: The economic aspects cover occupation profession, land holding subsidiary business, income, expenditure, bank deposits, loan and repayment of loan.

1. **Occupation:** 182 (91%) members from sample are Farmers. There are only 6 (3%) members who are in Trading business and 2 (1 %). A farmers and 4 members (4%) of B farmers are in service. (Table No. 4.9).

2. **Land holding:** 87 farmers (43.5%) have land between 2.5 and upto 5 Acres. It is followed by 81 farmers (40.5%) who hold land upto 2.5 Acres. 18

members (9%) hold land between 5.10 Acres. Five members have 10 to 15 acres land. There are 32 members (16%) of B producer category who hold land between 5 to 20 acres. Marginal farmers (upto 2.5 Acres) and small farmers (2.5 Acre-10 Acre) are in majority in the sample size. (Table No. 4.10).

3. Subsidiary Occupation: Only 12.5% farmers are doing subsidiary occupations along with farming. (Table No. 4.11).

4. Monthly Expenditure: 46% A farmers and 51% B farmers have monthly expenditure upto Rs. 5 thousand. 37% A farmers and 43% B farmers spent between Rs. 5 to 10 thousand per month. 10% A farmers and 4% B farmers spend in the range of Rs. 10 to 15 thousand per month. Only 7% A farmers and 7% B farmers have spent between Rs. 15 to 50 thousand per month. A farmers adopted fig plantation therefore they can do more expenditure. (Table No. 4.12)

5. Bank deposits: It is observed in the field work that 91% A farmers and 94% B farmers opted to bank accounts. There is no difference between A farmers and B farmers regarding opening the bank account. These A farmers and B farmers had deposits in the bank. A

farmers got more money from fig plantation than B farmers who did not opt to fig plantation. (Table 4.13).

6. Sources of Loan: 41% A farmers members and 40% B farmers availed the loan from Co-operative Banks. It is followed by 40% A farmers and 48% B farmers did not avail any kind of loan. Marginally 11% A farmers and 12% B farmers approached moneylenders, patsanstha and relatives and private banks. The co operative bank is the major source for loans to them. The borrowing capacity of A farmers opting to fig plantation increased rapidly. (Table No. 4.14)

7. Amount of Loan: 40% A farmers and 48% B farmers did not avail loan maximum 23% A farmers and 14% B farmers had loan above Rs. oneLac. Due to fig plantation borrowing capacity of A farmers is improved. (Table No. 4.15).

8. Refund of Loan: 82% A farmers and 91% B farmers are punctual in repayment of the loan. (Table No. 4.16)

C. Fig plantation :

In the section the researcher has made an attempt to cover the encouragement to opt for fig plantation, yearwise fig plantation, irrigation sources, irrigation system, year and acrewise expenditure, processing of fig, marketing of fig,

satisfaction, effects of fig plantation, employment generation and use of agricultural implements.

1. Encouragement : Fig Producers and Non-Fig producers are imitating the farming techniques from their Neighbors. 56 % A Farmer and 50% B Farmers started the Fig Production due to encouragement from Neighbours. 12% A Farmer and 2% B Farmers got inspiration from friends. 11% A Farmer and 10% B Farmers got encouragement from relatives and 5% farmers encouraged from Agriculture Officers and training by them.

80% Fig Farmers and Non fig Farmers are encouraged by Neighbourers, Relatives and Friends for fig plantation. (Table No. 4.17)

2. Yearwise Fig and Non Fig Plantation Area: In the year 2006 to 2010 there is no change in the area of plantation of Fig production. Upto 1 Acres A Farmer were 87. But B Farmers are 68 in 2006 and in the year 2007 it upto 80. Also 1 to 2 Acre Area A Farmers there is no change in the year 2006 -10 they are 9 members. No change in B Farmers which was 30. But A Farmers 3 and B farmers are 1 within 2006 to 2010. For 3 to 4 Acres area A Farmers were only in 2006 to 2009 and one added in the year 2010 total 2 Members, There was no major changes are in the plantation

of Fig. Mainly reasons were Employment, shortage of Water supply, Change of Climate, diseases etc. (Table No. 4.18).

3. Sources of Water: 91% A Farmers and 86% B Farmers rely on mansoon for water supply. 96% A Farmers and 93% B Farmers depend on well for supply of water. Borewell is the convenient source of water to 33% A Farmers and 19% B Farmers. Farm tank is the source of water to 8% A farmers and 5% B Farmers. Mansoon is most important source of water for Indian agriculture. All the year irrigation through river and canal is not available to fig Farmers. (Table No. 4.19)

4. Irrigation System: 93% A Farmers and 96% B Farmers use water sub canal. The drip irrigation is used by 7% A Farmers and 4% B Farmers. There is still scope for farmers to use drip irrigation and sprinkle irrigation. (Table No. 4.20)

5. Annual Cost of production of Fig and Non Fig crops: Per acre annual cost of fig production is in the rnage of Rs. 10000to Rs. 50000. The annual cost of Non Fig Farmers was between Rs. 10000 to Rs. 40000. It means that fig production cost is more than Non fig production. (Table No. 4.21)

6. Annual Income of Fig and Non Fig Farmes: One of the objectives of this research work is to have comparitive

analysis of annual income of Fig Farmers and Non Fig Farmers.

Fig producer farmers earning Rs. 1 Lac to 2 Lacs were per annum and per acre were 62 (62%) in 2006, remaining constant to 74 in 2007-08, 73 (73%) in 2009 and 68% (68%) in 2010. This is significant number of fig producer farmers earning upto Rs. 2 lacs per acre. During the same period from 2006 to 2010 hardly 2 Non fig producer farmers could get same income.

Further 8 fig producer farmers earned Rs. 2 Lacs – 3 Lacs in 2006, 9 fig producer farmers in 2007, 14 fig producer farmers in 2008, 17 fig producer farmers in 2009 and 24 fig producer farmers in 2010 had annual income Rs. 2 Lac – 3 Lac per acre.

During the period 2006-2010 only a single non fig producer farmer could achieve this income Rs. 2 Lacs – 3 Lacs in 2008. It is more significant from the fact that during 2006 1 fig producer farmer and during 2008 and 2009, 2 fig producer farmers had their income more than Rs. Lacs per year per acre. (Table No. 4.22). Thus fig production has positive effect on the economic development of the dry land farmers.

7. Profit of farmers: It is observed from table 4.23 that the profit earned upto Rs. 50000 by 14 fig farmers in 2006, 21 fig farmers in 2007, 14 fig farmers in 2008, 42 fig farmers in 2009 and 15 fig farmers in 2010. There were 91 Non Fig farmers earning the same profit in 2006, 95 Non fig farmers in 2007, 96 Non fig farmers in 2008, 95 Non Fig farmers in 2009 and 93 fig farmers in 2010. It means non fig farmers were more than fig farmers earning profit upto Rs. 50000.

There were 51 fig farmers who earned profit between Rs. 50000 to Rs. 100000 as against 8 non fig farmers in 2006, there were 41 fig farmers in 2009 and 2 non fig farmers in 2009 earning the same profit. There were 21 fig farmers and 5 non fig farmers earning the same profit in 2010. It means that fig farmers were more than Non fig farmers who earned profit between Rs. 5000 to Rs. 100000.

Same is the case of fig farmers earning profit in the range of Rs. 1 Lac and 1.5 lacs there were 29 fig farmers in 2006, 42 fig farmers in 2007, 14 fig farmers in 2009, 46 fig farmers in 2010 who earned profit Rs. 1 Lac to Rs. 1.5 lacs as against 2 non fig farmers in 2007 and 1 Non Fig farmers in 2009 it means fig farmers are more than non fig farmers earning the profit in the range of Rs. 1 lac to 1.5 lacs.

There were 6 fig farmers in 2006 and 2007, 13 fig farmers in 2008, and 15 fig farmers in 2010 who earned profit more

than 1.5 lacs. There were 3 non fig farmers in 2007, 5 non fig farmers in 2008, and 2 non fig farmers in 2010 who earned same profit. It means fig farmers are more than Non fig farmers who earned more profit than Non fig farmers to the extent of more than Rs. 1.5 lacs.

The hypothesis of this research is that fig production helps the producer farmers to improve their financial status. The table 4.13 concludes that fig production is resulting in improvement of financial status fig producer dry land farmers. Therefore, this hypothesis is positively proved. (Table No. 4.23). In this way the financial status of fig producer farmers is better than the non fig producer farmers.

8. Processing of Fig: Farmers are not processing any thing on their production. (Table No. 4.24).

9. Marketing of Fig: 5% fig Producers are selling fig in local market and 9% fig Producers in Taluka Market 2% in district Market and 83% fig farmers are selling their fig production in Mumbai Market.

On the other hand 18% Non Fig farmers are selling their fruits in local market, 6% in Taluka Market, 7% in District Market and 56% selling in Mumbai Market. It is noticed that fig product and other fruits are not marketed in National and International Market. Maximum sale is Mumbai Market only. (Table No. 4.25)

10. Agriculture Based Occupation: The fig fruit production helped the fig producers to be economically well off. They also started the agriculture based occupation to supplement their income. 39% Fig producers started milk business, 6% members started poultry farm, 4 % fig trading, 4% fig plant Nursery and 1% is the industrialist. (Table No. 4.26).

11. Farmer's Satisfaction: 60% fig producers are satisfied while five fig producers 5% are not satisfied. 33% fig producers are partially satisfied. About 93% fig producers are satisfied as fig has yielded maximum returns to them. (Table No. 4.27)

12. Effects of fig production on other farming : The first major effect of fig production is on bringing the waste land under plantation. The number of 80% A farmers and 43% B farmers have confirmed it may help helped them to increase their income due to extension in area under fig plantation.

51% A farmers and 19% B farmers have extended horticulture due to fig production and 50% from A Farmers and 28% B Farmers told that there is shortage manpower due to fig production. 63% A Farmers and 87% B Farmers told that there is shortage of water for other crops due to fig production and 47% A Farmers and 39% B Farmers have told about shortage capital due to fig plantation. 41 % A Farmers and 14 % B Farmers have opted water saving

system i.e. Drip irrigation, Sprinker, pipeline, etc. due to fig plantation. 14% A Farmer and 7% B Farmers informed that due fig plantation the agriculture tourism is encouraged. (Table No. 4.28)

13. Generation of Employment: Due to fig production temporary and permanent employment has been generated. 47% A Farmers and 48% B Farmers told that 1 to 2 man power temporary employment are generated and 14% A Farmers and 34% B Farmers told that 1-2 labour permanent employment is generated. 44% A Farmers and 42% B Farmers told that employment is temporarily generated for 3 to 5 laboures. But 17% A Farmers and 21 A Farmers B Farmers told that permanent employment is generated to 3 to 5 labours. Fig production has capacity to generate employment. (Table No. : 4.29)

14. Agricultural Implements: 87% A Farmers and 56% B Farmers have used Bullcart for agriculture production. 28% A Farmers and 13% B Farmers used Tractor and 19% A Farmers and 29% B Farmers use Petrol Pump spray for medicine JCB is used by 6% A Farmers and 6% B Farmers tractor is used by 5% A Farmers and B Farmers.

Traditional Fig Farmers are more than the advanced ones. Modern agriculture instruments i.e. tractor, truck, JCB etc are used by 47% A Farmers and 24 % B Farmers. It means

that due to fig production the farmers encouraged for use of advanced and modern techniques of agricultures. (Table No. 4.30)

15. Health: 6% A Farmers do not get health facility. 57% A Farmers have taken health facility in Private Clinic. 25% A Farmer members have taken health facility from Primary Health centre and 83% B Farmers get health facility from private clinic and 15 % member availed the primary Health facility. So it is clear that A Farmers and B Farmers have taken private health facility instead of Governments' Health facilities, it means due to increasing in income of A Farmers they have availed private health facility instead of Governments' Health facilities. (Table No. 4.31).

16. Tours: 48% A Farmers and 49% B Farmers enjoyed the State Tourism Scheme. 34% A Farmers and 25% B Farmers had tours in village area. 12% A Farmers and 13% B Farmers have enjoyed the District level. 4% A Farmers and 8% B Farmers enjoyed the Taluka level Tour. 2% A Farmers and 5% B Farmers had enjoyed National tour. So Maximum Farmers have taken experience of tour at local, state and or National level. (Table No. 4.32)

17. Material Facilities: As there is no difference in the basic needs of A Farmers and B Farmers all the essential things i.e. Domestic Gas (For cooking) cycle, Pumpset, Fan, Television, Telephone, Mobile and Motorcycle these things are available to them.

But the expensive material facilities like tractors, Car, Jeep, Van, Air Condition, Computer and internet are available to more (double) number of A Farmers than B Farmers. Fig producers have more purchasing capacity than Non fig producers. (Table No. 4.33)

D. Problems of fig producers:

The farmers have to face many problems while producing the fig fruits they are as follows: (Table No. 4.34).

1. Increase in diseases of Fig production: Total 94% fig Producers has difficulties of heavy diseases of fig production. Main diseases for fig plant are as Tembera, Pandhari Bhushi, Thipake, Phalkuj, Panawari Thipake, Phulkide, Mawa, Khodkida, etc. are the main disease and so the expenditure on medicine are burden on income from the same.

2. Shortage of Labours: 80% fig Producers has faced the problem of shortage of labours.

3. Shortage of Water supply: 73% fig Producers has water shortage difficulty. Actually it is told that few

monsoon is to be for fig production, i.e. 500 ml to 625 ml (20 to 25 Inch) Mansoon is essential for the same. In Sept and Oct. Monsoon must be stoped. This crop is to be taken at 1200 mtrs from sea level and high table land area. But that area is deep valley climate area and it is cool so decrease the production.

4. Climate: For fig production the climate is required Light winter, light summer and light monsoon. High winter, mist, hailstone are damaging to fig Trees. Due to more Winter Climate process of preparation of sugar is stopped. 72% Fig Producers are of the opinion that the bad climate is difficulty.

5. Training: 50% fig Producerss told that due to non education and absence of training the fig farmers could not get maximum output.

6. Shortage of Capital: 73% fig Producerss told that due to shortage of capital the production is not come out. For the Modernisation, Irrigation facility, Process industries, Storage, AC House, Transport facilities are needed heavy capital. For agriculture purpose minimum interest loan is not provided for the capital, so government should provide some ratio of capital and grant also.

7. Market Management: In the view of Market management fig producer's difficulties are shortage of

storage capacity, gradation and classification shortage of Market facility. The specifications are under:

i) Market Rate: No reasonable market rate is fixed for fig production according to by 88% fig Producers. When there is number the rates will crop its price collapses. Production is decreased due to diseases and hence farming of fig production is not profitable.

ii) Shortage of Market Facilities: 71% fig Producerss says that there are no facilties in the market and this is main difficulties. Now fig fruits producers depends on local market. Some may sell it at Mumbai but there is no marketing in the country and international Market and transport facility.

iii) Storage capacity: In the opinion of 50% fig Producers, there is no cold storage facility. Due to storage difficulty, the fig fruits are being sent to local market. The fluctuations in market rate can not benefit the fig farmers for want of storage facility.

vi) Gradation and Standardisation: The fig production must be graded and standardised for getting better price. But it is fact that 48% fig fruits are not graded and standardised.

For the purpose gradation and standarisation, training, and staderdised production is essential. This may help fig producers to export their product.

v) No export of fig production: 49% producers complained that there is no No proper management for export. The fig fruits can be exported to America. England, Arebean Contries, Africa, Europe. For the export there should be the quality fruits. There packaging must be light the attractive and cold storage is also essential for export.

E. Solutions to the problems of fig producers

The suggestions given by fig producer farmers are as follows: (Table No. 4.35).

1. Training : 65% fig farmers want training so that they can get more production. It needs to be graded, standardised and properly packed for export. For this purpose Government and different NGO's may provide the training to the farmers at their local areas.

2. Community Farming: Due to 35% fig Producers supports storages, export, process industry, irrigation, transport, modernization. Their difficulties can be solved through the community farming.

Due to community farming maximum profit can be earned. Common Medicine spray, Modernisation for

agriculture, Cold storage, storage, process industries, Raw Materials and availability of Capital are the favourable for community farming system. For that purpose farmers group, Government and Non Government Organisations may take the leading and enlighten to farmers.

3. Irrigation Facilities: According to 76 (76%) fig Producers, the irrigation facilities may be enhanced, and the govt. may introduce the lift irrigation. The grants and minimum interest rate loan also may be provided.

4. Modernisation: 52 (52%) fig Producer farmers told that if the modernization is done in the agriculture, the productivity also will be increased and 48 % members told that there is no need of modernization. The modernization must be done but for that purpose govt. must provide the loan with minimum interest along with grant.

5. Minimum Interest Loan: 73% fig Producers says that Govt. may provide the loan with minimum interest rate and 28% fir Producers have no complaint about the interest.

If Government provide the special capital for crops and minimum interest loan for fruit cultivation in dryland area, it will help for solving the problems. Process industry should be started to enhance export.

6. Federation of Fig Producers: 60% Fig Producers wants to make fig producers Sangh, because fig Producers Sangh is constituted to solve the problem of Fig Producers.

Encouragment for constituting the Fig Producers Sangh should be given by the Govt. and enlight for the same. Help to the Sangh, automatically the Fig Producerss Sangh will be increased.

7. Establishment of Process industries: 50% fig Producer gave good response for process industries. Process industry is established for the Jam, Chocklate, Dry fruits, Burfy, Milkshake, Packed Tin Figs, Powder etc. such sub products may be prepared. This may help to increase profit by 3 to 4 times.

8. Reasonable Market Rate: 72% fig Producers wish to earn reasonable market rate. Fig production expenditure is more, so if they do not get the reasonable rate, they will not earn the good profit. Many a times other fruits are coming in market that affects sale of fig. And some times due to different deseases production is less and that time no profit is earned by the fig Producers.

For that dry land agriculture Government should give the minimum rate surety to Producers.

9. Government Grants: 72% fig Producers feels that the Govt. may provide the grant to the fig production and 28% fig Producers said that there is no need of grant. They have self-sufficient capacity on themselves.

Dry land agriculture is developing and poor agriculturist self-sufficient and some percent unemployment problem is solving. Govt. may give the grant for fruit cultivation.

10. Study Tours : Out of the fig Producers 39 % farmer members feels that study tours may be arranged and 62% fig Producers member have no importance for the same.

If study tours farmers are arranged, the farmers can learn the different research and implement modern agriculture, irrigation facilities, export capacity, figs and process industry knowledge and for the development they can start their own process industries.

So Co-operative Society, NABARD, Agriculture Department, Federation of Farmers may arrange study tours of societies and for that purpose grant and free tours and concessions may be provided.

11. Research on fig: 47% fig Producers members feel that the research must be done on fig crops. And 53% members have no importance for the same.

Due to research minimum sugar fruits are producer production of long time figs are planted. Fig production required minimum water.

Fig production researches are conducted in Agriculture University and Government may give the grants for the same. Then the export quality good quality figs can be produced.

12. Exemption in Loan : 73% fig Producers members want the exemption in Loan. And 27% members not responded for exemption.

After getting the loan exemption, farmers have sufficient capital and the fig production will be increased and farmers may enter in the fig process industry.

5.3 HYPOTHESES TESTING

Five hypotheses were formulated for this research work. After the analysis of collected data these hypothesis are tested as follows:

Hypothesis No. 1

Fig plantation helps the producer farmers to improve their financial status.

This hypothesis is tested with the help of data given in the table No. 4.21 to 4.23 in respect of income of fig producer farmers, their earning of profit, their residence available to them and health etc.

A. Income of Fig producer farmer

Table 4.12 explains that maximum number of 62 farmers had the annual income in the range of Rs. 1 Lac to 2 Lacs in 2006. This number is increased to 68 in 2009 who earn the same income.

Secondly table 4.12 explains that there were 2 fig farmers earning more than Rs. 3 Lacs per annum in 2008-2009.

B. Profit

Table 4.23 indicates that the fig farmers had more profit per hectare than the Non Fig farmers.

C. Residence

It is observed by the researcher that fig farmers earn more income and hence they could afford to reside in bungalow, concrete house, this is explained in table 4.2.

Thus the hypothesis No. 1 is positively proved and accepted. Fig plantation helps the producer farmers to improve their financial status.

Hypothesis – 2

Comparatively fig producer farmers are earning more than the non fig producer farmers.

This hypothesis is tested on the basis of data given in table 4.12. Maximum number of 74 fig farmers earns Rs. 1 Lac to 2 Lacs in 2008 but only 2 Non fig farmers earn the same amount further 'A' fig producer increased from 8 in 2006 to 24

in 2010 to earn income Rs. 2-3 lacs whereas there was not a single non fig producer earning the same.

Considering the profit there were 51 A farmers earn profit Rs. 50000 – 1 Lac whereas 8 B farmers earn the same amount. In 2010, 46 'A' farmers earn Rs. 1 -1.5 lacs and 24 A farmers earned profit Rs. 50000 -1 lac it indicate fig farmers are earning more than B non fig farmers. In this way hypothesis No. 2 is positively tested and accepted. Comparatively fig producer farmers are earning more than the non fig producer farmers.

Hypothesis – 3

Fig production has good effects on agriculture based occupation.

This hypothesis is tested with the help of the data given in the table 4.27

The major effects of fig production are to bring waste land under plantation which is confirmed by 80 A farmers and 43 B farmers. Further fig production is extended fruit cultivation.

It is told by 51 A Farmers and 19 B Farmers there is shortage of capital, shortage of water and shortage of man power due to fig production but 41 A Farmers and 14 B Farmers have opted water saving system i.e. sprinkler, pipeline. Thus the hypotheses No. 3 is positively tested and accepted. Fig production has good effects on agriculture based occupation.

Hypothesis – 4

Farmers are not processing the figs.

This hypothesis is tested on the basis of data given in table 4.4.7. In this table not a single fig producer is processing his fruits. (100% fig producers are not processing their fruits). Therefore, hypothesis No. 4 is positively tested and accepted. Farmers are not processing the figs.

Hypothesis – 5

Fig producer farmers have various problems during the fig production.

This hypothesis is tested with the help of the data given in the table 4.9. It indicates that the main problems for fig production are the climate change, water supply (scarcity of water), capital shortage, employment and fruit diseases. As the fig producer farmers are faced above problems during the fig production the hypothesis No. 5 is positively tested and accepted. Fig producer farmers have various problems during the fig production.

5.4 CONCLUSIONS

1. There is positive economic impact of fig production on dry land farmers.
2. The financial status of fig producer farmers is better than the non fig producer farmers.
3. There is positive impact of Fig production on agriculture based occupation.

4. Fig producer farmers have following problems during the fig production:

   a. Diseases of fig plants is the major problem infront of the Fig producer farmers.

   b. Shortage of Laborers is another major problem of the Fig producers.

   c. Shortage of Water facility is the big problem to the Fig production.

   d. Bad Climate is again one of the problems of Fig producer farmers.

   e. Absence of training to the fig farmers is also the problem of Fig producers.

   f. Shortage of Capital is the main problem.

   g. Guaranteed reasonable market rate for fig is not fixed.

   h. No market opportunities at National and International level.

   i. There are no cold storage facilities and godowns for fig fruits at local level.

   j. No trained labour for gradation and separation of fig fruits for International market.

   k. There is no export facility for fig fruits.

6. The solutions for the problems of dry land fig producers are as follows:
    a. For the production of best quality Fig fruits, Government and NGOs' different NGO's should provide the training to the fig producer farmers at their local areas.
    b. To minimize the expenditure and earn more profit community farming should be adopted by the Fig producer farmers.
    c. Irrigation facilities should be provided to the Fig producer farmers.
    d. Modern and advanced techniques and equipments should be used by the farmers for the production of Figs.
    e. Government should provide Minimum Interest Loan to the Fig producer farmers.
    f. Federation of Fig Producers should establish to solve the problem of Fig Producers.
    g. Process industry should establish for processing on the Fig fruits.
    h. Government should give the minimum rate surety to Fig fruits.
    i. Government should provide grants for cultivation of Fig.

j. Study tours of Fig producing farmers should arrange to motivate them for Fig production and its processing.

k. Researches should be conducted to develop better varieties of Fig, processing on fig and other areas related to the Fig.

l. Exemption in the loan should be given to the Fig producer farmers and farmers who started the Fig processing industry.

5.5 RECOMMENDATIONS

The researcher suggested the following recommendations based on the present research work:

1. Encouragement for fig plantation :

Government should encourage the dry land farmers for plantation of fig production because this is very useful for economic development to the dry land farmers.

2. Increase the area of fig plantation:

The fig fruit plantation area should not be limited up to the Maharashtra but it should be extended in all over India where the dry land is available.

3. Irrigation Facility :

Government should provide the irrigation facilities i.e. tank, irrigation scheme, and dams etc. to provide water to the fig plants in summar season.

4. Crop Loan:

As the production cost of fig plantation is more the Government should provide crop loan against Fig plantation and interest should be exempted, if the farmer refunds the loan in time.

5. Micro Irrigation System:

At present many farmers are using the traditional system for irrigation which requires a large amount of water and the area is drought prone area. The micro irrigation system should be used by the farmers. The government should give the 100% grants for micro irrigation system.

6. Research of new type of Fig plant:

The Researchers should undertake the researches to find out new varieties of fig plant which will be diseases resistant, requires less amount of water and give the maximum yeild. Government should give motivation, facilities and provide funds for such type of researches.

7. Fig cultivation Awareness Campaign:

The Government should organize fig cultivation awareness campaigns to increase the fruit cultivation area, to motivate the farmers for cultivation of fig to aware them about various government schemes regarding fruit plant cultivation.

8. Minimum Basic price :

When there is more production of fig fruits, then the rates of fig collapes which cannot fullfill the expenditure of the farmers.

Therefore, government should decide the minimum basic price for figs based on production cost.

9. Production of export quality fruits:

The farmers should used bilogical and organic fertilizers for the fig plants, they should avoid chemical fertilizers, they should maintain the quality of fruits so that, they can export their fruits and get the benefit of international market and our country get the foreign currency.

10. Training of farmers:

The Government and agricultural department should organize various training programmes, seminars, workshops, orientations, field visits, interviews of successful fig farmers for the farmers. This will be useful for the farmers to improve their knowledge and skills regarding the fig production which directly effects and the quality and yield of the fig. As the quality increases the fruits will be exported and the farmers earned more profit through the fig plantation.

11. Cultivation of high yeilding varieties of Fig:

Now days the Poona Fig variety of fig is traditional cultivated in the Purandar Taluka instead of this variety newly invented and recommended high yielding varieties like Excel should be cultivated by the farmers.

12. Market and Transport Facility:

The fig fruits of Purandar Taluka farmers are sold in the local as well as Mumbai market. But they are not getting the benefit of National and International markets. The government should provide the facility, infrastructure and linkages with national and international market.

Internal roads and transport facilities should be better for the transport of fig fruits from farm to the State, National and International Market.

13. Removal of Agents:

The government should provide the opportunity for the farmers to sell the fig fruits directly to the consumer without agents. It will decrease the production cost and increase the profit of the farmers.

14. Fig Processing Industry:

The fig processing industry should be established in the Purandar Taluka so that the fig fruits after there production immediately processed and it will avoid the wastage of fruits. The processed figs get more price which increases the profit. The government should provide grants, low interest loans, infrastructural and other facilities for the fig processing industry. The government should motivate the farmers to established fig processing industry.

15. Community farming:

The farmers should initiate the community farming for fig cultivation. This community farming decreases the production cost and increases the profit through common irrigation, maintenance, Transport, godowns, Process Industry, Cold Storage, agricultural implements, fertilizers and Medicines facilities.

16. Cold Storage facility:

Government should provide the cold storage facility for fig fruits. There should be one cold storage after every ten fig producing villages. Thus there should be 4 to 5 cold storages in Purandar Taluka. So the fresh fig fruits will be stored immediately after harvesting and transported in the market when the rate for the figs is maximum. This will increase the profit of the fig producer farmers.

17. Fig Producers Federation:

Farmers should form the federation of fig producers. This federation will take care of the fig production by tackling the problems of fig producers and providing solutions to them.

18. Study Tours:

Agriculture Department of government, federation of fig producer farmers, should organize the study tours. They should visit to the farm of successful fig producer farmers, fig processing industry, Krushi Vikas Pratisthan, Agricultural

Universities, Agricultural Research Center, Markets etc. It will motivate the farmers to cultivate the fig, to use modern and advanced technology for fig production, to do the new and inovative experiments in fig cultivation to acquire the knowledge and skills regarding fig production and to change their attitude towards the fig production.

19. Insurance:

The Government should provide insurance facility to the fig crop. If natural calamity occurs and there is any loss to the farmer then the farmer will not suffer from this loss and more number of farmers will get attracted towards Fig cultivation.

20. Loan Exemption:

Government should provide a loan exemption facility to the fig producer farmers. As the Purandar is drought affected taluka, the farmers are very poor. If they take the loan from bank or any financial institute, but due to climate change and diseases on the fig crop and fluctuation in market price there may be loss to them. These farmers are unable to repayment the loans so government should provide loan exemption facility to such farmers.

21. Stories of successful fig producer farmers:

The stories of successful fig producer farmers should be written and published in books, news papers, the interviews of such successful fig producer farmers should be broadcasted on

radio and television. Such farmers should be awarded by the government. This will motivate the other farmers and attract them towards the cultivation of fig.

5.6 APPLICATION OF SCHULTZ'S THEORY :

5.6.1 Schultz's Theory :

The man who is bound by Traditional agriculture cannot produce much food no matter how rich the land. Thrift and work are not enough to overcome the niggardliness of this type of agriculture. To produce an abundance of farm products requires that the farmers has access to and has the skill and knowledge to use what science knows about soils, plants, animals and machines. To command farmers to increase production is doomed to failure even though they have access to knowledge. Instead, an approach that provides incentives and rewards to farmers is required. The knowledge that makes the transformation possible is a form of capital, which entails investment. Investments not only a material inputs in which a part of this knowledge is embedded but importantly also investment in farm people".

Prof. Schultz has stated that, differences in land are least important, differences in the quality of material capital are of great importance and differences in the capabilities of farm people are most important in explaining the differences in the amount and rate of increase in farm production.

Hypothesis of Schultz was that “the rate at which farmers who have settled into traditional agriculture accept a new factor or production depends upon its profit, with due allowance for risk and uncertainty and in this regard the response is similar t that observed by farmers in modern agriculture”. He also suggested that farmers are remarkably efficient in allocating the factors at their disposal in current production. According to Schultz, there is no correlation between the size of farms and productivity.

He asserted that modern agricultural inputs must be available at reasonable rate. That will lead to investment in agricultural profitable.

According to Schultz, the investment in human capital has radical social and economic implication. He emphasized that education is the best form of investment in human capital.

5.6.2 Application of Schultz theory to present research.

According to Schultz the transformation of Traditional Agriculture in modern agriculture depends on the following :

a. New factors in production.
b. Availability and price of non traditional (Modern) agricultural inputs.
c. Modern Material inputs.
d. Farm people with modern skills.
e. Investment in human capital.

Schultz theory may be considered in the context of this research, which studies the impact of fig plantation on Dry land farmers in Pune District.

1. Traditional Agriculture

It is primarily peasant farming, characterised by back world, primitive and labour intensive agriculture, with low productivity. Indian economy is agrarian in character. There are generally small sized farms. The land and labour are principal inputs of traditional agriculture. But there is great scope for increasing total production and resource productivity through technological change.

Total are under cultivation in Pune district is 1150900 hectares (73.68% of total area), total area under cultivation in Purandar Taluka is 98059 hectares (88.85%) of total area).

2. Transformation to modern agriculture.

Government of Maharashtra declared five Talukas of Pune District as drought prone area. Horticulture is important for water scarcity zone with low water balance. The fruit plantation is useful for the economic development of farmers having waste land. The area under plantation in Purandar Taluka is 80852 hectares (73.26% of total geographical area).

Fig, custerred apple, pomegranate, bear are popular fruits grown in this area. Land, water, hilly area and climate are in favour of horticulture in Purandar Taluka. The horticulture

yields net profit of about Rs. 1 to 1.5 lacs per Acre, whereas the fig plantation yields Rs. 2 to 2.5 lacs net profit per Acre.

Fig plantation in Purandar Taluka can be considered as transformation of traditional agriculture to modern agriculture.

3. New factors of Production.

Prof. Schultz pointed out that the traditional farmers accept new factors of production considering its profit.

Fig plantation was accepted by the farmers in Purandar taluka as they were encouraged by Neighbourers, friends, and agricultural officers. (P. 102 of thesis)

Moreover the hypothesis of this research is that, "Fig plantation helps the producer farmers to improve their financial status". This hypothesis is positively proved as income of fig producer farmers increased and they earned profit. (P. 145).

Secondly hypothesis of the research was that 'comparatively fig producer farmers are earning more than the non fig producer farmers". This hypothesis is positively proved. (P. 146.)

4. Modern Material inputs.

Prof. Schultz asserted that modern agricultural inputs must be available at reasonable rate. That will lead to investment in agriculture. Irrigation, better seeds, better manures and fertilizers, plant protection, use of mechanisation are various aspects of agricultural inputs.

A. Drip Irrigation.

B. Market Facilities.

C. Fig processing Unit:

D. Farm people with modern skills.

5. Investment in human capital.

Literacy rate in Purandar taluka is 77.34% these farmers want training. This can be given by government. They should arrange seminars, workshops, orientations, field visits, interviews of successful fig farmers. This will be useful for the farmers to improve their knowledge and skills regarding the fig production, which directly affects the quality and yield of the fig. It will be exported to earn more foreign exchange.

5.7 SCOPE OF FURTHER RESEARCH

This research studies the economic impact of fig production on Dry Land Farmers in Pune District with special reference to Purandar Taluka. In future any researcher may study the economic impact of other than fig production on irrigated or dry Land farmers.

The researcher is quite aware of the fact that there are several other aspects such as marketing, cost benefit analysis, impact of Globalisation on fig and Horticulture, Impact of Globalisation on marketing of fruits and fig and problems before food processing Industry and Remedial measures to over come them. There are also some another subjects for further research such as to study about agro base industry and fruit processing Industry. The study about export marketing of fig and other horticulture is also necessary.

The researcher has limitations to complete the research in stipulated time period. Therefore the researcher felt that there is further scope for the other scholars to study in more detail the other aspects of the research problem.

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अ.नं	वृत्तपत्र/साप्ताहिक	दिनांक	लेख
१	कैवारी, मराठा	२९/२/२०००	पोषक मुल्य असलेले अंजीर
२	कैवारी, मराठा	१६/१/०५	पुरंदरच्या फळ उत्पादकांनी शेततळयांचा प्रयोग राबवावा.
३	सकाळ	२६/३/२००५	पुरंदरला लागवड वाढल्याने अंजीराला पुन्हा गतवैभव
४	सकाळ	२६/३/२००५	सप्टेंबर छाटणीमुळे अंजीराचे पाच पट उत्पादन
५	सकाळ	१८/४/२००५	अंजीराची साथ..... लाखोंची बरसात सोमुडींच्या शेतकऱ्यांच्या राष्ट्रीय विक्रम.
६	सकाळ	२४/४/०५	अंजीराची योग्य निगा राखल्यास सर्वात अधिक खात्रीचे पिक
७	सकाळ	२६/११/०५	पुरंदरची अंजीरे जगाच्या बाजारात जाण्यासाठी
८	सकाळ	८/१२/०५	नीरा वाल्हा पटयात अंजीरावर तांबेऱ्याचा वाढता प्रादुर्भाव
९	सकाळ	१०/१२/०५	अतिवृष्टीत मुळया कुजल्याने अंजीर बागांवर परिणाम
१०	सकाळ	२०/१२/०५	पुरंदरच्या फळ उत्पादकांनी शेततळयांचा प्रयोग राबवावा.
११	सकाळ	२६/१२/०५	जिल्हयात २४५० हेक्टरवर यावर्षी फळ लागवड पुरंदरमध्ये अंजीर रोप निर्मिती वाढण्याची चिन्हे
१२	सकाळ	२७/१२/०५	अंजीर लागवड वाढली मात्र शास्त्रशुध्द मार्गदर्शनाचा अभाव.
१३	सकाळ	२२/२/२००५	अंजीराच्या बागेत ढेमसे व शेवगा
१४	सकाळ	२२/२/०६	अंजीरावरील संशोधन
१५	सकाळ	२७/२/०६	अंजीर बागा गारठल्या गोडी उतरली.
१६	सकाळ	१/३/०६	गांडुळ खतावर बहरली अंजीर बाग
१७	सकाळ	८/३/०६	अंजीराच्या बागेतून साडेचार लाखांचे उत्पन्न
१८	सकाळ	१२/३/०६	पुरंदरच्या शेतकऱ्यांच्या अंजीराच्या साथीने दिवाळी
१९	सकाळ	१७/३/०६	अंजीवरील संशोधन
२०	सकाळ	३/५/०६	ढगाळ हवामानाचा अंजीरांना तडाखा

२१	सकाळ	२८/५/०६	इतिहास प्रसिध्द राजेवाडीची अंजीराला मोठी मागणी.
२२	सकाळ	५/७/०६	पुरंदरमध्ये होणार डीएन्ना अंजीर लागवड
२३	सकाळ	१२/७/०६	माळरानावर बरहली अंजीराची बाग
२४	सकाळ	९/७/०६	अंजीर रोप निर्मितीचा जोडधंदा
२५	सकाळ	११/९/०६	उत्पादन खर्च कमी होण्यासाठी कृषी विदयापीठे काय करत आहेत?
२६	सकाळ	१७/९/०६	वाल्हा परिसरात जुन्या अंजीरावर खोडकिडीचा प्रादुर्भाव
२७	सकाळ	२६/१०/०६	खडकाळ माळावर अंजीराचे यशस्वी उत्पादन
२८	सकाळ	६/११/०६	खडकाळ माळावर अंजीराचे यशस्वी उत्पादन
२९	सकाळ	१०/११/०६	दिव्याच्या महिलने सोडविले अंजीराच्या बाजारभावाचे गणित
३०	सकाळ	२९/११/०६	बदलत्या हवामानात पुरंदरचे ८०टक्के अंजीर उकलले.
३१	सकाळ	२९/०१/०७	अंजीराच्या बागेत फुलविला संसार
३२	सकाळ	२/३/०७	विचित्र हवामान अंजीरांना फटका भाव कोसळला.
३३	सकाळ	१८/३/०७	सुकवल्या जाणाऱ्या अंजीर बाणावर देण्याचा निर्णय.
३४	सकाळ	१८/३/०७	वाल्हयांच्या अंजीरांना मुंबईच्या बाजारपेठेत मोठी मागणी.
३५	सकाळ	१८/३/०७	शेतीला कृषी पर्यटनाचा जोर
३६	सकाळ	१८/३/०७	अंजीर सीताफळाचा समावेश फलोत्पादन अभियानात हवाच
३७	सकाळ	१८/३/०७	तीस रूपयांची तरतूद : अंजीर.
३८	सकाळ	२४/३/०७	हवामानात बदल झाल्याने अंजीराची स्थिती सुधारली.
३९	सकाळ	२७/३/०७	पुरंदरचा अंजीर तोडणी हंगाम यंदा दिड महिना आधीच
४०	सकाळ	१२/५/०७	पुरंदरच्या अंजीराची निर्यात बंद
४१	सकाळ	१२/५/०७	पुरंदर मधील अंजीरबागा कुजल्या
४२	सकाळ	५/७/०७	राष्ट्रीय फलोत्पादनात अभियानातून

			अंजीरासाठी अनुदान मिळणार.
४३	सकाळ	२०/७/०७	अंजीर उत्पादकांनी सेंद्रिय खतांचा सुरूवातीपासून वापर करावा.
४४	सकाळ	१८/१०/०७	तंत्र अंजीर उत्पादन वाढीचे
४५	सकाळ	३०/११/०७	शेतीची साहित्य, साधने सामुहिक पध्दतीने भूमाता कृषीमंच खरेदी करणार
४६	सकाळ	३०/१/०८	कडाक्याच्या थंडीमुळे अंजीराची गोडी हटणार
४७	सकाळ	१५/३/०८	जुन्नरमधील पिंपळगाव तर्फेला अंजीराला यशस्वी उत्पादन
४८	सकाळ	१३/४/०८	७००० क्विंटल शेतीमालाचा खप
४९	सकाळ	८/५/०८	सेंद्रीय पध्दतीने अंजीराचे उत्पादन
५०	सकाळ	१६/५/०८	अंजीर संशोधन केंद्र निम्रातक्षम जाती शोधणार
५१	सकाळ	२६/५/०८	तरच शेतकऱ्याला व ग्राहकाला परवडेल.
५२	सकाळ	९/११/०८	पुरंदरमधील अंजीर.... हेक्टरी सोळा टन उत्पादन शक्य.
५३	सकाळ	७/१/०९	दिनकर अंजीर (वैशिष्टये व महत्व)
५४	सकाळ	१९/१/०९	गुरोळीत, दिनकर ची लागवड
५५	सकाळ	२४/१/०९	खटया हंगामाकडे कल..... अंजीराला मिळतो आहे समाधानकारक भाव
५६	सकाळ	२४/१/०९	फळ प्रक्रियासाठी उदयोग कंपन्यांच हव्यात – पवार
५७	सकाळ	११/३/०९	अंजीराची गोडी
५८	सकाळ	२३/३/०९	ज्वारीप्रमाणेच अंजीर राखण्यासाठी पुरंदरला गोफणीचा वापर.
५९	सकाळ	२६/३/०९	अंजीराच्या राखणीचा गोफण.
६०	सकाळ	८/४/०९	अंजीराची निर्यात केव्हा?
६१	सकाळ	१४/४/०९	सुक्या अंजीरासाठी उपयुक्त जाती लावणार – डॉ. खैरे.
६२	सकाळ	२२/४/०९	अंजीरासाठी सेंद्रीय खतांचा वापर
६३	सकाळ	२९/४/०९	पुरंदरमध्ये अंजीर तोडणे हंगाम गुंडाळला.
६४	सकाळ	२७/१०/११	फळबागांनाही विम्याचे कवच.

APPENDIX 1
QUESTIONNAIRE FOR FIG PRODUCER FARMERS
अंजीर उत्पादकांसाठी प्रश्नावली

मी टिळक महाराष्ट्र विद्यापीठाच्या विद्यावाचस्पती (पीएच.डी.) पदवीअंतर्गत अभ्यासक्रमाचा एक भाग म्हणून माझ्या उपरोक्त विषयाच्या संशोधनासाठी माहिती संकलित करण्याचे काम करीत आहे. त्यामध्ये अंजीर फळबाग़ लागवड़ उत्पादन ख़र्च़ उत्पन्ऩ विक्री समस्या़ उपाययोजना याबाबत संशोधन करण्याचा मुख्य उद्देश आहे.

सदर प्रश्नावली भरून देऊन मला माझ्या संशोधन कार्यासाठी मदत करावी. ही सर्व माहिती संशोधनकार्या व्यतिरिक्त अन्य कारणासाठी वापरली जाणार नाही व दिलेली माहिती गोपनीय ठेवली जाईन याबाबत मी आपणास ख़ात्री देतो.

आपला विश्वासू

(प्रा. दिगंबर दुर्गाडे)

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१. **तुमचे नाव पत्ता आणि फोन सांगा** (कुटुंब प्रमुख शेतक-याचे)

.....

.....फोन न. .....

२. **तुमच्या कुटुंबातील सदस्य संख्या किती आहे?**

१. एक ते पाच २. सहा ते दहा ३. दहापेक्षा अधिक

३. **तुमच्या कुटूंबाचे स्वरूप कसे आहे?**

१. संयुक्त २. विभक्त

४. **तुमचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

५. **तुमच्या पत्नीचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

६. **तुमच्या मुलाचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

७. **तुमच्या मुलीचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

८. **तुमचा धर्म कोणता आहे?**

१. हिंदू २.मुस्लिम ३. शिख ४. ख्रिश्चन

५. बौद्ध / नवबौद्ध ६. जैन ७. धर्म नाही ८. इतर

९. **तुमची जात कोणती आहे?**

.....

१०. **तुमचा प्रमुख व्यवसाय कोणता आहे?**

१. शेती २. व्यापार ३. उद्योग ४. नोकरी

११. **तुमच्या शेतीचे एकूण क्षेत्र किती आहे?**

१. ० ते २.५ एकर २.२.५ ते ५ एकर ३. ५ ते १० एकर

४. १० ते १५ एकर ५. १५ ते २० एकर ६. २० एकरपेक्षा जास्त

१२. **कुटुंबाच्या उत्पन्नाचा मुख्य स्तोत्र कोणता?**

१. अंजीर शेती २. शेती अंजीरेतर ३. शेतीपूरक व्यवसाय

४.व्यापार ५. नोकरी ६. उद्योग ७. इतर

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१३. **तुमचे अंजीराच्या लागवडीखालील एकूण क्षेत्र किती?**

१. १ एकरपर्यंत २. १ ते २ एकर ३. २ ते ३ एकर

४. ३ ते ५ एकर ५.५ एकरपेक्षा जास्त

१४. **अंजीर लागवडीखालील एकूण क्षेत्र (वर्षनिहाय) ः**

	१	२	३	४	५
	१ एकरपर्यंत	१ ते २ एकर	२ ते ३एकर	३ ते ५ एकर	५ एकरपेक्षा जास्त
अ.२००६					
ब.२००७					
क.२००८					
ड. २००९					
इ. २०१०					

१५. **अंजीराचा दर एकरी उत्पादन खर्च रूपये** (लागवड़ चाळणी खते औषधे मजूरी पॅकींग़ विक्रीखर्च़ वाहतूक

अ. **प्रत्यक्ष खर्चाची रक्कम** **अंजीर**

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१६. **दर एकरी उत्पन्न रूपये** **अंजीर**

अ

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१७. **अंजीर फळबागांपासून पिकांपासून दर एकरी नफा (उत्पादन - उत्पादन खर्च = नफा)**

अ **अंजीर**

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१८. **कुटुंबाचे एकूण वार्षिक उत्पन्न रूपये**

१९. **शेती फळबाग सिंचनाच्या पद्धती ः**

१. पाटपाणी २. ठिबक सिंचन ३. तुषार सिंचन ४. इतर

२०. **शेतीला पाणीपुरवठयाचे स्तोत्र कोणते?**

	होय	**नाही**
अ. पाऊस	१	०
ब. विहीर	१	०
क. बोअरवेल	१	०
ड. शेततळे	१	०
इ. उपसा जलसिंचन योजना	१	०
फ. कॅनॉल	१	०
ग. नदी	१	०
च. इतर	१	०

२१. **अंजीराची विक्री कोठे होते?**

१. स्थानिक बाजारपेठ २. तालुका ३. जिल्हा
४. मुंबई ५. देशात ६. परदेशी निर्यात

२२. **अंजीर पिकांवर प्रक्रिया करता काय?**

१. होय २. नाही

अ. अंजीरावर प्रक्रिया करीत असल्यास कोणते उपपदार्थ बनवता?

	होय	नाही
१. सुकामेवा	१	०
२. चॉकलेट	१	०
३. ज्यूस	१	०
४. पल्प	१	०
५. पावडर	१	०
६. आइसक्रीम	१	०
७. जाम व जेली	१	०
८. इतर	१	०

२३. अंजीर उत्पादनामुळे आपण गेल्या पाच वर्षात इतर कोणते शेतीपूरक व इतर व्यवसाय सुरू केले?

	होय	नाही
१. दुग्धव्यवसाय	१	०
२. कुक्कुटपालन	१	०
३. मत्स्यशेती	१	०
४. मेंढीपालन	१	०
५. शेळीपालन	१	०
६. अंजीराचा व्यापार	१	०
७. अंजीर रोपवाटिका पन्हेरी विक्री	१	०
८. व्यापार	१	०
९. उद्योग	१	०
१०. कृषी पर्यटन	१	०
११. इतर	१	०

२५. अंजीर उत्पादनाची प्रेरणा कोणाकडून मिळाली?

१. शेजारील शेतकरी २. नातेवाईक ३. मित्र ४. वर्तमानपत्रे

५. कृषी अधिकारी ६. चर्चासत्रे ७. कार्यशाळा प्रशिक्षण ८. इतर .....

२६. अंजीर उत्पादनामुळे आपले कुटुंब सुखी झाले आहे असे आपणास वाटते काय?

१. नाही २. अल्पसमाधानी ३. समाधानी ४. सर्वोच्च पूर्ण समाधान

२७. अंजीर उत्पादनाचा इतर शेती व्यवसायावर कोणता परिणाम झाला?

	होय	नाही
अ. पडीक जमीन लागवडीखाली आणली	१	०
ब. सिंचनाच्या सोयी (ठिबक सिंचन तुषार सिंचन पाईपलाईन इ.)	१	०
क. इतर फळबागांची लागवड	१	०
ड. कृषी पर्यटन व्यवसायास चालना	१	०
इ. इतर पीक उत्पादनास रोजगार अपुरा पडतो	१	०
फ. इतर पिकांना पाणी तुटवडा	१	०
च. इतर पिकांना भांडवल कमी पडते	१	०

२८. अंजीर शेतीमुळे इतर किती लोकांना रोजगार मिळतो.

अ. हंगामी ...

१. १ ते २ मजूर २. ३ ते ५ मजूर ३. ५ ते १० मजूर ४. १० पेक्षा अधिक

ब. वर्षभर...

१. १ ते २ मजूर २. ३ ते ५ मजूर ३. ५ ते १० मजूर ४. १० पेक्षा अधिक

२९. कुटुंबाचा दरमहिना उपभोग खर्च | | | | | |

३०. अंजीर उत्पादन करणेसाठी इतरांना प्रोत्साहन देता काय?

१. होय २. नाही

३१. शेतीसाठी कोणती अवजारे वापरता? (स्वतःची)

	होय	नाही
अ. बैलगाडी	१	०
ब. ट्रॅक्टर	१	०
क. जीप	१	०
ड. टेम्पो	१	०
इ. ट्रक	१	०
घ. जे.सी.बी.	१	०
फ. औषध फवारणी पेट्रोल पंप	१	०
ह. इतर	१	०

३२. राहत्या घराचा प्रकार

	होय	नाही
अ. झोपडी	१	०
ब. कच्चे घर	१	०
क. अर्धेकच्चे अर्धे पक्के (भिंती कच्च्या छत क्रॉक्रीटचे)	१	०
ड. मिश्र घर (काही पक्क्या काही कच्च्या खोल्या)	१	०
इ. पक्के घर / बंगला	१	०
घ. फ्लॅट	१	०

३३. आपले बँकेत खाते आहे काय?

१. होय २. नाही

अ. बॅंकेमध्ये किती ठेवी आहेत?

१. १ ते १० हजार रूपये　　२. १०००१ ते २५००० रूपये
३.२५,००१ ते ५०००० रूपये　　४. ५०००१ ते १ लाख
५. १ लाखापेक्षा अधिक　　६. नाहीत

३४. आपण कर्ज घेतले आहे काय?

१. होय　　२. नाही

अ. कर्ज कोणत्या संस्थाकडून घेता?

१. सावकार　　२. पतसंस्था　　३. सहकारी बॅंका
४. राष्ट्रीयकृत बॅंका　　५. खाजगी बॅंका　　६. नातेवाईक मित्र
७. इतर

ब. आपण किती कर्ज घेतले आहे?

१. २५ हजारापर्यंत　　२. २५ ते ५० हजार
३. ५० हजार ते १ लाख　　४. १ लाखापेक्षा जास्त
५. नाही

क. कर्जाची परतफेड केली काय?

१. नाही　　२. वेळेवर कर्जफेड　　३. थकीत कर्ज　　४. संपूर्ण परतफेड केली

३५. मोठया आजारपणात आपण कोणत्या दवाखान्यात जाता?

१. नाही　　२. गावात　　३. प्राथमिक आरोग्य केंद्र
४. खाजगी दवाखाना　　५. सरकारी हॉस्पिटल　　६. मांत्रिक व घरगुती उपाय

३६. सहल पर्यटन किंवा तीर्थयात्रेला जाता काय?

१. नाही　　२. होय　　३. १ वेळा　　४. २ वेळा　　५. २ पेक्षा अधिक वेळा

३७. सहल पर्यटनासाठी कोठे जाता? (सहल पर्यटन तीर्थयात्रा)

१. परिसर　　२. तालुका　　३. जिल्हा
४. राज्य　　५. देश　　६. परदेशात

३८. तुमच्याकडे किंवा तुमच्या कुटुंबाकडे खालील गोष्टी आहेत काय?

	होय	नाही
अ. सायकल	१	०
ब. स्वयंपाकाचा गॅस	१	०
क. टेलिफोन / मोबाईल	१	०
ड. विजेचा पंखा	१	०
इ. टी.व्ही.	१	०
फ. संगणक /इंटरनेट	१	०
ग. स्कूटर / मोटारसायकल/ मोपेड	१	०
ग्. कार / जीप / व्हॅन	१	०
य. एअरकंडीशनर / एअरकुलर / फ्रिज	१	०
ज. ट्रॅक्टर	१	०
क. पंपसेट	१	०
ल. वृत्तपत्रे	१	०

३९. अंजीर उत्पादनामध्ये येणा-या प्रमुख समस्या कोणत्या?

	होय	नाही
अ. भांडवलाचा अभाव	१	०
ब. अंजीरावरील रोगाचे वाढते प्रमाण	१	०
क. बाजारभाव	१	०
ड. अज्ञान प्रशिक्षणाचा अभाव	१	०
इ. बाजारपेठेच्या अपु-या सोयी	१	०
फ. साठवणक्षमतेचा अभाव हरीतगृह	१	०
ग. पाण्याचा तुटवडा	१	०
म. मजूराचा तुटवडा	१	०
य. हवामान	१	०
क. मालाची निर्यात नाही (निर्यात योग्य)	१	०
म. प्रतवारी व प्रमाणीकरण	१	०
न. इतर समस्या	१	०

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४०. अंजीर उत्पादनामध्ये येणा-या समस्या सोडविण्याचे उपाययोजना

	होय	नाही
१.सिंचनाच्या सोयी	१	०
२.प्रशिक्षण	१	०
३.कमी व्याजदराने कर्ज़ भांडवलपुरवठा	१	०
४. सामुहिक शेती	१	०
५. अंजीर उत्पादक संघ	१	०
६. प्रक्रिया करणाया उद्योगाची निर्मिती (मूल्यवर्धित प्रक्रिया)	१	०
७. वाहतूकीच्या सोयी	१	०
८. सरकारी अनुदान	१	०
९. यांत्रिकीकरण	१	०
१०. योग्य बाजारभाव	१	०
११. कमी साखरेच्या व टिकाऊ अंजीराच्या जातींचे संशोधन इ.	१	०
१२. अभ्यासदौरे	१	०
१३. इतर उपाययोजना	१	०

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धन्यवाद.

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APPENDIX 2
QUESTIONNAIRE FOR NON FIG PRODUCER FARMERS
बिगर अंजीर उत्पादकांसाठी प्रश्नावली

मी टिळक महाराष्ट्र विद्यापीठाच्या विद्यावाचस्पती (पीएच.डी.) पदवीअंतर्गत अभ्यासक्रमाचा एक भाग म्हणून माझ्या उपरोक्त विषयाच्या संशोधनासाठी माहिती संकलित करण्याचे काम करीत आहे. त्यामध्ये अंजीर फळबाग़ लागवड़ उत्पादन ख़र्च़ उत्पन्ऩ विक्री समस्या़ उपाययोजना याबाबत संशोधन करण्याचा मुख्य उद्देश आहे.

सदर प्रश्नावली भरून देऊन मला माझ्या संशोधन कार्यासाठी मदत करावी. ही सर्व माहिती संशोधनकार्या व्यतिरिक्त अन्य कारणासाठी वापरली जाणार नाही व दिलेली माहिती गोपनीय ठेवली जाईन याबाबत मी आपणास ख़ात्री देतो.

आपला विश्वासू

(प्रा. दिगंबर दुर्गाडे)

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१. **तुमचे नाव पत्ता आणि फोन सांगा** (कुटुंब प्रमुख शेतक-याचे)

.....

.....फोन न. .....

२. **तुमच्या कुटुंबातील सदस्य संख्या किती आहे?**

१. एक ते पाच २. सहा ते दहा ३. दहापेक्षा अधिक

३. **तुमच्या कुटूंबाचे स्वरूप कसे आहे?**

१. संयुक्त २. विभक्त

४. **तुमचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

५. **तुमच्या पत्नीचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

६. **तुमच्या मुलाचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

७. **तुमच्या मुलीचे शिक्षण किती झाले आहे?**

१. निरक्षर २. १ ली ते ८ वी ३. ८वी ते १० वी ४. १० ते १२ वी

५. पदवी ६. पदव्युत्तर ७. व्यावसायिक ८. इतर

८. तुमचा धर्म कोणता आहे?

१. हिंदू २.मुस्लिम ३. शिख ४. ख्रिश्चन

५. बौद्ध / नवबौद्ध ६. जैन ७. धर्म नाही ८. इतर

९. तुमची जात कोणती आहे?

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१०. तुमचा प्रमुख व्यवसाय कोणता आहे?

१. शेती २. व्यापार ३. उद्योग ४. नोकरी

११. तुमच्या शेतीचे एकूण क्षेत्र किती आहे?

१. ० ते २.५ एकर २.२.५ ते ५ एकर ३. ५ ते १० एकर

४. १० ते १५ एकर ५. १५ ते २० एकर ६. २० एकरपेक्षा जास्त

१२. कुटुंबाच्या उत्पन्नाचा मुख्य स्तोत्र कोणता?

१. अंजीर शेती २. शेती अंजीरेतर ३. शेतीपूरक व्यवसाय

४.व्यापार ५. नोकरी ६. उद्योग ७. इतर

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१३. तुमचे बिगर अंजीराच्या लागवडीखालील एकूण क्षेत्र किती?

१. १ एकरपर्यंत २. १ ते २ एकर ३. २ ते ३ एकर

४. ३ ते ५ एकर ५.५ एकरपेक्षा जास्त

१४. बिगर अंजीर लागवडीखालील एकूण क्षेत्र (वर्षनिहाय) ः

	१	२	३	४	५
	१ एकरपर्यंत	१ ते २ एकर	२ ते ३एकर	३ ते ५ एकर	५ एकरपेक्षा जास्त
अ.२००६					
ब.२००७.					
क.२००८					
ड. २००९					
इ. २०१०					

१५. **बिगर अंजीराचा दर एकरी उत्पादन खर्च रूपये** (लागवड़ चाळणी खते औषधे मजूरी पॅकींग़ विक्रीखर्च़ वाहतूक)

प्रत्यक्ष खर्चाची रक्कम **१५. अ. अंजीरेतर**

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१६. **दर एकरी उत्पन्न रूपये** **१६. अ. अंजीरेतर**

१६ १६अ

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१७. **बिगर अंजीर फळबागांपासून पिकांपासून दर एकरी नफा** (उत्पादन - उत्पादन खर्च = नफा)

१७ १७अ **१७. अ. अंजीरेतर**

अ. २००६ रूपये

ब. २००७ रूपये

क. २००८ रूपये

ड. २००९ रूपये

इ. २०१० रूपये

१८. **कुटुंबाचे एकूण वार्षिक उत्पन्न रूपये**

१९. **शेती फळबाग सिंचनाच्या पद्धती ः**

१. पाटपाणी २. ठिबक सिंचन ३. तुषार सिंचन ४. इतर

२०. शेतीला पाणीपुरवठयाचे स्तोत्र कोणत्ते?

	होय	नाही
अ. पाऊस	१	०
ब. विहीर	१	०
क. बोअरवेल	१	०
ड. शेततळे	१	०
इ. उपसा जलसिंचन योजना	१	०
फ. कॅनॉल	१	०
ग. नदी	१	०
च. इतर	१	०

२१. बिगर अंजीराची विक्री कोठे होते?

१. स्थानिक बाजारपेठ २. तालुका ३. जिल्हा
४. मुंबई ५. देशात ६. परदेशी निर्यात

२२. बिगर अंजीर पिकांवर प्रक्रिया करता काय?

१. होय २. नाही

२२. अ. बिगर अंजीरावर प्रक्रिया करीत असल्यास कोणते उपपदार्थ बनवता?

	होय	नाही
४. सुकामेवा	१	०
५. चॉकलेट	१	०
६. ज्यूस	१	०
४.पल्प	१	०
५.पावडर	१	०
६. आइसक्रीम	१	०
७.जाम व जेली	१	०
८. इतर	१	०

२३. कुटुंबाचा दरमहिना उपभोग खर्च | | | | | |

२४. शेतीसाठी कोणती अवजारे वापरता? (स्वतःची)

	होय	नाही
अ.बैलगाडी	१	०
ब. ट्रॅक्टर	१	०
क. जीप	१	०
ड. टेम्पो	१	०
इ. ट्रक	१	०
घ. जे.सी.बी.	१	०
फ. औषध फवारणी पेट्रोल पंप	१	०
ह. इतर	१	०

२५. राहत्या घराचा प्रकार

	होय	नाही
अ. झोपडी	१	०
ब. कच्चे घर	१	०
क. अर्धेकच्चे अर्धे पक्के (भिंती कच्च्या छत क्रॉक्रीटचे)	१	०
ड. मिश्र घर (काही पक्क्या काही कच्च्या खोल्या)	१	०
इ. पक्के घर / बंगला	१	०
घ. फ्लॅट	१	०

२६. आपले बॅंकेत खाते आहे काय?

१. होय २. नाही

अ. बॅंकेमध्ये किती ठेवी आहेत?

१. १ ते १० हजार रूपये २. १०००१ ते २५००० रूपये
३. २५,००१ ते ५०००० रूपये ४. ५०००१ ते १ लाख
५. १ लाखापेक्षा अधिक ६. नाहीत

२७. आपण कर्ज घेतले आहे काय?

१. होय २. नाही

अ. कर्ज कोणत्या संस्थाकडून घेता?

१. सावकार २. पतसंस्था ३. सहकारी बॅंका
४. राष्ट्रीयकृत बॅंका ५. खाजगी बॅंका ६. नातेवाईक मित्र
७. इतर

ब. आपण किती कर्ज घेतले आहे?

२. २५ हजारापर्यंत २. २५ ते ५० हजार

३. ५० हजार ते १ लाख ४. १ लाखापेक्षा जास्त
५. नाही

क. कर्जाची परतफेड केली काय?

१. नाही २. वेळेवर कर्जफेड ३. थकीत कर्ज ४. संपूर्ण परतफेड केली

२८. मोठया आजारपणात आपण कोणत्या दवाखान्यात जाता?

१. नाही २. गावात ३. प्राथमिक आरोग्य केंद्र
४. खाजगी दवाखाना ५. सरकारी हॉस्पिटल ६. मांत्रिक व घरगुती उपाय

२९. सहल पर्यटन किंवा तीर्थयात्रेला जाता काय?

१. नाही २. होय ३. १ वेळा ४. २ वेळा ५. २ पेक्षा अधिक वेळा

३०. सहल पर्यटनासाठी कोठे जाता? (सहल पर्यटन तीर्थयात्रा)

१. परिसर २. तालुका ३. जिल्हा
४. राज्य ५. देश ६. परदेशात

३१. तुमच्याकडे किंवा तुमच्या कुटुंबाकडे खालील गोष्टी आहेत काय?

	होय	नाही
अ.सायकल	१	०
ब.स्वयंपाकाचा गॅस	१	०
ल. टेलिफोन / मोबाईल	१	०
श. विजेचा पंखा	१	०
इ. टी.व्ही.	१	०
ह. संगणक /इंटरनेट	१	०
ग. स्कूटर / मोटारसायकल/ मोपेड	१	०
ि. कार / जीप / व्हॅन	१	०
य. एअरकंडीशनर / एअरकुलर / फ्रिज	१	०
ज. ट्रॅक्टर	१	०
क. पंपसेट	१	०
ल. वृत्तपत्रे	१	०

धन्यवाद.

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APPENDIX 3
LIST OF FIG PRODUCER VILLAGES IN PURANDAR TALUKA

Sr. No.	Name of the village	Area
1	Sonori	81.50
2	Pimple	29.00
3	Walhe	27.00
4	Supe Khurda	25.00
5	Kalewadi	24.80
6	Shivari	22.00
7	Jadhavwadi	20.55
8	Dive-2	16.65
9	Garholi	14.33
10	Dive -1	14.33
11	Zendewadi	13.95
12	Borhalawadi	12.00
13	Singapur	11.15
14	Waghapur	6.30
15	Somurdi	5.40
16	Bhivari	4.00
17	Lapatalwadi	2.40
18	Devadi	2.15
19	Garade	2.00
20	KJodit Budruk	2.00
21	Vanapuri	1.60
22	Pingori	1.50
23	Rakh	1.40
24	Nawali	1.20
25	Thoaptewadi	1.20
26	Walunja	1.10
27	Mandaki	1.00
28	Gulunche	1.00
29	Pimpare Khurda	1.00
30	Saswad	1.00

31	Kodit Khurda	1.00
32	Rajuri	1.00
33	Paragaon	1.00
34	Udachiwadi	0.90
35	Khalad	0.90
36	Bhivadi	0.870
37	Naygaon	0.80
38	Rajewadi	0.80
39	Pisarve	0.75
40	Pokhar	0.60
41	Sakurde	0.50
42	Jawalarjun	0.40
43	Karnalwadi	0.40
44	Jeur	0.40
45	Aambale	0.40
46	Vir	0.20
47	Nazare K. P.	0.20
48	Bhosalewadi	0.20
49	Khanwadi	0.20
50	Takrarwadi	0.15

APPENDIX 4
LIST OF FIG PRODUCERS IN PURANDAR TALUKA

Sr. No.	Name of the Producers	Village
1	Vilas Genaba Poman	Pimple
2	Subhash Baban Poman	Pimple
3	Gulab Baban Poman	Pimple
4	Shivaji Bhiku Poman	Pimple
5	Anil Shantaram Poman	Pimple
6	Vitthal Dinkar Lolhe	Pimple
7	Dattatraya Sitaram Poman	Pimple
8	Laxman Mahadev Poman	Pimple
9	Bharat Govinda Shivarkar	Pimple
10	Ashok Mahadev Navale	Pimple
11	Sopan Kondiba Navale	Pimple
12	Dilip Tukaram Lolhe	Pimple
13	Baburao Sambhaji Poman	Pimple
14	Shantaram Ganpat Poman	Pimple
15	Vilas Dhondiba Poman	Pimple
16	Vasant Dnyanadev Poman	Pimple
17	Laxman Bhikoba Poman	Pimple
18	Mohan Ramchandra Walhekar	Pimple
19	Balasaheb Vitthal Poman	Pimple
20	Janardan Raghunath Poman	Pimple
21	Tukaram Ganpat Poman	Pimple
22	Kailas Ganpat Poman	Pimple
23	Vilas Genaba Poman	Pimple
24	Sudhakar Nivrutti Poman	Pimple
25	Gajanan Gokul Borkar	Sonori
26	Sandip Bandu Kale	Sonori
27	Shantaram Dagadu Aadarake	Sonori
28	Sukhadev Shankar Sonawane	Sonori
29	Pandurang Rajaram Pawar	Sonori
30	Pandharinath Damodar Kale	Sonori
31	Gokul Baban More	Sonori
32	Prakash Vitthal Kale	Sonori
33	Dagadeu Mahadu Kamathe	Sonori
34	Shivaji Khandu Kale	Sonori
35	Baban Govinda Kale	Sonori
36	Malhari Kalhuram Borkar	Sonori
37	Dnyanadev Martand Kale	Sonori

38	Chandrakant Ananta Kale	Sonori
39	Annaso Dasharath Kale	Sonori
40	Yashwant Rajaram Kale	Sonori
41	Sanjay Raghunath Kale	Sonori
42	Shantaram Pandit More	Sonori
43	Baban Shripati More	Sonori
44	Vaman Vitthal Kale	Sonori
45	Mohan Sahebrao Kale	Sonori
46	Dnyanadev Dagadu Kale	Sonori
47	Balaso Pandurang Kale	Sonori
48	Someshwar Balakrishna Kale	Sonori
49	Krishna Jyotiba Kamathe	Sonori
50	Subhas Shivaram Kale	Sonori
51	Shankar Pandit More	Sonori
52	Dnyanadev Tatyaba Kale	Sonori
53	Dattatraya Nana Kale	Sonori
54	Ramesh Rajaram Kale	Sonori
55	Vilas Tatyaba Kale	Sonori
56	Manoj Murlidhar Jagtap	Supe
57	Anil Baburao Phadatare	Supe
58	Vilas Tukaram Phadatare	Supe
59	Sudhakar Kashinath Raut	Supe
60	Vaman Tukaram Jagtap	Supe
61	Nilesh Gulab Pawar	Supe
62	Digambar Waghuji Bandal	Supe
63	Ashok Sudam Jagtap	Supe
64	Sandip Raghunath Katkar	Supe
65	Dilip Krishna Subhagade	Supe
66	Dilip Sitaram Chavan	Supe
67	Rajendra Kashinath Mhetre	Supe
68	Balasaheb Kashinath Mhetre	Supe
69	Anil Ananta Poman	Supe
70	Nitin Kaluram Phadatare	Supe
71	Subhash Martand Jagtap	Supe
72	Vilas Martand Jagtap	Supe
73	Somnath Eknath Mhetre	Supe
74	Ramesh Martand Jagtap	Supe
75	Pandurang Baban Mhetre	Supe
76	Balu Vithal Mhetre	Supe
77	Vasant Haribhau Mhetre	Supe

78	Eknath Shankar Jagtap	Supe
79	Bapu Sadhu Mhetre	Supe
80	Jaysingh Sadhu Mhetre	Supe
81	Ankush Bhivan Pawar	Supe
82	Sopan Sahebrao Shirke	Walhe
83	Anand Manohar Pawar	Walhe
84	Suryakant Anandarao Pawar	Walhe
85	Namdev Genu Pawar	Walhe
86	Tatyaba Nanaso Pawar	Walhe
87	Babai Dhondiba Date	Walhe
88	Dilip Maruti Pawar	Walhe
89	Shamrao Bhikoba Pawar	Walhe
90	Sudam Baburao Date	Walhe
91	Dattatraya Shankar Pawar	Walhe
92	Santosh Bolchanda Pawar	Walhe
93	Gulab Baburao Date	Walhe
94	Vishnu Bhiku Pawar	Walhe
95	Dnyanadev Pandharinath Pawar	Walhe
96	Sunil Baburao Kandhalkar	Walhe
97	Jaysing Ramchandra Date	Walhe
98	Maruti Gopinath Pawar	Walhe
99	Sainath Chandrakant Chavan	Walhe
100	Dattatraya Maruti Pawar	Walhe

APPENDIX NO. 5
LIST OF NON FIG PRODUCERS IN PURANDAR TALUKA

Sr. No.	Name of the Producers	Village
1	Ganesh Dhondiba More	Sonori
2	Alka Kisan Kale	Sonori
3	Vasant Nana Kale	Sonori
4	Bapu Sadhu Kale	Sonori
5	Kisan Baban More	Sonori
6	Abhijeet Shantaram More	Sonori
7	Kailas Gokul Kale	Sonori
8	Amol Dhondiba More	Sonori
9	Saheberao Namdev Kale	Sonori
10	Balaso Eknath Kale	Sonori
11	Sopan Raaso Kale	Sonori
12	Santosh Raghu Kale	Sonori
13	Sarjerao Shripati Kale	Sonori
14	Pandurang Vitthal Kale	Sonori
15	Sudam Dasharath Kale	Sonori
16	Ramchandra Shripati Kale	Sonori
17	Mhasku Bhairu Kale	Sonori
18	Baban Bhairu Kale	Sonori
19	Shankar Ranu Kale	Sonori
20	Dnyandev Mahadev Kale	Sonori
21	Satish Shantaram Katkar	Supe Khurd
22	Kundlik Sadashiv Jagtap	Supe Khurd
23	Kishor Sahebrao Raut	Supe Khurd
24	Narayan Shripati Aambole	Supe Khurd
25	Vishwas Baban Katkar	Supe Khurd
26	Machindra Murlidhar Jagtap	Supe Khurd
27	Ashok Khandu Pawar	Supe Khurd
28	Shankar Govind Jagtap	Supe Khurd
29	Eknath Krushna Kale	Supe Khurd
30	Balasaheb Sahebrao Pawar	Supe Khurd
31	Hanumant Dattoba Kshirsagar	Supe Khurd
32	Vijay Baban Mote	Supe Khurd

33	Lahu Ramdas Kunjir	Supe Khurd
34	Dyandev Khandu Pawar	Supe Khurd
35	Pappu Maruti Raut	Supe Khurd
36	Suresh Baburao Jagtap	Supe Khurd
37	Anil Baban Jadhav	Supe Khurd
38	Jairam Shankar Jagtap	Supe Khurd
39	Raghunath Shankar Jagtap	Supe Khurd
40	Gulab Pandharinath Jagtap	Supe Khurd
41	Maruti Kashinath Mhetre	Supe Khurd
42	Mugut Bajirao Jagtap	Supe Khurd
43	Goturam Shrirang Jagtap	Supe Khurd
44	Ramdas Dasharath Jagtap	Supe Khurd
45	Shriramg Sopan Mhetre	Supe Khurd
46	Vikas Chanedrakant Jagtap	Supe Khurd
47	Mohan Kisan Jagtap.	Supe Khurd
48	Suresh Chandrakant Jagtap	Pimpale
49	Namdev Haribhau Poman	Pimple
50	Sampat Shivaji Poman	Pimple
51	Sahaji Chandrakant Poman	Pimple
52	Dnyaneshwar Sitaram Poman	Pimple
53	Sudam Vitthal Poman	Pimple
54	Uttam Aashru Khairnar	Pimple
55	Tulshiram Bhairu Poman	Pimple
56	Tanaji Parvati Poman	Pimple
57	Sampat Genba Poman	Pimple
58	Sumit Maruti Borade	Pimple
59	Suresh Sopanrao Saste	Somurdi
60	Chandrakant Raghoba Surve	Somurdi
61	Ankush Dashrath Durgade	Walhe
62	Santosh Nanaso Durgade	Walhe
63	Kamal Suresh Bhujbal	Walhe
64	Ramdas Sahebrao Shirke	Walhe
65	Sopanrao Sarjerao Pawar	Walhe
66	Sonaba Raghunath Durgade	Walhe
67	Tatyaba Raju Dargade	Walhe

68	Haridas Ramchandra Durgade	Walhe
69	Tukaram Sidu Pawar	Walhe
70	Shivaji Namdev Pawar	Walhe
71	Gorakh Gopichand Pawar.	Walhe
72	Balu Kashiram Pawar	Walhe
73	Jaywant Baburao Bhujbal	Walhe
74	Ramchandra Aaju Durgade	Walhe
75	Bhalchandra Sidram Durgade	Walhe
76	Subhash Balaso Durgade	Walhe
77	Tukaram Kondiram Durgade	Walhe
78	Popat Sahadu Durgade	Walhe
79	Laxman Baburao Bunage	Walhe
80	Sunil Sopanrao Pawar	Walhe
81	Laxman Baburao Pawar	Walhe
82	Dhondba Tukaram Kale	Walhe
83	Dhimrao Sidu Madane	Walhe
84	Shrirang Tukaram Durgade	Walhe
85	Haribhau Mahadu Durgade	Walhe
86	Popat Raghu Pawar	Walhe
87	Shantaram Bhikoba Pawar	Walhe
88	Satywan Nathsaheb Suryawanshi	Walhe
89	Kalyan Baburao Pawar	Walhe
90	Rekhatai Hanumant Pawar	Walhe
91	Nivrutti Krushna Pawar	Walhe
92	Gangaram Tukaram Durgade	Walhe
93	Pradip Vitthal Durgade	Walhe
94	Kundlik Dharmaji Durgade	Walhe
95	Dhananjay Ramchandra Pawar	Walhe
96	Dattatray Tukaram Pawar	Walhe
97	Bajrang Somaji Pawar	Walhe
98	Dattatray Babaji Chavan	Walhe
99	Ankush Dinkar Pawar	Walhe
100	Dattatray Aashru Poman	Walhe

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MAP NO. 2.3
SELECTED VILLAGES IN PURANDAR TALUKA

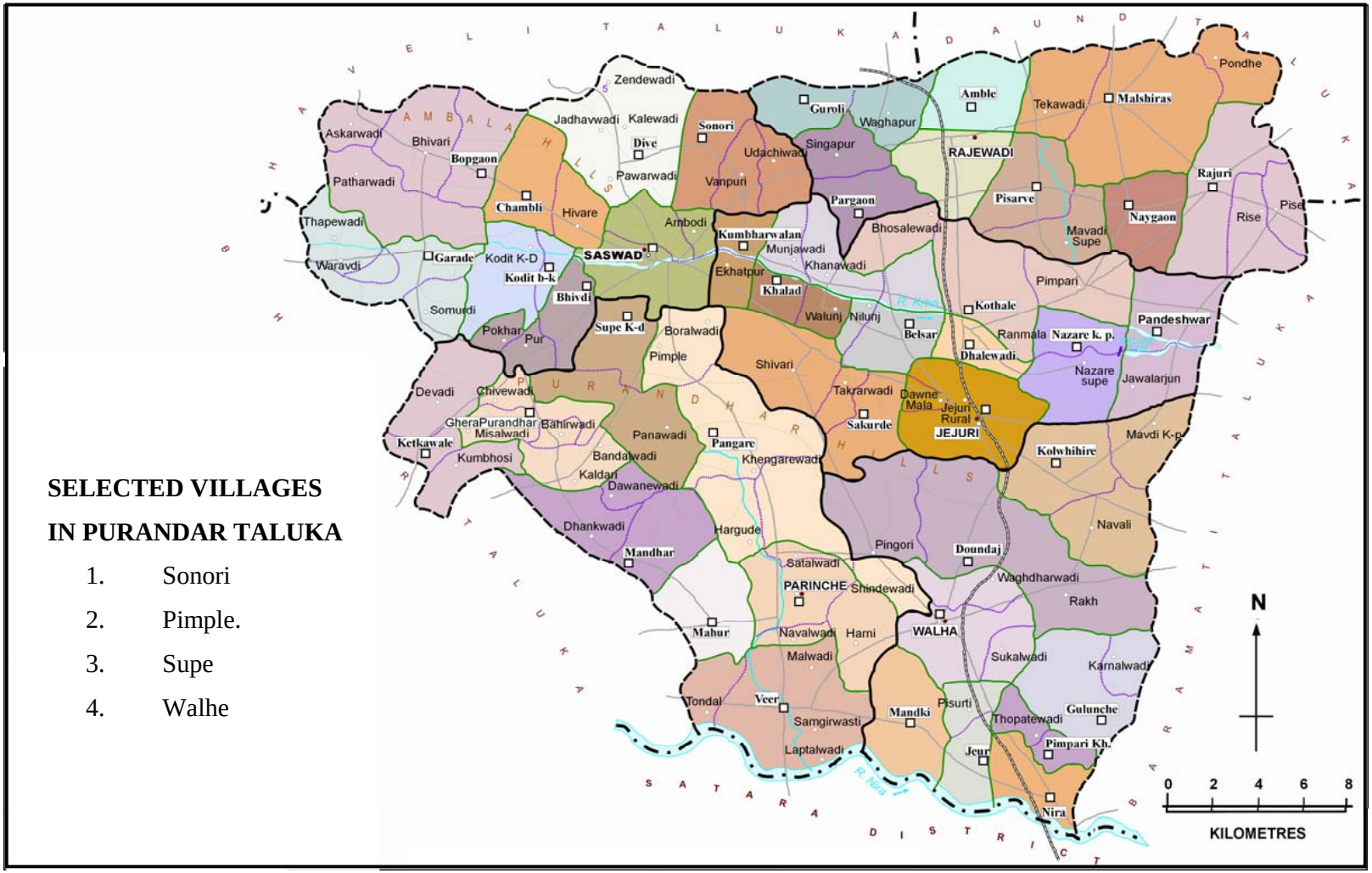

Photo No. 1.1

Trained / Pruned orchard of fig

Photo No. 2.1

Fully grown orchard of fig

Photo No. 3.1

Fig plant with fruits

Photo No. 4.1

Field visit of expert with farmers

Photo No. 5.1

Fig fruits before harvesting