

**COST OF PRODUCTION OF CITRUS FRUITS
IN HIMACHAL PRADESH
(Kinnow, Malta, Sangtra, Galgal and Lime)**

**A Study Sponsored by
Department of Horticulture, Himachal Pradesh**



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EXECUTIVE SUMMARY

Abstract *Fruits cultivation plays an important role in the economy of the state. Besides nutritional advantages, the production of fruit crops is the only vocation through which higher income can be generated. Earlier emphasis were laid to the production of apple and stone fruits in the state, but now equal emphasis is being given on citrus and other sub-tropical fruits suited to mid-hills and low-hill areas of Himachal Pradesh. The area under fruit crops has increased from 176206 hectares to 191668 hectares during 2002-03 to 2005-06 and out of which apple occupies 46.20 per cent followed by stone fruits (19.45%) and citrus (10.81%). Thus besides apple and stone fruits, citrus is of great importance to push up the per capita income and hence living standard of people of low-hill areas. Keeping in view the importance of citrus fruit state government started Market Intervention Scheme (MIS) so that citrus prices can be stabilized. With this back ground the present study on cost of production of citrus fruits has been conducted in Himachal Pradesh. The study reveals that the average per kg cost of production of Kinnow is Rs 3.62, Malta/Sangtra Rs 4.36, Galgal Rs2.84 and Kagzi Lime Rs 6.17. The bulk line cost of production of Kinnow, Malta/Sangtra, Galgal and Kagzi Lime is Rs3.60, Rs 4.32, 2.83 and Rs 6.14 per kg, respectively. The sampled orchardists reported the problem of insufficient irrigation, lack of transportation and non availability of suitable root stocks of Kinnow. High prices of fertilizers and insecticides/ pesticides increased the cost of production of citrus fruits.*

Objectives of the study

1. To work out the average cost of production of citrus crops for the year 2005-06.
2. To work out the bulk-line cost of production of various citrus crops for the year 2005-06.

Methodology

The study is based on the data collected from 360 orchardists located in Kangra, Sirmour and Mandi district of Himachal Pradesh. Multistage stratified random sampling technique was used in the selection of sample. The data was collected on well designed, pre-tested schedules through personal interview method. Reference period for the study is 2005-06.

Main findings of the study

Trend in area and production of various citrus fruits in H.P.

The area under Kinnow in the state is increasing at the rate of 1.62 per cent per annum during 2002-03 to 2005-06 whereas area under Malta, Kagzi lime and Galgal registered the growth of 3.41, 1.45 and 0.39 per cent respectively. Area under all citrus crops had the growth rate of 1.48 per cent during the same period.

As far as production scenario of citrus is concerned, Kinnow registered the record growth of 27.63 per cent while production of Malta, Kagzi lime, Galgal and other citrus increased at the rate of 9.10, 6.37, 20.51 and 14.54 per cent per annum, respectively during 2002-03 to 2005-06.

Initial cost of Plantation of Kinnow orchards

Digging of pits was the largest cost component of initial cost of Kinnow orchard plantation. It accounted for 27.89 per cent of total initial cost followed by planting material (15.26%), FYM (13.94%), layout/ clearing of land (12.20%) cost of plantation (8.28%) and insecticide/pesticides (4.14%) etc..

Maintenance cost of non-bearing Kinnow orchards

The per hectare cost of non-bearing orchard varies between Rs. 30882 to Rs. 33162 for various age groups. Returns from intercrops are recorded highest for marginal category orchardists getting Rs. 15770, 14938 and 14354 from 1st, 2nd and 3rd years of orchards respectively.

Maintenance cost of bearing Kinnow orchards

Highest per hectare maintenance cost is reported in case of medium category orchardists (maintenance cost ranges from Rs. 43275 to 45500 during 4th year to 21 & above age group orchards) followed by marginal category orchardists (maintenance cost ranges from Rs. 41965 to 44507 during 4th year to 21 & above age group orchards) and least is reported in case of semi-medium category orchardists (maintenance cost ranges from Rs. 41728 to 44142 during 4th year to 21 & above age group orchard).

Average and bulk line cost of production of Kinnow

Overall average cost of production of Kinnow during 2005-06 is found to be Rs. 3.62 per kg while bulk line cost is found to be slightly lower i.e. Rs. 3.60 per kg.

Initial cost of Malta/Sangtra orchards

Out of the total initial cost of Malta plantation, cost incurred on digging of pits is 28.11 per cent, laying/ clearing of land 12.29 per cent, cost of planting material 15.48 per cent cost of plantation 8.31 per cent, FYM 14.09 per cent, I&P 4.25 per cent and rest 17.47 per cent of initial cost is other cost components.

Maintenance cost of non-bearing Malta/Sangtra orchards

Per hectare expenditure on maintenance of sangtra orchard is maximum in case of marginal category orchardists (per hectare spending Rs. 31443, 31970 and 32466 in 1st, 2nd and 3rd year of orchard respectively) followed by small, semi-medium and medium categories of orchardists respectively.

Maintenance cost of bearing Malta/Sangtra orchards

Highest per hectare maintenance cost is reported in case of medium category orchardists ranges from Rs. 42917 to 45478 during 4th year to 21 & above age group of orchards followed by marginal, small and semi-medium categories of orchardists respectively.

Average and bulk line cost of production of Malta/Sangtra

The average cost of production of Malta/Sangtra during 2005-06 is found to be Rs. 4.36 per kg while bulk line cost of Malta is Rs. 4.32 per kg.

Initial cost of Galgal orchards

Out of the total initial cost of Galgal plantation, cost incurred on layout/clearing is 11.76 per cent, digging of pits 26.48 per cent, filling of pits 7.22 per cent, cost of plants 14.96 per cent, FYM 13.57 per cent, I & P 2.70 per cent and rest of 23.31 per cent cost involved in other cost components.

Maintenance cost of non-bearing Galgal orchards

Per hectare spending on non-bearing orchard of Galgal is reported maximum in case of small category orchardists (spending Rs. 29659, 30469 and 30952 in 1st, 2nd and 3rd year of orchard respectively) followed by marginal, semi-medium and medium categories of orchardists respectively.

Maintenance cost of bearing Galgal orchards.

Maximum per hectare maintenance cost are noticed in case of medium category orchardists ranges from Rs. 38541 to 40119 during 4th to 21 & above age group of orchards followed by marginal, small and semi-medium categories of orchardists respectively.

Average and bulk line cost of production of Galgal

The average cost of production of Galgal is Rs. 2.84 per kg while bulk line of Galgal is recorded slightly lower i.e. Rs. 2.83 per kg.

Initial cost of Kagzi lime orchards

Finding of study shows that out of the total initial cost of Kagzi lime plantation, cost incurred on digging of pits is 27.99 per cent, layout/ clearing of land 12.01 per cent, cost of planting material 14.92 per cent, cost of plantation 8.46 per cent, FYM 14.35 per cent, insecticide/ pesticides 4.26 per cent. Rest 18.02 per cent of total initial cost was on other cost components viz. filling of pits, plant support, fencing of plants and watering of plants etc.

Maintenance cost of non-bearing Kagzi lime orchards

Per hectare expenditure on maintenance of non-bearing orchards of Kagzi lime was higher in case of medium holding orchardists (spending Rs. 31353, 31922 and 32848 in 1st, 2nd and 3rd year of orchard respectively) followed by semi-medium small and marginal categories of orchardists respectively.

Maintenance cost of bearing Kagzi lime orchards

Per hectare maintenance cost is highest in case of medium holding orchardists ranges from Rs. 41269 to 43954 during 4th to 21& above age group of orchards followed by

marginal (maintenance cost ranges from Rs. 40891 to 43517 during 4th year to 21 & above age group of orchards) small and semi-medium categories of orchardists respectively.

Average and bulk line cost of production of Kagzi lime

Average production cost of Kagzi lime during 2005-06 is estimated to be Rs. 6.17 per kg while bulk line cost for the same season was recorded Rs. 6.14 per kg.

Major problems faced by orchardists

Major problems faced by the orchardists is low support price for citrus followed by payments are not made in time and high cost of fertilizer and insecticides materials. The other important problems are irrigation, transportation, high prices & shortage of packing material and poor quality of root stock etc.

Chapter – I

INTRODUCTION

The varied agro-climatic conditions of Himachal Pradesh are suitable for growing various fruit crops. With the effort of state department of horticulture, Himachal has become one of the leading states in India for the production of high quality temperate fruit particularly apple, while the popularity of stone and citrus fruit too has been increasing in lower and mid hill areas.

Fruit crops play an important role in the economy of the state. Cereal cultivation except for some areas, does not offer good potential to sustain well being of Himachal's people. Therefore, the best use of the land can only be made through cultivation of commercial field crop and horticultural crops. Besides nutritional advantages, the production of fruit crops is the only avocation through which higher income can be generated. It also helps in conserving soils and gives more employment opportunities as well.

Earlier emphasis was given to the production of apple and stone fruits only but now equal emphasis is on citrus and other fruits suited to lower and mid-hill areas. However, the production and marketing facilities for citrus growers are not up to desired level and major part of the produce has to be disposed off, many times, at prices below the remunerative level resulting in lower returns to orchardists. This is one of the most important disincentives.

1.1 Climate

Citrus tree cannot with stand cold and too hot climate. Temperature below 3°C is not conducive for growth and temperature above 40°C is also not conducive for production of high quality citrus crops*.

1.2 Soil

Deep, well-drained, loamy land fertile soil is considered to be the best. There should be no hard pan within 2 meters of the soil. The water table should be below 3 m. Citrus plants thrive best in soils having slightly acidic reaction with pH range of 5.0-6.5 (Ibid-2003).

1.3 Area suited for citrus cultivation in H.P.

Citrus is produced in all the districts except Kinnaur and Lahaul-Spiti but the main producing areas are Kangra, Mandi and Sirmour. The area under fruit has increased from 176206 hectares to 191668 hectares during 2002-03 to 2005-06, and out of which apple occupies 46.20 per cent followed by stone fruits (19.45%) and citrus (10.81%). Thus, besides apple and stone fruits, citrus is of great importance in the State economy and particularly to push up the per capita income and living standard of people of low-hill areas.

1.4 Growth in area and production of citrus in Himachal Pradesh

The area under fruit in Himachal Pradesh has been increasing at a very fast rate evidently due to its better returns potentiality as compared to other crops. However, in higher hills, emphasis is on production of apples whereas in lower hills it is on citrus fruits. Table 1.1 shows the growth rate trend of area under various citrus crops. Table reveals that during 2002-03 to 2005-06, the area under Kinnow in the state increased at

*Package of Practices for Fruit Crops, 2003, Dr Y.S.Parmar University of Horticulture and Forestry, Nauni, Solan, H.P.

the rate of 1.62 per cent whereas area under Malta, Kagzi lime and Galgal registered the growth rate of 3.41, 1.45 and 0.39 per cent per annum, respectively. Area under total citrus crops shows the growth of 1.48 per cent during the same period.

The production of citrus heavily depends upon the weather conditions, soil and age of the plants. Citrus is alternative – bearing crops, therefore, large fluctuation is registered in its production. Table 1.2 shows the growth rate trend of production under various citrus crops. Table reveals that during 2002-03 to 2005-06 the production of Kinnow shows record growth of 27.63 per cent while production of Malta, Kagzi lime, Galgal and other citrus are increasing at the rate of 9.10, 6.37, 20.51 and 14.54 per cent respectively. Overall production growth rate of citrus during 2002-03 to 2005-06 is noticed 19.85 per cent.

Table-1.1: Area under different citrus fruits in H.P.

(Hectare)

Year	Kinnow	Malta	Kagzi Lime	Galgal	Other Citrus	Total
2002-03	7633	873	8916	2308	54	19784
2003-04	7844	909	9132	2322	54	20261
2004-05	7906	932	9188	2322	54	20402
2005-06	8033	968	9336	2338	54	20729
CGR (%)	1.62	3.41	1.45	0.39	0.00	1.48

* Significant at 1 per cent level of probability.

Source: Directorate of Horticulture, H.P. Shimla.

Table-1.2: Production of various citrus fruits in H. P.

(MT)

Year	Kinnow	Malta	Kagzi Lime	Galgal	Other Citrus	Total
2002-03	8054	1218	5120	1540	95	16027
2003-04	14242	2844	4777	6130	128	28121
2004-05	13702	4391	5730	3832	899	28554
2005-06	18397	1409	5921	3354	78	29159
CGR (%)	27.63	9.10	6.37	20.51	14.54	19.85

*Significant at 1 per cent level of probability

Source: Directorate of Horticulture, H.P. Shimla

1.5 Need of Study

The Agro-Economic Research Centre (AERC), H.P. University, Shimla-171005, has conducted various studies for working out the cost of cultivation as well as cost of production of various fruits in Himachal Pradesh. This Centre has been supplying the data based on these studies to Department of Horticulture, Government of Himachal Pradesh as base for implementing/recommending the Market Intervention Scheme (MIS). This is further submitted to the government of Himachal Pradesh for finalizing the procurement price for citrus fruit. The state is handicapped in implementing the support price policy for horticultural crops because of non-availability of data generated through scientific studies and requisite support from the central government in this regard. Thus, present study is the need of the day to find out the cost of cultivation of citrus fruit on scientific lines so that procurement price under MIS becomes more realistic and may not harm the interest of poor orchardists in any manner. Keeping in view the above facts, the present study has been conducted with the following specific objectives.

1.6 Objectives

1. To work out the average cost of production of citrus fruits under Market Intervention Scheme (MIS) in Himachal Pradesh.
2. To work out the bulk line cost of production of citrus under Market Intervention Scheme (MIS) in Himachal Pradesh.

Chapter – II

METHODOLOGY OF THE STUDY

Citrus is produced in all the districts except Kinnaur and Lahaul-Spiti but the main growing areas are Kangra, Mandi and Sirmour. The Kangra district alone accounts for 43.67 percent of total area under citrus fruits followed by Mandi (20.78%) and Sirmour (7.92 %) respectively. Keeping in view the importance of these districts, Kangra, Mandi and Sirmour districts are selected for the present study.

2.1 Sampling Design

Multistage stratified random sampling technique was used in selection of sample. At the 1st stage three districts were selected purposely on the basis of having largest area under citrus fruits. Secondly, from each of the selected districts two administrative blocks were selected. In the 3rd stage two patwar circles in each selected block were chosen with the consideration that one of these is near to the road head and other away from it. From each patwar circle a cluster of two villages was selected in order to take into consideration the micro level variations. Finally, thirty orchardists with probability proportion of their actual number were randomly selected. Thus, the survey of the citrus fruits is based on 360 orchardists located in twelve village clusters, twelve patwar circles, six administrative blocks and three districts.

The data from selected orchardists was collected on well designed pre-tested schedules through personal interview method.

Table-2.1: Sample of orchardists in districts selected for the study

(Numbers)

District	Blocks	Village	Farm Size					Overall
			Margin al	Small	Semi- Medium	Medium	Large	
Kangra	Nurpur	Basa	10	12	6	2	-	30
		Bajeera						
		Sukhar	18	8	4	-	-	30
	Indora	Indpur	11	13	5	1	-	30
		Bhoop	16	10	4	-	-	30
Total	2	4	55	43	19	3	-	120
Sirmour	Nahan	Rakhani	21	7	2	-	-	30
		Nalka	12	13	5	-	-	30
	Poanta Sahib	Dohlakaun	10	14	6	-	-	30
		Kodewala	16	11	3	-	-	30
	Total	2	4	59	45	16	-	-
Mandi	Balah	Reur	18	9	3	-	-	30
		Sapru	24	4	2	-	-	30
	Gohar	Chailchock	13	13	4	-	-	30
		Gohar	12	13	5	-	-	30
	Total	2	4	67	39	14	-	-
G. Total	6	12	181	127	49	3	-	360

2.2 Orchard classification

The sampled orchardists of Kangra, Mandi and Sirmour districts were classified into standard farm size groups i.e. marginal (less than 1 hectare), small (1-2 hectares) semi medium (2-4 hectare), medium (4-10 hectare), and large (above 10 hectares) as shown in table 2.1.

The age of citrus plant is a crucial factor to determine the costs of orchard. Therefore, the study was further classified into seven groups according to the age of the orchard. Citrus plants generally start bearing at the age of four years and up to that stage farmer generally takes field crops alongwith citrus plants. Thus, during the first three years, there is investment on the upbringing of the citrus orchard with no returns from it, but intercrops grown in orchards do give some income to orchardists. Citrus plants generally start bearing fruits at the age of four years and the bearing plants were categorized into various age groups i.e. 4-5 years, 8-10 years, 11-12 years, 13-15 years and 16-20 years. The non-bearing plants were classified into three groups viz. 1 year, 2 years and 3 years. The rationale of this categorization of citrus orchards is that the cost of cultivation and returns vary from orchard to orchard depending on the age of the trees in the orchard. The productivity of citrus plants generally shows increasing trend up to the age of 13 years where it gets somewhat stabilized and continues so for next 8 years. Thereafter, the productivity generally starts decreasing.

2.3 Reference year

The reference year of the study is crop year 2005-06.

2.4 Cost concepts used

The standard cost concepts have been used in the study in order to work out the cost of cultivation of crops. The details of which are given below:

Cost A₁	<ol style="list-style-type: none"> 1. Value of hired human labour 2. Value of hired bullock labour 3. Value of owned bullock labour 4. Hired machinery charges 5. Value of owned machine labour 6. Value of seed plants (both farm produced and purchased) 7. Value of insecticides and pesticides. 8. Value of manure (owned and purchased) 9. Value of fertilizer 10. Depreciation of implements and farm buildings 11. Irrigation charges 12. Land revenue, cesses and other taxes. 13. Interest on working capital 14. Miscellaneous expenses
Cost A₂	Cost A ₁ +Rent paid for leased in land
Cost B	Cost A ₂ +Imputed rental value of owned land (net of land revenue and interest on owned fixed capital excluding land)
Cost C	Cost B+Imputed value of family labour

Prorated Establishment Cost

Prorated establishment cost was computed by using the following formula

$$PC = P \cdot i / 1 - (1+i)^{-n}$$

Where

- PC = Prorated Establishment Cost (Rs/ha)
- P = Initial Capital Investment (Rs/Ha)
- i = Rate of interest (10%)
- n = Life span of citrus plant (30 years)

Bulk Line Cost

This cost is also estimated same as average cost of orchard. But, only the cost incurred by 85-per cent of the orchardists are taken into account. For this all the orchardists are arranged in ascending order in terms of cost incurred by them and thereafter 15 per cent of orchardists whose cost of production is higher than the other 85 per cent of orchardists were excluded.

2.5 Assumptions made in the study

- a. The plant have an expected 30 years life, 3 years of establishment and 27 years of production
- b. Cost for the year 2005 was used for the equipments, machinery, building (storage) and the depreciation calculated by straight line method.
- c. The interest on working capital has been charged at the rate of 8 per cent per annum (loan up to Rs. 50000).
- d. In the non-bearing stage the interest of accumulated establishment cost in each year has been charged at 10 per cent per annum.
- e. The prorated establishment cost is charged at 10 per cent and amortized over 27 years.

Chapter - III

SOCIO-ECONOMIC PROFILE OF SAMPLE ORCHARDISTS

In this chapter, some economic features of sampled citrus orchardists of Kangra, Sirmour and Mandi districts have been discussed. Chapter also focuses on land use and cropping pattern of sampled orchardists of Himachal Pradesh.

3.1 General features of sample orchardists.

Socio-economic profile of sampled orchardists is presented in Table 3.1 and Annexures 1.1, 2.1. Table reveals that the average family size of Kangra district orchardists is 5.48 persons whereas it is reported 5.87 and 5.67 persons in case of Sirmour and Mandi district, respectively. The overall (sample) family size is noticed 5.67 persons per household (table 3.1). Table also presents the literacy rate and sex ratio of sample orchardists. The overall sex ratio is 961 female for 1000 male. Farm size-wise, overall sex ratio is highest among medium orchardists (1125) and lowest in case of marginal orchardists. District wise analysis of sex ratio revealed that it is higher in district Kangra (1009/1000) followed by Sirmour (939/1000) and lowest in district Mandi (937/1000).

3.2 Educational status of sampled orchardists

Education is an important indicator and a facilitating factor for achieving higher level of development. The literacy status of the selected orchardists is very high (Table 3.2), as 83.83 and 79.41 per cent for males and females, respectively. The orchardists of Kangra got comparatively better educational status (86.62% and 82.92% for male and female) than Mandi (84.54% and 81.14% for male and female) and Sirmour (78.06% and 74.85% for male and female) districts, respectively (Annex. 1.2 and 2.2).

3.3. Land holding size

Average land holding size of sampled orchardists is presented in Table 3.3. The Table reveals that average land holding in district Kangra is 1.61 hectares while it is 1.35 and 1.27 hectares in district Sirmour and Mandi, respectively. Overall average land holding size of sampled orchardists is 1.41 hectares.

3.4 Land use pattern of sampled orchardists

Land use pattern and cropping intensity of sampled orchardists is presented in Table 3.4. Table reveals that cropping intensity of the overall sample is 192 per cent in case when orchard is excluded and 132.36 per cent in case when orchard is included. It is observed highest in case of marginal farmers i.e. 192.71 and 138.98 per cent followed by semi-medium (192.07% and 125.30%), small (191.53% and 135.49%) and medium category orchardists (184.21% and 107.94%), respectively indicating most intensive cultivation on marginal farms.

3.5 Distribution of land under citrus crops

It is observed from the Table 3.5 that out of the total land holding, about 33.29 per cent of area is under citrus orchards. Table further reveals that area under citrus is higher under Kinnow fruit followed by Kagzi lime, Galgal and Malta, respectively.

3.6 Cropping pattern

Table 3.6 revealed that under sole crops (excluding orchard) maximum area is under wheat (67.37 hectares) followed by maize (34.34 hectare), tomato (21.38 hectares), paddy (19.21 hectare), chari (16.99 hectare) and ginger (8.30 hectare), respectively.

Under mixed cropping system, wheat + peas is the main crop occupying 33.90 hectares of cropped area followed by maize+mash (16.88 hectare), toria+lady finger (11.98) and arbi+ginger (11.35 hectare) respectively. While in non-bearing orchard, orchardists are

growing mainly crops of tomato (15.57 hectare), maize (7.87 hectares), toria (5.93 hectare), lady finger (4.48 hectare) and peas (3.75 hectare), respectively.

3.7 Location of Sampled Orchard

Location of orchard with respect to road head is the factor significantly influencing the transportation and other costs. The distance of orchards has been presented in Table 3.7. Table reveals that 60.25 per cent orchards of district Kangra are situated within 1 Km. of road head. In district Sirmour 32.20 per cent of orchards are located within this distance while in district Mandi 43.96 per cent orchards are reported in this range of <1 Km.

In district Kangra, 28.54 per cent orchards are located within 1-2 K.M. from the road head, while 19.90 and 36.46 per cent orchards of district Sirmour and Mandi fall in this range, respectively.

Table- 3.1: Socio-Economic Profile of Sampled orchardists in H.P.

(Numbers)

Category of orchardists	Male	Female	Total population	Family Size	Sex Ratio
Marginal (181)	526	502	1028	5.68	954
Small (127)	365	351	716	5.64	962
Semi-Medium (49)	142	138	280	5.71	972
Medium (3)	8	9	17	5.67	1125
Large	-	-	-	-	-
Total (360)	1041	1000	2041	5.67	961

Table-3.2: Educational Status of Sampled household in Himachal Pradesh

Category of orchardists	0-5 age groups		Illiterate		Primary		Middle		Matric		10+2		Graduate		Post-Graduate		Other professional		Literacy Rate (%)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Marginal	51	50	95	103	74	85	72	72	74	74	61	65	54	31	25	12	22	7	80.08	77.06
Small	27	26	52	62	52	54	54	57	54	56	62	62	36	22	16	7	13	5	86.97	80.92
Semi-medium	10	9	17	22	23	29	19	24	22	24	20	17	17	9	8	3	6	2	87.12	83.08
Medium	1	1	-	1	-	2	1	2	2	1	1	2	1	1	-	-	1	-	100.00	88.89
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	89	86	164	188	149	170	146	155	152	155	144	146	108	63	49	22	42	14	83.83	79.41

Table-3.3: Average land holding size of sampled orchardists**(Ha.)**

Category of Orchardists	Kangra	Sirmour	Mandi	Overall
Marginal	0.85	0.92	0.81	0.86
Small	1.72	1.36	1.44	1.51
Semi-medium	2.91	2.94	2.98	2.94
Medium	5.81	-	-	5.81
Large	-	-	-	-
Total	1.61	1.35	1.27	1.41

Table-3.4: Land use pattern of sampled orchardists**(Ha/Farm)**

Particulars	Marginal	Small	S. Medium	Medium	Large	Total
Sample Size	181	127	49	3	-	360
Orchards Area	0.38	0.70	1.78	4.87	-	0.72
Net Area Sown (Excluding orchard)	0.28	0.44	0.67	0.51	-	0.39
Net Area Sown (Including orchard)	0.66	1.14	2.43	5.37	-	1.11
Permanent Fallow	0.06	0.13	0.19	0.28	-	0.11
Ghasni	0.13	0.23	0.29	0.16	-	0.19
Current Fallow	0.02	0.04	0.05	0.08	-	0.03
Gross Cropped Area (Excluding orchard)	0.53	0.85	1.30	0.93	-	0.75
Gross Cropped Area (Including orchard)	0.91	1.55	3.07	5.80	-	1.47
Cropping intensity (Excluding orchard)	192.71	191.53	192.07	184.21	-	192.00
Cropping intensity (Including orchard)	138.98	135.49	125.30	107.94	-	132.36

Table-3.5: Distribution of land under different citrus crops.

(In hectares)

Farm Size	Total land holding	Area under citrus	Area under other crops/ orchard	Area under follow land ghasni	Distribution of area under different citrus crops							
					Kinnow (A)		Malta (B)		Kagzi Lime (C)		Galgal (D)	
					Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing
Marginal	155.19 (100.00)	48.33 (31.14)	70.80 (45.62)	36.06 (23.24)	3.56	16.05	0.60	2.32	2.76	10.64	3.28	9.12
Small	191.25 (100.00)	62.22 (32.53)	82.73 (43.26)	46.30 (24.21)	4.92	20.72	0.82	3.24	3.82	14.78	4.25	9.67
Semi-medium	144.08 (100.00)	45.75 (31.75)	74.48 (51.70)	23.85 (16.55)	2.74	15.48	0.40	2.18	2.48	11.02	2.52	5.83
Medium	17.44 (100.00)	12.80 (73.39)	3.32 (19.04)	1.32 (7.57)	0.84	7.12	0.04	0.48	0.40	3.28	-	0.64
Large	-	-	-	-	-	-	-	-	-	-	-	-
Total	507.96 (100.00)	169.10 (33.29)	231.33 (45.54)	107.53 (21.17)	12.06	59.37	1.86	8.22	9.46	39.72	10.05	25.26

Note: Figures in parentheses are the percentages.

Table-3.6: Cropping pattern of sampled household in Himachal Pradesh

(Hectare)

Farm Size	Sole Crops (Excluding orchard)								
	Maize	Paddy	Wheat	Tomato	Cauliflower	Toria	Chari	Arbi	Ginger
Marginal	11.23	5.38	25.63	7.75	0.92	1.04	5.79	2.20	3.40
Small	13.21	6.83	27.06	10.54	1.48	1.56	6.72	2.25	3.50
Semi-medium	9.62	6.32	13.88	3.09	1.20	1.24	4.20	0.70	1.40
Medium	0.28	0.68	0.80	-	-	0.20	0.28	-	-
Large	-	-	-	-	-	-	-	-	-
Total	34.34	19.21	67.37	21.38	3.60	4.04	16.99	5.15	8.30

Contd. 3.6 (Contd.): Cropping pattern of sampled household in H.P.

(Hectare)

Farm Size Category	Mixed Crops (Excluding Orchard)				
	Maize+Mash	Toria+Lady Finger	Wheat+Peas	Maize+Rajmash	Arbi+Ginger
Marginal	6.10	4.35	12.30	4.30	5.10
Small	6.22	4.53	13.70	4.25	5.00
Semi-medium	4.36	2.94	7.90	1.20	1.25
Medium	0.20	0.16	-	-	-
Large	-	-	-	-	-
Total	16.88	11.98	33.90	9.75	11.35

Contd. 3.6 (Contd): Cropping Pattern of Sampled Household in H.P.

(Hectare)

Farm Size Category	Inter crops (Including Orchard)						
	Maize	Toria	Tomato	Cauliflower	Lady Finger	Arbi	Peas
Marginal	2.46	1.76	4.79	0.45	1.40	0.60	1.40
Small	3.27	2.22	5.76	1.20	1.68	0.80	1.50
Semi-medium	1.82	1.47	4.10	0.25	1.00	0.55	0.85
Medium	0.32	0.48	0.92	-	0.40	-	-
Large	-	-	-	-	-	-	-
Total	7.87	5.93	15.57	1.90	4.48	1.95	3.75

Table-3.7 Distances of Sample Orchards from Road Head

(Percent)

Farm Size	Kangra					Sirmour				
	<1 Km	1-2 Km	2-3 Km	3 & above km.	Total	<1 Km	1-2 Km	2-3 Km	3 & above km.	Total
Marginal	60.41	28.37	7.12	4.10	100.00	30.58	35.73	20.45	13.24	100.00
Small	57.35	30.70	8.20	3.75	100.00	32.46	34.65	19.92	12.97	100.00
Semi-medium	63.50	25.75	6.25	4.50	100.00	34.20	36.70	18.30	10.80	100.00
Medium	66.67	33.33	-	-	100.0	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	--
Total	60.25	28.54	7.13	4.08	100.00	32.20	35.40	19.90	12.50	100.00

Table 3.7 contd....

(Percent)

Farm Size	Mandi					Himachal Pradesh				
	<1 Km	1-2 Km	2-3 Km	3 & above km.	Total	<1 Km	1-2 Km	2-3 Km	3 & above km.	Total
Marginal	45.20	36.58	13.91	4.31	100.00	45.42	33.38	13.85	7.35	100.00
Small	43.80	35.60	13.55	7.05	100.00	42.90	35.42	13.60	8.08	100.00
Semi-medium	40.70	38.20	12.85	8.25	100.00	46.20	34.25	12.15	7.40	100.00
Medium	-	-	-	-	-	66.67	33.33	-	-	-
Large	-	-	-	-	-	-	-	-	-	-
Total	43.96	36.46	13.80	5.78	100.00	45.30	34.02	13.04	7.64	100.00

ECONOMICS OF CITRUS CULTIVATION

In this chapter an attempt has been made to calculate the various costs incurred on establishment and maintenance of Kinnow, Malta/Sangtra, Kagzi Lime and Galgal (Citrus fruits) orchards by different categories of orchardists in Himachal Pradesh.

4.1 Economics of Kinnow Cultivation

4.1.1 Initial Cost of Kinnow Plantation

The details of various components involved in initial plantation of Kinnow orchard is presented in Table 4.1. Table reveals that average initial cost of citrus plantation was Rs.19833 per hectare. The initial cost was highest for marginal farmer followed by small, medium and semi-medium farmers. Out of the total initial cost of Kinnow plantation, cost incurred on digging of pits is 27.89 per cent, layout, clearing of land 12.20 per cent, cost of planting material 15.26 per cent, cost of plantation 8.28 per cent and insecticides/ pesticides 4.14 per cent of the value of total initial cost. Rest of the 18.29 per cent of the initial cost accounted for filling of pits, plant support, fencing of individual plants and watering of plants etc.

4.1.2 Maintenance Cost of Non-bearing Kinnow Orchard

The orchardists starts getting returns from the age of 4th years of the plant. Up to that stage they have to bear establishment and maintenance costs of orchards. To minimize this loss orchardists take intercrops from their orchards. The intercrops can be taken only up to 3 year and after that this practice may be harmful. The study also reveal that net returns from intercrops are inversely related to the size of orchards as well as the age group of orchard.

Table 4.2 reveals that per hectare spending of medium category farmers was highest for maintenance of orchard followed by small, semi-medium and marginal category orchardists respectively. Their cost varied between Rs. 30882 to Rs. 33162 per hectare for various age groups. Table further reveals that major component of annual maintenance cost of marginal orchardists for non-bearing orchards was rental value of owned land which was Rs.20900 per hectare and ranged from 67.68 per cent of total non-bearing cost during first year to 63.52 per cent during 3rd years of plantation. The value of labour increased with age of non-bearing ranges from 11.14 per cent to 11.84 percent during 1st to 3rd year plantation cost.. Value of fertilizer also had direct relation with age of orchard. While value of manure ranges from 5.09 to 5.36 per cent during 1st to 3rd year plantation cost, respectively. The total maintenance cost of other categories of orchardists i.e. small, semi-medium and medium also had similar trend of direct relationship. Returns from intercrops were highest for marginal category orchardists getting Rs. 15770, 14938 and 14354 from 1st, 2nd and 3rd years of orchards, respectively. The returns from inter crops had inverse relationship with age of orchard. As a result, during non-bearing stage the orchardists suffered losses which increased with age of orchard.

4.1.3 Maintenance Cost of Bearing Kinnow Orchards

Bearing sampled orchards have been classified into seven age groups. In the analysis, the initial cost of orchard has been spread over economic life of orchard. Table 4.3 to 4.6 shows the age-wise maintenance cost and production of Kinnow orchard for different farm sizes. It is also observed from the study that yield goes on increasing till the plant attains age of 13-15 years and after that production starts declining. In other hand per hectare maintenance cost of bearing Kinnow plantations shows the increasing trend with increasing age group of orchard. Highest per hectare maintenance cost is reported in case of medium category orchardists (maintenance cost ranges from Rs. 43275 during 4th year to 45500 for 21 & above age group of orchard) followed by marginal category orchardists (maintenance cost ranges from Rs. 41965 during 4th year to 44507 during 21 & above age group of orchard) and least is reported in case of semi-

medium category orchardists (maintenance cost ranges Rs. 41728 during 4th year to Rs. 44142 during 21 year and above age group of orchard).

4.1.4 Cost of Production of Kinnow in H.P.

Cost of production of Kinnow in H.P. is presented in Table 4.7. The Table reveals that the cost of production of Kinnow is much lower in case of medium category orchardists (Rs. 3.11/ kg) followed by marginal category (Rs. 3.59/ kg) and highest is recorded for small category orchardists (Rs. 3.97 /kg.). Overall average cost of production of Kinnow during 2005-06 is found to be Rs. 3.62 per kg. The details of average cost of Kinnow production in the state have been presented in Table 4.8.

4.1.5 Bulk-Line Cost of Production of Kinnow

Bulk-Line cost of production of Kinnow is presented in Table 4.9. It is found to be slightly lower as compare to average cost of Kinnow i.e. Rs. 3.60 per kg. This is estimated lower because of higher per hectare yield of marginal orchardists.

4.2 Economics of Kagzi Lime Cultivation

4.2.1 Initial Cost of Kagzi Lime Plantation

The various cost components involved in initial plantation of Kagzi lime have been presented in Table 4.10. Table reveals that per hectare initial cost of Kagzi lime is maximum in case of marginal orchardists (Rs. 19184) and shows gradual declining trend with increasing size of holding. Table further indicates that out of the total initial cost of Kagzi-lime plantation, cost incurred on digging of pits is 27.99 per cent, layout/clearing of land 12.00 per cent, cost of planting material 14.92 per cent, cost of plantation 8.46 per cent, FYM 14.34 per cent, insecticide and pesticides 4.26 per cent and rest 18.02 per cent of initial cost is accounted for by other cost components viz. filling of pits, plant support, fencing of plants and watering of plants etc.

4.2.2 Maintenance Cost of non-bearing Kagzi-Lime Orchard

Maintenance cost and returns from non-bearing orchard of Kagzi Lime are presented in table 4.11. Table reveals that per hectare expenditure on maintenance of orchard of Kagzi Lime is maximum in case of medium holding orchardists (spending Rs. 31353, 31922 and 32848 in 1st, 2nd and 3rd year of orchard respectively) followed by semi-medium and same declining trend is noticed with declining land holding size of orchards.

4.2.3 Maintenance Cost of bearing Kagzi Lime

Maintenance cost of bearing Kagzi lime has been presented in table 4.12 to 4.15. Table reveals that per hectare maintenance cost of Kagzi lime increases with increasing age group of orchard. As far as productivity scenario is concern, it shows increasing trend up to the orchard age group of 13-15 and after that declining productivity trend is recorded.

Table also presents farm size-wise cost of bearing orchard. Results show that, per hectare maintenance cost is reported highest in case of medium holding orchardists (maintenance cost ranges from Rs. 41269 during 4th year to 43954 during 21 & above age group) followed by marginal (maintenance cost ranges from Rs. 40891 during 4th year orchard to 43517 during 21 & above age group), small (maintenance cost ranges from Rs. 40665 to Rs. 43110 during 4th to 21 & above age group of orchard) and semi-medium (maintenance cost range from Rs. 40516 to Rs. 42886 during 4th to 21 & above age group) categories of orchardists respectively.

4.2.4 Cost of production of Kagzi Lime in H.P.

Cost of production of Kagzi Lime is presented in Table 4.16. The study reveals that per kg cost of production of Kagzi lime was least in case of marginal category orchardists (i.e. Rs. 5.97/ kg) followed by medium (Rs. 5.99/ kg), small (Rs. 6.27/ kg) and semi-medium (Rs. 6.36/ kg) categories of orchardists respectively. Overall average

production cost of Kagzi Lime during 2005-06 is estimated to be Rs. 6.17 per kg. The detailed analysis of cost of production has been presented in Table 4.17.

4.2.5 Bulk Line Cost of Production of Kagzi Lime

Bulk line cost of production of Kagzi lime are presented in table 4.18. Table reveals that slightly decline in value of cost components as compare to average cost, the bulk line cost was found to be Rs. 6.14 per kg.

4.3 Economics of Malta/ Sangtra Cultivation

4.3.1 Initial Cost of Malta/ Sangtra Plantation

Table 4.19 presents the details of cost component, involved in initial plantation of Malta/ Sangtra fruits. Table reveals that, out of the total initial cost of Malta/ Sangtra plantation, cost incurred on digging of pits is 28.11 per cent, layout/ clearing of land 12.29 per cent, cost of planting material 15.48 per cent, cost of plantation 8.31 per cent, FYM 14.09 per cent, insecticide & pesticides 4.25 per cent and rest 17.47 per cent of initial cost are accounted for by other cost components.

4.3.2 Maintenance Cost of Non-bearing Malta/Sangtra

Table 4.20 presents the cost and returns scenario of non-bearing orchard of Malta/Sangtra. Table reveals that per hectare expenditure on maintenance of Malta/ Sangtra orchard is maximum in case of marginal category orchardists (per hectare expenditure Rs. 31443, 31970, 32466 in 1st, 2nd and 3rd year of orchard respectively) followed by small, semi-medium and medium category orchardists respectively.

4.3.3 Maintenance Cost of Bearing Malta/ Sangtra Orchard

Maintenance cost of bearing Malta/ Sangtra orchards for different categories of orchardists have been presented in Table 4.21 to 4.24. Tables reveal that per hectare

maintenance cost of Malta/ Sangtra increases with increasing age group of orchard. Highest per hectare maintenance cost is reported in case of medium category orchardists (maintenance cost ranges from Rs. 42917 during 4th year to Rs. 45478 during 21st and above age group) followed by marginal, small and semi-medium category orchardists respectively.

4.3.4 Cost of production of Malta/Sangtra in H.P.

Overall cost of production of sangtra/Malta is presented in Table 4.25. The cost of production of Malta/ Sangtra is minimum in case of medium category orchardists. (Rs. 4.12/ kg) followed by marginal (Rs. 4.36/ kg), small (Rs. 4.38/ kg) and semi-medium (Rs. 4.42/ kg) categories of orchardists, respectively. This is due to highest productivity (11873 kg/ ha) of medium category orchardists as compare to marginal (11544 kg/ha), small (11438 kg/ha) and semi-medium (11176 kg/ha) category orchardists. The average cost of Malta/ Sangtra during 2005-06 is found to be Rs. 4.36 per kg. the details of which have been presented in Table 4.26.

4.3.5 Bulk Line Cost of Production of Malta/ Sangtra

Bulk Line cost of Malta/ Sangtra is presented in table 4.27. Table reveals that bulk-line cost is slightly lower (i.e. Rs. 4.32/ kg) as compared to average cost of Malta/ Sangtra production which is Rs. 4.36/ kg.

4.4 Economics of Galgal Cultivation

4.4.1 Initial Cost of Galgal Plantation

Initial cost of Galgal plantation for different categories of orchardists has been presented in Table 4.28. Table reveals that, out of the total initial cost on Galgal plantation cost incurred on layout/ clearing is 11.76 per cent, digging of pits 26.48 per cent, filling of pits 7.22 per cent, cost of plants 14.96 per cent, FYM 13.57 per cent and insecticides and

pesticides 2.70 per cent and rest of 23.31 per cent cost involved is on other cost components.

4.4.2 Maintenance Cost of Non-bearing Galgal

Table 4.29 shows the non-bearing maintenance cost of Galgal orchard. Table reveals that per hectare spending on non-bearing orchard of Galgal is maximum in case of small category orchardists (per hectare expenditure Rs. 29659, 30469 and 30952 in 1st, 2nd and 3rd year of orchard respectively) followed by marginal, semi-medium and medium category orchardists respectively.

4.4.3 Maintenance Cost of Bearing Galgal Orchard

Maintenance cost of bearing Galgal orchards has been presented in Table 4.30 to 4.33. Tables reveal that per hectare maintenance cost is higher in case of medium category orchardists (ranges from Rs. 38541 during 4th year to 40119 during 21st and above age group) followed by marginal, small and semi-medium categories orchardists respectively.

4.4.4 Cost of production of Galgal Orchard

The overall cost of production of Galgal is presented in Table 4.34. The Table reveals that average cost of Galgal production is minimum in case of marginal orchardists (Rs. 2.79/ kg) followed by semi-medium (Rs. 2.84/ kg), medium (Rs. 2.85/ kg) and small (2.88 kg) respectively. The average cost of Galgal presented in Table 4.35 is noticed Rs. 2.84/ kg. , table 4.35 provides details.

4.4.5 Bulk-Line Cost of Production of Galgal

Bulk-Line cost of production of Galgal is presented in Table 4.36. Table reveals that per kg bulk-line cost of Galgal is Rs. 2.83/ kg., which is slightly lower as compared to average per kg cost of Galgal.

Table- 4.1: Initial cost of Kinnow plantation in sampled orchardists in H.P.

(Rs. /hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Layout/ Clearing	2454 (12.19)	2429 (12.18)	2415 (14.18)	2376 (12.21)	-	2419 (12.20)
Digging of pits	5568 (27.66)	5542 (27.79)	5523 (32.43)	5491 (28.20)	-	5531 (27.89)
Filling of pits	1247 (6.19)	1235 (6.19)	1224 (7.19)	1260 (6.47)	-	1241 (6.26)
Cost of plants	3061 (15.21)	3039 (15.24)	3017 (17.71)	2985 (15.33)	-	3026 (15.26)
Cost of plantation	1648 (8.19)	1637 (8.21)	1658 (9.73)	1624 (8.34)	-	1642 (8.28)
Plant support	703 (3.49)	684 (3.43)	656 (3.85)	632 (3.25)	-	669 (3.37)
Fencing of Individual plants	283 (1.41)	276 (1.38)	271 (1.59)	262 (1.35)	-	273 (1.38)
FYM	2826 (14.04)	2801 (14.04)	2756 (16.18)	2673 (13.73)	-	2764 (13.94)
I&P	847 (4.21)	833 (4.18)	817 (4.79)	792 (4.07)	-	822 (4.14)
Watering	1235 (6.13)	1216 (6.09)	1201 (7.05)	1124 (5.77)	-	1194 (6.02)
Miscellaneous	259 (1.29)	253 (1.27)	248 (1.46)	246 (1.26)	-	252 (1.27)
Total	20131 (100.00)	19945 (100.00)	17030 (100.00)	19465 (100.00)	-	19833 (100.00)

Note: Figures in parenthesis are percentage to total.

Table-4.2: Maintenance cost and returns from non-bearing fruits of Kinnow plants in H.P.

(Rs./ hectare)

Cost Components	Marginal			Small			Semi Medium			Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	3441	3752	3895	3409	3699	3826	3400	3677	3807	3369	3573	3752
Value of Manure	1573	1681	1764	1520	1669	1757	1509	1653	1733	1503	1646	1713
Value of Fertilizer	1713	1830	1965	1711	1810	1951	1706	1801	1934	1696	1782	1910
Value of I&P	728	839	899	739	832	892	732	825	886	728	820	884
Land revenue & cess and Other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	507	526	539	503	521	533	497	514	527	490	512	523
Depreciation	228	228	228	224	224	224	219	219	219	221	221	221
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900	20900	20900	21500	21500	21500
Interest on fixed capital	528	528	528	534	534	534	539	539	539	539	539	539
Interest on accumulated establishment cost	1980	2062	2170	1963	2040	2148	1944	2018	2127	1952	2016	2108
Maintenance cost	30882	32358	32900	31515	32241	32777	31458	32158	32684	32010	32621	33162
Return from Inter crops	15770	14938	14354	14898	14016	13620	14349	13823	13434	12896	12583	12192
Net Returns	(-) 15112	(-) 17420	(-) 18546	(-) 16617	(-) 18225	(-) 19157	(-) 17109	(-) 18335	(-) 19250	(-) 19114	(-) 20038	(-) 20970

Table-4.3: Maintenance cost of bearing plants of Kinnow on sampled Marginal farmers in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2510	2692	2901	3091	3302	3422	3494
Manure	807	863	915	956	1018	1061	1101
Fertilizer	826	870	928	965	1021	1072	1106
Insecticide & Pesticides	742	796	835	883	943	1018	1079
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	794	865	914	1060	1117	1180	1221
Depreciation	3 89	468	499	514	554	571	609
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1081	1081	1081	1081	1081	1081	1081
Prorated establishment cost	13904	13904	13904	13904	13904	13904	13904
Sub-total	41965	42451	42889	43366	43852	44221	44507

Table-4.4: Maintenance cost of bearing plants of Kinnow on sampled Small Farmers in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2485	2658	2885	3054	3274	3400	3456
Manure	798	851	907	948	1005	1044	1071
Fertilizer	816	860	917	956	1008	1048	1080
Insecticide & Pesticides	725	781	823	871	934	1007	1062
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	773	852	900	936	1018	1125	1151
Depreciation	382	460	495	510	544	578	610
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1085	1085	1085	1085	1085	1085	1085
Prorated establishment cost	13895	13895	13895	13895	13895	13895	13895
Sub-total	41871	42354	42819	43167	43675	44094	44322

Table-4.5: Maintenance cost of bearing plants of Kinnow on sampled Semi-medium Farmers in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2465	2628	2845	3022	3246	3360	3434
Manure	785	830	894	929	981	1029	1051
Fertilizer	808	838	901	945	995	1033	1058
Insecticide & Pesticides	716	768	810	860	916	996	1045
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	762	837	878	922	987	1112	1139
Depreciation	373	453	480	512	538	565	596
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1087	1087	1087	1087	1087	1087	1087
Prorated establishment cost	13820	13820	13820	13820	13820	13820	13820
Sub-total	41728	42173	42627	43009	43482	43914	44142

Table 4.6: Maintenance cost of bearing plants of Kinnow on sampled Medium Farmers in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2341	2513	2767	2916	3168	3273	3312
Manure	740	782	860	894	941	989	1007
Fertilizer	792	798	851	905	963	992	1012
Insecticide & Pesticides	681	741	783	836	878	967	996
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	726	801	842	913	1009	996	984
Depreciation	352	434	448	502	518	554	546
Rental Value of Owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1103	1103	1103	1103	1103	1103	1103
Prorated establishment cost	14028	14028	14028	14028	14028	14028	14028
Sub-total	43275	43712	44194	44609	45120	45414	45500

Table- 4.7 Cost of cultivation of Kinnow on sampled farmers in H.P.

(Rs./hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Labour	3259	3030	3000	2899	-	3047
Value of Manner	960	946	928	887	-	930
Value of Fertilizer	970	956	940	902	-	942
Value of I&P	899	886	872	840	-	874
Land revenue, cesses and other taxes	13	13	13	12	-	13
Interest on working capital	1022	951	960	896	-	957
Depreciation	515	505	508	479	-	502
Rental value of own land	20900	20900	20900	22500	-	21300
Interest on fixed capital	1081	1085	1087	1103	-	1089
Prorated and establishment	13904	13895	13821	14028	-	13912
Sub Total A	43523	43167	43029	44546	-	43566
Harvesting and Assembling cost	7259	7040	6860	6763	-	6981
Total A+B	50782	50207	49889	51309	-	50547
Productivity kg/ha	14140	12655	12630	16498	-	13981
Cost incurred Rs/Kg	3.59	3.97	3.95	3.11	-	3.62

Table-4.8: Average per hectare cost of production of Kinnow in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost	-	-	-	13731
1. Labour Cost	-	-	-	3047
Preparation and Maintenance of basin	Man days	80	13	1040
B. Inter-culture	Man days	80	4	320
C. Pruning	Man days	107	7	749
D. FYM and Fertilizer Application	Man days	80	7	560
Plant Protection	Man days	94.5	4	378
2. Material Cost	-	-	-	2746
a. FYM	-	-	-	930
b. Fertilizer	-	-	-	942
c. Plant protection	-	-	-	874
3. Harvesting Cost	-	-	-	6981
a. Picking and assembly cost	-	-	-	6981
4. Interest on working capital	-	-	-	957
Total variable cost 1+2+3+4	-	-	-	13731
B. Fixed Cost	-	-	-	36816
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	502
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1089
5. Protected establishment cost	-	-	-	13912
Total fixed cost 1+2+3+4+5	-	-	-	36816
Total cost (A+B)	-	-	-	50547
Productivity Kg/hec.	-	-	-	13981
Cost of Production (Rs/Kg.)	-	-	-	3.62

Table 4.9: Per hectare Bulk Lime cost of Kinnow in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	2714
Preparation and Maintenance of basin	Man days	80	12	960
B. Inter-culture	Man days	80	3	240
C. Pruning	Man days	107	7	749
D. FYM and Fertilizer Application	Man days	80	6	480
Plant Protection	Man days	95	3	285
2. Material Cost	-	-	-	2720
a. FYM	-	-	-	920
b. Fertilizer	-	-	-	935
c. Plant protection	-	-	-	865
3. Harvesting Cost	-	-	-	6928
a. Picking and assembly cost	-	-	-	6928
4. Interest on working capital	-	-	-	946
Total variable cost 1+2+3+4	-	-	-	13308
B. Fixed Cost	-	-	-	36782
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	496
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1080
5. Protected establishment cost	-	-	-	13893
Total fixed cost 1+2+3+4+5	-	-	-	36782
Total cost (A+B)	-	-	-	50090
Productivity Kg/hect.	-	-	-	13902
Cost of Production (Rs/Kg.)	-	-	-	3.60

Table- 4.10: Initial cost of cultivation of Kagzi lime on sampled farms in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Layout/ Clearing	2320 (12.09)	2300 (12.07)	2270 (11.99)	2210 (11.87)	-	2275 (12.00)
Digging of pits	5367 (27.98)	5327 (12.95)	5301 (28.02)	5218 (28.02)	-	5303 (27.99)
Filling of pits	1212 (6.32)	1213 (6.36)	1205 (6.37)	1193 (6.40)	-	1206 (6.37)
Cost of plants	2847 (14.84)	2839 (14.89)	2827 (14.94)	2791 (14.99)	-	2826 (14.92)
Cost of plantation	1607 (8.38)	1615 (8.47)	1602 (8.47)	1586 (8.52)	-	1603 (8.46)
Plant support	641 (3.34)	630 (3.30)	621 (3.28)	614 (3.30)	-	626 (3.30)
Fencing of Individual plants	271 (1.41)	262 (1.37)	253 (1.34)	246 (1.32)	-	258 (1.36)
FYM	2744 (14.30)	2725 (14.30)	2713 (14.34)	2692 (14.46)	-	2718 (14.34)
I&P	809 (4.22)	809 (4.24)	810 (4.20)	803 (4.31)	-	808 (4.26)
Watering	1138 (5.93)	1118 (5.86)	1100 (5.81)	1056 (5.67)	-	1103 (5.82)
Miscellaneous	228 (1.19)	224 (1.18)	219 (1.16)	211 (1.13)	-	221 (1.17)
Total	19184 (100.00)	19062 (100.00)	18921 (100.00)	18620 (100.00)	-	18947 (100.00)

Note: Figures in parenthesis are percentage to total.

Table- 4.11: Maintenance cost and returns from non-bearing Kagzi lime plants in H.P.
(Rs./hectare)

Cost Components	Marginal			Small			Semi Medium			Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	3098	3245	3586	3095	3227	3569	3095	3221	3561	2862	2996	3561
Value of Manure	1464	1593	1670	1470	1596	1670	1469	1599	1668	1463	1582	1654
Value of Fertilizer	1593	1739	1840	1595	1735	1833	1594	1733	1835	1642	1746	1861
Value of I&P	708	780	845	709	779	842	711	778	843	712	781	868
Land revenue & Less and Other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	474	509	521	475	506	522	476	507	523	484	510	518
Depreciation	219	219	219	225	225	225	233	233	233	238	238	238
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900	20900	20900	21500	21500	21500
Interest on fixed capital	510	510	510	519	519	519	526	526	526	539	539	539
Interest on accumulated establishment cost	1895	2020	2097	1918	2026	2096	1927	2018	2093	1901	2018	2097
Maintenance cost	30873	31527	32200	30918	31525	32188	30943	31527	32194	31353	31922	32848
Return from Inter crops	16050	15391	14778	15838	15068	14500	15522	14662	14000	13996	13064	12592
Net Returns	(-) 14823	(-) 16136	(-) 17422	(-) 15080	(-) 16457	(-) 17688	(-) 15421	(-) 16865	(-) 18194	(-) 17357	(-) 18858	(-) 20256

Table- 4.12: Maintenance cost of bearing plants of Kagzi lime on sampled marginal farms in H.P.

(Rs./ hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2446	2607	2830	3010	3227	3403	3474
Manure	786	846	893	941	996	1029	1072
Fertilizer	804	847	907	948	1003	1037	1078
Insecticide & Pesticides	712	765	817	857	915	996	1055
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	720	845	893	1022	1091	1138	1190
Depreciation	360	446	478	499	535	543	585
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1018	1018	1018	1018	1018	1018	1018
Prorated establishment cost	13133	13133	13133	13133	13133	13133	13133
Sub-total	40891	41419	41881	42340	42830	43209	43517

Table- 4.13: Maintenance cost of bearing plants of Kagzi lime on sampled Small Farms in H.P.

(Rs./ hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2429	2595	2821	2986	3237	3368	3439
Manure	780	832	880	931	970	1010	1045
Fertilizer	797	834	892	938	974	1018	1052
Insecticide & Pesticides	706	743	784	816	862	907	950
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	714	836	885	999	1066	1115	1163
Depreciation	356	440	472	492	528	536	578
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1010	1010	1010	1010	1010	1010	1010
Prorated establishment cost	12961	12961	12961	12961	12961	12961	12961
Sub-total	40665	41163	41617	42045	42520	42837	43110

Table-4.14: Maintenance cost of bearing plants of Kagzi lime on sampled Semi-medium Farms in H.P.

(Rs./ hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2412	2579	2805	2958	3106	3274	3359
Manure	775	825	873	924	964	998	1039
Fertilizer	791	830	862	933	967	1007	1047
Insecticide & Pesticides	701	737	780	812	855	902	945
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	708	830	878	993	1056	1105	1150
Depreciation	352	434	467	475	522	539	569
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1002	1002	1002	1002	1002	1002	1002
Prorated establishment cost	12863	12863	12863	12863	12863	12863	12863
Sub-total	40516	41012	41442	41872	42247	42602	42886

Table-4.15: Maintenance cost of bearing plants of Kagzi lime on sampled Medium Farms in H.P.

(Rs./ hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2381	2618	2820	3014	3216	3442	3509
Manure	754	820	863	918	970	1013	1048
Fertilizer	782	818	885	923	972	1025	1058
Insecticide & Pesticides	700	746	796	840	906	975	1041
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	739	820	867	1002	1064	1123	1176
Depreciation	352	427	450	466	511	526	561
Rental Value of Owned land	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	1026	1026	1026	1026	1026	1026	1026
Prorated establishment cost	13023	13023	13023	13023	13023	13023	13023
Sub-total	41269	41810	42243	42724	43200	43665	43954

Table-4.16 Cost of cultivation of Kagzi lime in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Labour	2999	2979	2928	3000	-	2977
Value of Manner	938	921	914	912	-	921
Value of Fertilizer	946	929	923	923	-	930
Value of I&P	874	824	819	858	-	844
Land revenue, cesses and other taxes	13	13	13	12	-	13
Interest on working capital	986	968	960	970	-	971
Depreciation	494	487	481	470	-	483
Rental value of own land	20900	20900	20900	21500	-	21300
Interest on fixed capital	1017	1010	1002	1026	-	1014
Prorated and establishment	13133	12961	12863	13023	-	12995
Sub Total A	42300	41992	41803	42694	-	42448
Harvesting and Assembling cost	8078	7906	7791	8054	-	7957
Total A+B	50378	49898	49594	50748	-	50405
Productivity kg/ha	8438	7955	7792	8477	-	8166
Cost incurred Rs/Kg	5.97	6.27	6.36	5.99	-	6.17

Table-4.17: Average per hectare cost of Kagzi Lime in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	2977
Preparation and Maintenance of basin	Man days	80	13	1040
B. Inter-culture	Man days	80	5	400
C. Pruning	Man days	107	6	642
D. FYM and Fertilizer Application	Man days	85	7	595
Plant Protection	Man days	100	3	300
2. Material Cost	-	-	-	2695
a. FYM	-	-	-	921
b. Fertilizer	-	-	-	930
c. Plant protection	-	-	-	844
3. Harvesting Cost	-	-	-	7957
a. Picking and assembly cost	-	-	-	7957
4. Interest on working capital	-	-	-	971
Total variable cost 1+2+3+4	-	-	-	14600
B. Fixed Cost	-	-	-	35805
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	483
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1014
5. Protected establishment cost	-	-	-	12995
Total fixed cost 1+2+3+4+5	-	-	-	35805
Total cost (A+B)	-	-	-	50405
Productivity Kg/hect.	-	-	-	8166
Cost of Production (Rs/Kg.)	-	-	-	6.17

Table-4.18: Bulk Line hectare cost of cultivation of Kagzi lime in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	2478
Preparation and Maintenance of basin	Man days	80	12	920
B. Inter-culture	Man days	80	4	320
C. Pruning	Man days	107	4	428
D. FYM and Fertilizer Application	Man days	85	6	510
Plant Protection	Man days	100	3	300
2. Material Cost	-	-	-	2663
a. FYM	-	-	-	910
b. Fertilizer	-	-	-	918
c. Plant protection	-	-	-	835
3. Harvesting Cost	-	-	-	7920
a. Picking and assembly cost	-	-	-	7920
4. Interest on working capital	-	-	-	965
Total variable cost 1+2+3+4	-	-	-	14026
B. Fixed Cost	-	-	-	35774
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	475
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1006
5. Protected establishment cost	-	-	-	12980
Total fixed cost 1+2+3+4+5	-	-	-	35774
Total cost (A+B)	-	-	-	49800
Productivity Kg/hect.	-	-	-	8109
Cost of Production (Rs/Kg.)	-	-	-	6.14

Table-4.19: Initial cost of plantation of Malta/sangtra on sampled farms in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Layout/ Clearing	2425 (12.28)	2403 (12.31)	2385 (12.29)	2351 (12.30)	-	2391 (12.29)
Digging of pits	5533 (28.0)	5465 (27.99)	5461 (28.15)	5403 (28.27)	-	5466 (28.11)
Filling of pits	1221 (6.18)	1210 (6.20)	1198 (6.17)	1176 (6.15)	-	1201 (6.17)
Cost of plants	3049 (15.44)	3023 (15.48)	3004 (15.48)	2967 (15.53)	-	3011 (15.48)
Cost of plantation	1636 (8.28)	1617 (8.28)	1609 (8.29)	1612 (8.44)	-	1618 (8.32)
Plant support	694 (3.51)	683 (3.50)	669 (3.45)	662 (3.46)	-	677 (3.48)
Fencing of Individual plants	273 (1.38)	268 (1.37)	262 (1.35)	258 (1.35)	-	265 (1.36)
FYM	2784 (14.09)	2748 (14.07)	2726 (14.05)	2705 (14.15)	-	2741 (14.09)
I&P	839 (4.25)	830 (4.25)	823 (4.24)	814 (4.26)	-	827 (4.25)
Watering	1194 (6.04)	1178 (6.03)	1162 (5.99)	1162 (6.08)	-	1174 (6.04)
Miscellaneous	104 (0.53)	102 (0.52)	102 (0.53)	-	-	77 (0.39)
Total	19752 (100.00)	19527 (100.00)	19401 (100.00)	19110 (100.00)	-	19448 (100.00)

Note: Figures in parenthesis are percentage to total.

**Table-4.20 : Maintenance cost and returns from non-bearing orchards
of Malta/Sangtra in H.P.**

(Rs./ hectare)

Cost Components	Marginal			Small			Semi Medium			Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	3365	3562	3679	3342	3539	3651	3329	3522	3631	3362	3682	3792
Value of Manure	1574	1649	1774	1484	1631	1749	1478	1569	1743	1496	1605	1886
Value of Fertilizer	1624	1704	1827	1613	1696	1818	1606	1690	1809	1982	1792	1918
Value of I&P	720	800	839	712	794	833	706	731	827	718	880	715
Land revenue & Less and Other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	487	505	519	480	499	511	474	495	498	489	512	485
Depreciation	230	230	230	229	229	229	230	230	230	218	218	218
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900	20900	20900	21500	21500	21500
Interest on fixed capital	524	524	524	530	530	530	530	530	530	527	527	527
Interest on accumulated establishment cost	2007	2084	2162	1989	2066	2150	1978	2053	2076	1952	2036	1945
Sub-total (A)	31443	31970	32466	31291	31896	32383	31243	31732	32256	32256	32764	32998
Return from Inter crops	15552	14922	14506	15174	14509	14263	15017	14343	14078	13621	13462	13294
Net Returns	-15891	-17048	-17960	-16117	-17387	-18120	-16226	-17389	-18178	-18635	-19302	-19704

Table-4.21: Maintenance cost of bearing orchards of Malta/Sangtra on sampled marginal farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2492	2679	2885	3078	3279	3385	3468
Manure	799	854	903	948	1006	1051	1090
Fertilizer	816	863	918	957	1014	1064	1148
Insecticide & Pesticides	736	790	827	884	938	1009	1085
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	784	857	901	1046	1106	1172	1209
Depreciation	384	464	492	511	548	565	599
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1075	1075	1075	1075	1075	1075	1075
Prorated establishment cost	13875	13875	13875	13875	13875	13875	13875
Sub-total	41873	42369	42788	43286	43753	44108	44461

Table-4.22: Maintenance cost of bearing orchards of Malta/ Sangtra on sampled Small Farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2477	2661	2867	3056	3261	3371	3448
Manure	794	849	896	942	1000	1045	1081
Fertilizer	810	856	910	951	1005	1057	1092
Insecticide & Pesticides	732	783	820	870	933	1003	1068
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	777	850	894	1032	1102	1163	1204
Depreciation	380	458	487	505	541	559	591
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1062	1062	1062	1062	1062	1062	1062
Prorated establishment cost	13779	13779	13779	13779	13779	13779	13779
Sub-total	41723	42210	42627	43109	43595	43951	44237

Table 4.23: Maintenance cost of bearing orchards of Malta/ Sangra on sampled Semi-medium Farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2462	2644	2846	3036	3240	3345	3427
Manure	784	841	887	935	933	1039	1078
Fertilizer	804	897	905	944	1000	1047	1084
Insecticide & Pesticides	726	776	815	864	925	996	1060
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	769	841	888	1026	1095	1157	1197
Depreciation	375	453	479	496	536	553	585
Rental Value of Owned land	20900	20900	20900	20900	20900	20900	20900
Interest on fixed capital	1042	1042	1042	1042	1042	1042	1042
Prorated establishment cost	13324	13324	13324	13324	13324	13324	13324
Sub-total	41190	41730	42098	42579	43007	43415	43709

Table 4.24: Maintenance cost of bearing orchards of Malta/Sangtra on sampled Medium Farms in H.P.

(Rs./Hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2415	2643	2852	3039	3248	3372	3437
Manure	780	841	883	932	991	1032	1067
Fertilizer	805	847	910	944	998	1046	1078
Insecticide & Pesticides	728	770	814	861	926	995	1062
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	762	837	886	1016	1087	1142	1198
Depreciation	371	443	468	486	529	545	580
Rental Value of Owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1050	1050	1050	1050	1050	1050	1050
Prorated establishment cost	13494	13494	13494	13494	13494	13494	13494
Sub-total	42917	43437	43869	44334	44835	45188	45478

Table- 4.25: Cost of cultivation of Malta/Sangtra on sampled farms in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Labour	3038	3020	3000	3001	-	3015
Value of Manure	950	944	934	932	-	940
Value of Fertilizer	968	955	954	947	-	956
Value of I&P	894	886	880	889	-	887
Land revenue, cesses and other taxes	13	13	13	13	-	13
Interest on working capital	1010	1003	996	990	-	1000
Depreciation	509	503	497	489	-	499
Rental value of own land	20900	20900	20900	20500	-	21300
Interest on fixed capital	1075	1062	1042	1050	-	1057
Prorated and establishment	13875	13779	13324	13494	-	13618
Sub Total A	43232	43065	42540	42305	-	43285
Harvesting and Assembling cost	7116	6997	6880	6618	-	6903
Total A+B	50348	50062	49420	48923	-	50188
Productivity kg/ha	11544	11438	11176	11873	-	11508
Cost incurred Rs/Kg	4.36	4.38	4.42	4.12	-	4.36

Table-4.26: Average per hectare cost of production of Malta in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	3015
Preparation and Maintenance of basin	Man days	80	13	1040
B. Inter-culture	Man days	80	4	320
C. Pruning	Man days	105	7	735
D. FYM and Fertilizer Application	Man days	86	6	516
Plant Protection	Man days	101	4	404
2. Material Cost	-	-	-	2783
a. FYM	-	-	-	940
b. Fertilizer	-	-	-	956
c. Plant protection	-	-	-	887
3. Harvesting Cost	-	-	-	6903
a. Picking and assembly cost	-	-	-	6903
4. Interest on working capital	-	-	-	1000
Total variable cost 1+2+3+4	-	-	-	13701
B. Fixed Cost	-	-	-	36487
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	499
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1057
5. Protected establishment cost	-	-	-	13618
Total fixed cost 1+2+3+4+5	-	-	-	36487
Total cost (A+B)	-	-	-	50188
Productivity Kg/hec.	-	-	-	11508
Cost of Production (Rs/Kg.)	-	-	-	4.36

Table- 4.27: Per hectare Bulk Line Cost of production of Malta in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	2555
Preparation and Maintenance of basin	Man days	80	12	960
B. Inter-culture	Man days	80	3	240
C. Pruning	Man days	105	6	630
D. FYM and Fertilizer Application	Man days	85	5	425
Plant Protection	Man days	100	3	300
2. Material Cost	-	-	-	2748
a. FYM	-	-	-	928
b. Fertilizer	-	-	-	945
c. Plant protection	-	-	-	875
3. Harvesting Cost	-	-	-	6863
a. Picking and assembly cost	-	-	-	6863
4. Interest on working capital	-	-	-	985
Total variable cost 1+2+3+4	-	-	-	13151
B. Fixed Cost	-	-	-	36178
1. Land revenue and taxes	-	-	-	13
2. Depreciation on Implements	-	-	-	490
3. Rental value of own land	-	-	-	21300
4. Interest on fixed capital	-	-	-	1048
5. Protected establishment cost	-	-	-	13327
Total fixed cost 1+2+3+4+5	-	-	-	36178
Total cost (A+B)	-	-	-	49329
Productivity Kg/hect.	-	-	-	11407
Cost of Production (Rs/Kg.)	-	-	-	4.32

Table- 4.28: Initial cost of Galgal plantation on sampled farms in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Layout/ Clearing	1848 (11.76)	1839 (11.79)	1814 (11.78)	-	-	1834 (11.76)
Digging of pits	4156 (26.44)	4124 (26.43)	4109 (26.56)	-	-	4130 (26.48)
Filling of pits	1142 (7.27)	1123 (7.20)	1112 (7.19)	-	-	1126 (7.22)
Cost of plants	2350 (14.95)	2337 (14.98)	2316 (14.97)	-	-	2334 (14.97)
Cost of plantation	1525 (9.70)	1529 (9.80)	1507 (9.74)	-	-	1520 (9.75)
Plant support	602 (3.83)	598 (3.83)	590 (3.81)	-	-	597 (3.83)
Fencing of Individual plants	209 (1.33)	204 (1.31)	201 (1.30)	-	-	204 (1.31)
FYM	2130 (13.55)	2113 (13.54)	2105 (13.61)	-	-	2116 (13.56)
I&P	430 (2.74)	424 (2.72)	411 (2.66)	-	-	422 (2.71)
Watering	1120 (7.13)	1109 (7.11)	1102 (7.12)	-	-	1110 (7.12)
Miscellaneous	205 (1.30)	201 (1.29)	203 (1.31)	-	-	203 (1.30)
Total	15717 (100.00)	15601 (100.00)	15470 (100.00)	-	-	15596 (100.00)

Note: Figures in parenthesis are percentage to total.

Table-4.29: Maintenance cost and returns from non-bearing orchards of Galgal in H.P.

(Rs./ hectare)

Cost Components	Marginal			Small			Semi Medium			Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	2630	2846	2982	2618	2832	2970	2610	2815	2958	2595	2805	2945
Value of Manure	1223	1365	1442	1220	1357	1437	1214	1350	1430	1210	1345	1425
Value of Fertilizer	1187	1281	1363	1180	1275	1355	1175	1271	1351	1170	1268	1346
Value of I&P	385	490	523	382	485	520	380	481	515	376	476	510
Land revenue & Less and Other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	402	420	439	453	483	498	412	426	439	452	470	487
Depreciation	210	210	210	210	210	210	210	210	210	210	210	210
Rental Value of Owned land	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	432	432	432	432	432	432	432	432	432	432	432	432
Interest on accumulated establishment cost	1693	1891	2041	1652	1883	2018	1648	1870	2009	1630	1858	2003
Total	29674	30447	30944	29659	30469	30952	29593	30367	30856	29587	30376	30870

Table- 4.30: Maintenance cost of bearing orchards of Galgal on sampled marginal farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1612	1726	1822	1921	2062	2190	2249
Manure	612	737	783	851	930	947	1050
Fertilizer	470	499	551	582	643	676	714
Insecticide & Pesticides	388	414	443	482	617	557	586
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	463	528	589	661	733	727	845
Depreciation	278	316	352	393	427	461	509
Rental Value of Owned land	21183	21183	21183	21183	21183	21183	21183
Interest on fixed capital	685	685	685	685	685	685	685
Prorated establishment cost	11437	11437	11437	11437	11437	11437	11437
Sub-total	37141	37538	37858	38208	38730	38876	39271

Table- 4.31: Maintenance cost of bearing orchards of Galgal on sampled Small Farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1602	1711	1779	1908	2047	2173	2232
Manure	607	731	776	845	922	939	1043
Fertilizer	465	493	622	575	636	671	710
Insecticide & Pesticides	383	409	437	477	512	553	581
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	458	522	584	657	728	722	839
Depreciation	273	311	345	387	422	455	502
Rental Value of Owned land	21183	21183	21183	21183	21183	21183	21183
Interest on fixed capital	677	677	677	677	677	677	677
Prorated establishment cost	11308	11308	11308	11308	11308	11308	11308
Sub-total	36968	37357	37723	38029	38447	38693	39087

Table- 4.32: Maintenance cost of bearing orchards of Galgal on sampled Semi-medium Farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1590	1709	1800	1900	2035	2160	2221
Manure	601	729	776	841	917	934	1037
Fertilizer	462	489	540	570	633	667	706
Insecticide & Pesticides	379	405	435	487	507	550	577
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	456	518	579	649	725	785	832
Depreciation	269	307	343	383	418	453	498
Rental Value of Owned land	21183	21183	21183	21183	21183	21183	21183
Interest on fixed capital	672	672	672	672	672	672	672
Prorated establishment cost	11224	11224	11224	11224	11224	11224	11224
Sub-total	36848	37248	37564	37921	38326	38640	38962

Table-4.33: Maintenance cost of bearing orchards of Galgal on sampled Medium Farms in H.P.

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1582	1703	1812	1905	2052	2193	2246
Manure	603	756	812	903	998	1014	1152
Fertilizer	494	531	593	624	702	746	797
Insecticide & Pesticides	463	491	526	579	623	676	709
Land revenue and Other taxes	12	12	12	12	12	12	12
Interest on working capital	524	610	696	792	886	967	1038
Depreciation	296	341	387	442	487	532	598
Rental Value of Owned land	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	813	813	813	813	813	813	813
Prorated establishment cost	11254	11254	11254	11254	11254	11254	11254
Sub-total	38541	38011	38405	38824	39327	39707	40119

Table-4.34: Cost of cultivation of Galgal on sampled household in H.P.

(Rs./ hectare)

Cost components	Marginal	Small	Semi-Medium	Medium	Large	Average
Labour	1940	1922	1916	1928	-	1927
Value of Manner	844	838	834	882	-	849
Value of Fertilizer	591	596	581	631	-	600
Value of I&P	498	479	477	570	-	506
Land revenue, cesses and other taxes	12	12	12	12	-	12
Interest on working capital	649	644	649	752	-	674
Depreciation	391	385	382	415	-	393
Rental value of own land	21183	21183	21183	22500	-	21512
Interest on fixed capital	685	677	672	813	-	712
Prorated and establishment	11437	11308	11224	11254	-	11306
Sub Total A	38230	38044	37930	39757	-	38491
Harvesting and Assembling cost	6732	6583	6330	6058	-	6426
Total A+B	44962	44627	44260	45815	-	44917
Productivity kg/ha	16134	15479	15590	16070	-	15818
Cost incurred Rs/Kg	2.79	2.88	2.84	2.85	-	2.84

Table- 4.35: Average per hectare cost of production of Galgal in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	1927
Preparation and Maintenance of basin	Man days	80	9	720
B. Inter-culture	Man days	80	3	240
C. Pruning	Man days	112	3	336
D. FYM and Fertilizer Application	Man days	85	5	425
Plant Protection	Man days	103	2	206
2. Material Cost	-	-	-	1955
a. FYM	-	-	-	849
b. Fertilizer	-	-	-	600
c. Plant protection	-	-	-	506
3. Harvesting Cost	-	-	-	6426
a. Picking and assembly cost	-	-	-	6426
4. Interest on working capital	-	-	-	674
Total variable cost 1+2+3+4	-	-	-	10982
B. Fixed Cost	-	-	-	33935
1. Land revenue and taxes	-	-	-	12
2. Depreciation on Implements	-	-	-	393
3. Rental value of own land	-	-	-	21512
4. Interest on fixed capital	-	-	-	712
5. Prorated establishment cost	-	-	-	11306
Total fixed cost 1+2+3+4+5	-	-	-	33935
Total cost (A+B)	-	-	-	44917
Productivity Kg/hect.	-	-	-	15818
Cost of Production (Rs/Kg.)	-	-	-	2.84

Table-4.36: Per hectare Bulk line Cost of production of Galgal in H.P.

Cost Components	Units	Cost/Unit	Qty.	Total
A. Variable Cost				
1. Labour Cost	-	-	-	1750
Preparation and Maintenance of basin	Days	80	8	640
B. Inter-culture	Days	80	3	240
C. Pruning	Days	110	3	330
D. FYM and Fertilizer Application	Days	85	4	340
Plant Protection	Days	100	2	200
2. Material Cost	-	-	-	2025
a. FYM	-	-	-	840
b. Fertilizer	-	-	-	685
c. Plant protection	-	-	-	500
3. Harvesting Cost	-	-	-	6385
a. Picking and assembly cost	-	-	-	6385
4. Interest on working capital	-	-	-	667
Total variable cost 1+2+3+4	-	-	-	10827
B. Fixed Cost	-	-	-	33897
1. Land revenue and taxes	-	-	-	12
2. Depreciation on Implements	-	-	-	390
3. Rental value of own land	-	-	-	21512
4. Interest on fixed capital	-	-	-	705
5. Prorated establishment cost	-	-	-	11278
Total fixed cost 1+2+3+4+5	-	-	-	33897
Total cost (A+B)	-	-	-	44724
Productivity Kg/hec.	-	-	-	15788
Cost of Production (Rs/Kg.)	-	-	-	2.83

Chapter - V

UTILIZATION PATTERN AND MARKETING OF CITRUS

The study of utilization pattern of the citrus produce is important aspect of planning for marketing. This aspect has been dealt in present chapter which also concentrates on market destinations for citrus and prevailing price scenario in these markets.

5.1 Marketed surplus and marketing destinations for Kinnow

Utilization pattern of Kinnow in sampled area is presented in table 5.1. Table reveals that out of the total production 99.17 per cent was sold in the market and only 0.55, and 0.28 per cent of total produce was retained for home consumption and gift to relatives respectively.

Out of the total Kinnow marketed by the sampled orchardists about 19.03 per cent produce is sold at Jassur followed by Jammu (18.95%) Pathankot (17.66%) and others (14.18%) respectively. Orchardists are getting highest price from the market of Srinagar (Rs. 11.59/ Kg) followed by Chandigarh (Rs. 11.58/ Kg.) Yamunanagar (Rs. 11.31/ Kg.) and Jammu (Rs. 11.05/ Kg.) respectively.

5.2 Marketed Surplus and Marketing Destinations for Kagzi Lime

Utilization pattern of Kagzi lime and arrivals in different markets are presented in table 5.2. The table reveals that out of the total production of Kagzi lime only 0.60 and 0.33 per cent produce was retained for home consumption and gift etc. while, 99.07 per cent of total produce was sold directly in the market. Out of total (Kagzi lime) 28.12 per cent produce was sold in Jasur market followed by Pathankot (21.18%) Jammu (17.41%)

and others (16.39%). Rest of the Kagzi lime was sold in the markets of Nahan, Poanta Sahib, Jalandhar, Yamuna Nagar, and Chandigarh. The orchardists were able to obtain maximum prices for Kagzi lime in the market of Chandigarh (Rs. 14.53/ kg.) followed by Jammu (Rs. 14.00/ kg), Yamuna Nagar (Rs. 13.75/ kg) and Jalandhar (Rs. 13.71/ kg).

5.3 Marketed Surplus and Marketing destinations of Malta/Sangtra

Marketing destinations and marketing surplus of malta/sangtra is presented in table 5.3. The table reveals that out of the total production only 2.20 and 1.59 per cent was retained for home consumption and gift to relatives etc while 96.21 per cent of total produce was sold directly in the market.

Out of the total, 25.44 per cent produce was sold in the market of Pathankot, while 20.20, 10.59 and 6.83 per cent of the produce was sold in the markets of Jasur, Jammu, and Srinagar, respectively. About 19 per cent of the produce was sold in other markets.

Orchardists were fetching highest price from the market of Srinagar (Rs. 13.81/ kg.) followed by Jammu (Rs. 12.89), Chandigarh (Rs. 12.80 per kg), Yamunanagar (Rs. 12.65/ kg) and Pathankot (Rs. 12.60/ kg.).

5.4 Marketed Surplus and Marketing destinations of Galgal

Utilization pattern and marketing scenario of Galgal is presented in table 5.4. The table reveals that out of the total production about 98.48 per cent goes to market as marketed surplus while only 1.52 per cent of produce is retained for home consumption and gift purpose etc. Table also reveals that out of the total, 21.21 per cent produce was sold in the market of Mandi while 16.55, 5.48, 5.27 and 22.30 per cent of produce was sold at Mandi, Jasur, Sundarnagar, Pathankot and other markets respectively.

Table- 5.1: Utilization pattern of Kinnow on sampled farms in H.P.

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold to processing plant (kg)	Sold in Local Market					
					Jasur		Nahan		Paonta Sahib	
					Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	274313	2060	1132	11253	56785	522425	8735	80798	9656	88352
Small	347114	1872	950	12420	67862	644689	9563	89412	10842	100287
Semi-Medium	236322	1092	479	5116	48970	479906	6356	59748	7965	74075
Medium	117464	362	176	1868	10420	105240	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-
Total	975213	5386 (0.55)	2737 (0.28)	30657 (3.14)	184037 (18.87)*	1752260 (9.52)**	24654 (2.52)*	229958 (9.32)**	28463 (2.91)*	262714 (9.23)**

Note: * Percent of total production sold in the particular market.

** Average price received by orchardists Rs./kg.

Table- 5.1 Cont... Kinnow Sold by sampled farms in Distant Markets

Farm size category	Pathankot		Jammu		Srinagar		Jalandhar		Chandigarh		Yamunanagar		Others	
	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	48140	491028	48960	528768	28152	318710	10938	110085	4090	47038	4168	46890	40244	412515
Small	57365	587994	61562	675951	31845	366218	17372	108562	5245	60845	5784	65362	64412	663303
Semi-Medium	45125	465690	42540	470067	26432	309254	14516	105636	3249	37852	3580	40805	3736	40953
Medium	20164	209302	30167	349937	45162	530654	7595	70983	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	170794 (17.51)	1752260 (10.26)	183229 (18.78)	2024723 (11.05)	131591 (13.47)	1524836 (11.58)	50421 (5.17)	395266 (7.83)	12584 (1.26)	145735 (11.58)	13532 (1.38)	153057 (11.31)	137098 (14.06)	1412546 (10.30)

Table- 5.2: Utilization pattern of Kagzi Lime produced on sampled farms in H.P.

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold in Local Market					
				Jasur		Nahan		Paonta Sahib	
				Qty (kg)	Value (Rs.)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	93649	911	509	26452	339908	3960	49495	2355	28253
Small	123414	774	429	35363	457951	3567	45302	2095	25768
Semi-Medium	90281	277	154	24568	320645	1683	21626	1419	17731
Medium	27806	48	30	6982	91472	-	-	-	-
Large	-	-	-	-	-	-	-	-	-
Total	335150	2010 (0.59)	1122 (0.33)	93365 (27.85)*	1209976 (12.95)**	9210 (2.74)*	116423 (12.64)**	5869 (1.75)*	71752 (12.22)**

Note: * Percent of total production sold in the particular market.

** Average price received by orchardists Rs./kg.

Table 5.2 contd... Kagzi Lime Sold by sampled farmers in Distant Markets

Farm size category	Pathankot		Jammu		Srinagar		Jalandhar		Chandigarh		Yamunanagar		Others	
	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	18454	249135	12213	168539	-	-	3168	43243	7386	105989	4165	56645	14076	193417
Small	24852	338046	18535	259483	-	-	5346	73242	6420	92962	3928	54206	22105	305266
Semi-Medium	18973	259930	18585	261124	-	-	2734	37593	3862	57736	2343	32682	15683	219119
Medium	8376	115589	8462	120160	-	-	1363	18793	-	-	-	-	2545	35250
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	70655 (21.88)	962700 (13.62)	57795 (17.24)	809306 (14.00)	-	-	12611 (3.76)	172871 (13.70)	17668 (5.27)	256687 (14.52)	10436 (3.11)	143533 (13.75)	54409 (16.23)	753052 (13.84)

Table- 5.3: Utilization pattern of Malta produced on sampled farms in H.P.

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold in Local Market					
				Jasur		Nahan		Paonta Sahib	
				Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	27672	959	701	5183	58205	2095	21992	2078	21297
Small	38544	722	546	7246	81734	2180	23108	2365	24476
Semi-Medium	25374	357	218	5097	58208	1255	13305	1342	14091
Medium	5699	106	82	1382	15866	-	-	-	-
Large	-	-	-	-	-	-	-	-	-
Total	97289	2144 (2.20)	1547 (1.59)	18908 (19.43)	214013 (11.31)	5530 (5.68)	58405 (10.56)	5785 (5.94)	59864 (10.34)

Table 5.3 Contd... - Malta Sold by sampled farmers in Distant Markets

Farm size category	Pathankot		Jammu		Srinagar		Chandigarh		Yamunanagar		Others	
	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	6387	79837	2132	27185	1486	20072	1263	16105	786	9825	4602	58148
Small	9781	123243	3453	44406	1895	26151	1152	14748	1393	17691	7811	99776
Semi-Medium	6376	80848	3058	39692	1981	27635	673	8680	596	7599	4421	56868
Medium	1263	16090	1267	16476	1034	14490	-	-	-	-	565	7299
Large	-	-	-	-	-	-	-	-	-	-	-	-
Total	23807 (24.47)	300018 (12.60)	9910 (10.18)	127759 (12.89)	6396 (6.57)	88348 (13.81)	3088 (3.17)	39533 (12.80)	2775 (2.85)	35115 (12.65)	17399 (17.88)	222091 (12.77)

Table- 5.4: Utilization pattern of Galgal produced on sampled farms in H.P.

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold to process plants	Sold in Local Market									
					Jasur		Nahan		Paonta Sahib		Sunder Nagar		Mandi	
					Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	146630	1853	908	16255	16862	95270	5635	18314	3995	12381	8930	28576	35685	115924
Small	151621	1447	716	14382	27978	159475	1705	5658	1655	5298	7545	24425	32390	107535
Semi-Medium	92431	653	456	8206	14784	84713	1640	5576	1560	5068	5180	16835	15320	51322
Medium	10285	39	30	985	5733	33079	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	400967	3992 (0.99)	2110 (0.53)	39828 (9.93)	65357 (16.29)*	372537 (5.70)**	8980 (2.23)*	29548 (3.29)**	7210 (1.79)*	22747 (3.15)**	21655 (5.40)*	69836 (3.22)* *	83395 (20.79)* *	274781 (3.29)**

Note: * Percent of total production sold in the particular market.

** Average price received by orchardists Rs./kg.

Table - 5.4: Contd... Galgal Sold in Distant Markets

Farm size category	Pathankot		Jammu		Chandigarh		Yamunanagar		Others	
	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)	Qty (kg)	Value (Rs)
Marginal	5564	33273	552	3456	20730	81995	2160	7452	28021	114734
Small	8456	51159	2281	15625	18545	75585	1045	3663	33476	143601
Semi-Medium	5260	32081	1736	12083	11360	47232	945	3445	25331	111441
Medium	1531	9431	739	5171	-	-	-	-	1230	8240
Large	-	-	-	-	-	-	-	-	-	-
Total	20811	125944	5308	36335	50635	204812	4150	14560	88058	378017
	(5.19)	(6.05)	(1.32)	(6.84)	(1.26)	(4.04)	(1.03)	(3.50)	(21.96)	(4.29)

Chapter - VI

PROBLEMS OF THE CITRUS ORCHARDISTS IN PRODUCTION AND MARKETING

Fruit farming is most suited to the terrain of Himachal Pradesh. The fruit production is the only enterprise through which higher income can be generated. The low hill zones are suitable for the production of citrus fruits like Kinnow, Sangtra/Malta, Kagzi lime and Galgal etc. The area under these crops are increasing continuously since last two decades whereas the fruit production for the same period is showing fluctuating trend. The citrus growers of the state time and again have expressed their concern and urge to govt. of Himachal Pradesh to help them in eradication of their problems. The information regarding following problems of orchardists are reported and the results are presented in Table 6.1. The problem has been categorized under following heads.

- i. Poor quality root stock
- ii. Irrigation.
- iii. High cost of fertilizer and plant protection chemical
- iv. High transportation cost
- v. Low support/ procurement prices
- vi. Poor road infrastructure
- vii. High commission charges
- viii. Knowledge of technical know-how.

Root Stock

This is the major problem reported by sampled orchardists of H.P. About 61.25 per cent orchardists reported that some time there is non-availability of root stock while 72.38 and 60.38 per cent orchardists reported high cost of root stock and poor quality of root stock respectively as major problem.

Fertilizer

High cost, lack of timely availability, poor quality and lack of availability of micro-nutrient fertilizer are major problems reported by orchardists. About 63.13 per cent orchardists reported that fertilizer is poor in quality while 100 per cent orchardists reported the problem of high cost of fertilizer.

Irrigation

Irrigation is the major component which determines the yield of orchards. Table 6.1 shows that 77.13 per cent of orchardists faced the problem of irrigation most often while 22.87 per cent orchardists reported that some time (mostly in summer season) they are faced the problem of irrigation.

Plant protection chemical

Poor quality and high cost of plant protection chemical are other major problems reported by sampled orchardists. All the orchardists reported that cost of plant protection chemicals are very high while 36.90 per cent orchardists reported that most often plant protection chemical are poor in quality.

Support procurement price

Low support prices are other major problems of orchardists. All orchardists reported that support procurement price is very low while 62.06 per cent orchardists claim that even low prices are not paid in time by H.P.M.C.

Packing Material

A high price of packing material is reported main problem of orchardists. 100 per cent orchardists reported that price of packing material is very high.

Orchardists are also facing the problems of technical know how. About 71.96 per cent of orchardists reported the problems of training of plants while 34.13 per cent reported that some time they can't properly identify the diseases of plants.

Table- 6.1: Problems faced by sampled orchardists of Himachal Pradesh

(Per cent)

Particulars			Marginal	Small	S. Medium	Medium	Large	Total
Root Stock	Non-availability	Most Often	25.00	23.00	28.00	33.00	-	27.25
		Some Time	60.00	61.00	57.00	67.00	-	61.25
		Never	15.00	16.00	15.00	0.00	-	11.50
	Lack of timely availability	Most Often	20.00	18.00	20.00	33.50	-	22.88
		Some Time	65.00	70.00	66.00	66.50	-	66.87
		Never	15.00	12.00	14.00	0.00	-	10.25
	Poor Quality	Most Often	53.00	62.00	60.00	66.50	-	60.38
		Some Time	35.00	28.00	32.00	33.50	-	32.13
		Never	12.00	10.00	8.00	0.00	-	7.49
	High Cost	Most Often	76.00	67.00	80.00	66.50	-	72.38
		Some Time	24.00	33.00	20.00	33.50	-	27.62
		Never	0.00	0.00	0.00	0.00	-	0.00
High Incidence of Disease	Most Often	20.00	18.00	16.00	0.00	-	13.50	
	Some Time	46.50	50.00	54.00	66.50	-	54.25	
	Never	33.50	32.00	30.00	33.50	-	32.25	
Irrigation	Inadequate facilities	Most Often	80.00	78.00	84.00	66.50	-	77.13
		Some Time	20.00	22.00	16.00	33.50	-	22.87
		Never	0.00	0.00	0.00	0.00	-	0.00
Fertilizer	Lack of timely availability	Most Often	10.20	10.26	15.79	0.00	-	9.06
		Some Time	36.73	43.59	36.84	66.50	-	45.92
		Never	53.06	46.15	47.37	33.50	-	45.02
	Poor quality	Most Often	61.00	60.00	65.00	66.50	-	63.13
		Some Time	29.00	24.00	20.00	33.50	-	26.63
		Never	10.00	16.00	15.00	0.0	-	10.24
	High quality	Most Often	100.00	100.00	100.00	100.00	-	100.00
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	0.00	0.00	0.00	0.00	-	0.00
	Lack of availability of micronutrient fertilizer	Most Often	28.57	19.05	21.43	0.00	-	17.26
		Some Time	34.92	33.33	35.71	33.00	-	34.37
		Never	36.51	47.62	42.86	66.50	-	48.37

Continue Table 6.1

Particulars			Marginal	Small	S. Medium	Medium	Large	Total
Plant protection chemical	Lack of timely availability	Most Often	19.50	28.25	25.15	0.00	-	18.23
		Some Time	38.15	39.40	36.60	33.50	-	36.91
		Never	42.35	40.35	38.25	66.50	-	44.86
	Poor Quality	Most Often	40.25	38.35	35.50	33.50	-	36.90
		Some Time	39.35	41.15	42.25	66.50	-	47.31
		Never	28.40	20.50	22.25	0.00	-	15.79
	High Cost	Most Often	100.00	100.00	100.00	100.00	-	100.00
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	0.00	0.00	0.00	0.00	-	0.00
Picking grading and packing	Shortage of Skilled labour	Most Often	18.00	20.00	16.00	0.00	-	13.50
		Some Time	50.00	46.50	52.00	66.50	-	53.75
		Never	32.00	33.50	32.00	33.50	-	32.75
	High Wages	Most Often	80.00	66.50	75.00	66.50	-	72.00
		Some Time	20.00	33.50	25.00	33.50	-	28.00
		Never	0.00	0.00	0.00	0.00	-	0.00
	Non-availability of labour	Most Often	20.50	29.40	26.25	0.00	-	19.04
		Some Time	39.15	40.25	37.15	66.50	-	45.76
		Never	40.35	38.35	36.60	33.50	-	37.20
Packing material	Shortages of CFB Carton	Most Often	10.20	15.79	10.26	0.00	-	9.06
		Some Time	36.73	36.84	43.59	33.50	-	37.67
		Never	53.06	47.37	46.15	66.50	-	53.27
	Shortages of other material	Most Often	36.73	38.46	31.58	0.00	-	26.69
		Some Time	34.69	30.77	36.84	33.50	-	33.69
		Never	28.57	30.77	31.58	66.50	-	39.36
	High prices	Most Often	100.00	100.00	100.00	100.00	-	100.00
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	0.00	0.00	0.00	0.00	-	0.00
	Non-availability in time	Most Often	22.22	30.43	10.53	0.00	-	15.80
		Some Time	36.11	34.78	26.32	33.50	-	32.68
		Never	41.67	34.78	63.16	66.50	-	51.52
	Non-availability at desired place	Most Often	31.67	37.50	43.48	0.00	-	28.16
		Some Time	39.17	27.78	39.13	66.50	-	43.15
		Never	29.17	34.72	26.09	33.50	-	28.69

Continue Table 6.1

Particulars			Marginal	Small	S. Medium	Medium	Large	Total
Transportation	Lack of timely availability	Most Often	22.23	28.43	26.25	0.00	-	19.23
		Some Time	36.10	35.78	36.60	33.50	-	35.50
		Never	41.67	35.78	37.15	66.50	-	45.27
	Shortage of vehicles	Most Often	34.69	30.77	36.84	0.00	-	25.57
		Some Time	36.73	38.46	31.58	33.50	-	35.07
		Never	28.57	30.77	31.58	66.50	-	39.36
	Village are not linked with roads	Most Often	31.10	38.67	39.30	33.50	-	35.64
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	68.90	61.33	60.70	66.50	-	64.36
	High transportation charges	Most Often	100.00	100.00	100.00	100.00	-	100.00
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	0.00	0.00	0.00	0.00	-	0.00
Lack of all weather roads	Most Often	25.50	28.35	23.25	33.50	-	27.65	
	Some Time	54.25	56.25	53.50	66.50	-	57.63	
	Never	20.25	15.40	23.25	0.00	-	14.72	
Support procurement price	Prices not announced in time	Most Often	56.00	58.00	61.00	66.50	-	60.38
		Some Time	34.00	31.00	26.50	33.50	-	31.25
		Never	10.00	11.00	12.50	0.00	-	8.37
	Prices not paid in time	Most Often	62.00	60.50	59.25	66.50	-	62.06
		Some Time	29.50	27.25	26.75	33.50	-	29.25
		Never	8.50	12.25	14.00	0.00	-	8.69
	Low prices	Most Often	100.00	100.00	100.00	100.00	-	100.00
		Some Time	0.00	0.00	0.00	0.00	-	0.00
		Never	0.00	0.00	0.00	0.00	-	0.00

Continue Table 6.1

Particulars		Marginal	Small	S. Medium	Medium	Large	Total	
Technical know how	Orchard establishment	Most Often	40.82	41.90	52.63	33.50	-	42.22
		Some Time	36.73	35.03	31.79	66.50	-	42.51
		Never	22.45	23.08	15.58	0.00	-	15.28
	Lack of knowledge about variety polynizer	Most Often	6.12	7.69	10.53	0.00	-	6.09
		Some Time	14.29	25.64	26.32	33.50	-	24.94
		Never	77.59	66.67	63.16	66.50	-	68.97
	Training of plants	Most Often	66.64	81.30	73.40	66.50	-	71.96
		Some Time	25.68	14.62	20.25	33.50	-	23.51
		Never	7.68	4.08	6.35	0.00	-	4.53
	Pruning of plants	Most Often	21.15	10.00	13.89	0.00	-	11.26
		Some Time	27.35	21.67	20.83	33.50	-	25.84
		Never	51.50	68.33	65.28	66.50	-	62.90
	Spray schedule	Most Often	15.00	16.00	15.00	0.00	-	11.50
		Some Time	25.00	23.00	28.00	33.50	-	27.38
		Never	60.00	61.00	57.00	66.50	-	61.12
	Fertilizer and micronutrients	Most Often	15.00	12.00	14.00	0.00	-	10.25
		Some Time	65.00	18.00	20.00	33.50	-	34.13
		Never	20.00	70.00	66.00	66.50	-	55.62
	Identification of diseases	Most Often	33.50	32.00	30.00	0.00	-	23.88
		Some Time	46.50	50.00	54.00	66.50	-	54.25
		Never	20.00	18.00	16.00	33.50	-	21.87
Identification of insect and pest	Most Often	10.73	15.37	10.59	0.00	-	9.17	
	Some Time	36.20	36.79	43.15	33.50	-	37.41	
	Never	53.06	47.84	46.26	66.50	-	53.42	

KANGRA

Annexure: 1.1 Socio Economic Profile of Sampled Household (Distt Kangra)

Farm Size	Male Total	Female Total	Total Population	Family Size	Sex Ratio
Marginal	152	147	299	5.44	967
Small	116	120	236	5.49	1034
Semi Medium	51	54	105	5.53	1059
Medium	8	9	17	5.67	1125
Large	-	-	-	-	-
Total	327	330	657	5.48	1009

Annexure- 1.2: Education Status of sampled Household (Distt. Kangra)

Farm Size	0-5 age group		Illiterate		Primary		Middle		Matric	
	M	F	M	F	M	F	M	F	M	F
Marginal	24	23	20	21	22	20	18	21	20	22
Small	13	14	12	18	15	18	16	19	16	20
Semi Medium	5	5	6	9	7	9	5	8	8	10
Medium	1	1	-	1	-	2	1	1	2	1
Large			-	-	-	-	-	-	-	-
Total	43	43	38	49	44	49	40	49	46	53

Annexure 1.2 Continued.....

Farm Size	10+2		Graduate		Post graduate		Professional		Percentage of Literacy ratio	
	M	F	M	F	M	F	M	F	M	F
Marginal	17	20	19	12	6	3	8	2	84.38	83.06
Small	17	18	16	9	5	2	6	2	88.35	83.02
Semi Medium	7	7	7	4	3	1	3	1	86.97	81.63
Medium	1	2	1	1	-	-	1	-	100	87.50
Large	-	-	-	-	-	-	-	-	-	-
Total	42	47	43	26	14	6	18	5	86.62	82.33

Annexure- 1.3: Land Utilization Pattern of Kangra Distt.

(Hectare)

Farm Size	Total cultivated area	Field crop	Orchards	Mangoes	Citrus	Kinnow		Malta	
						Non-bearing	Bearing	Non-bearing	Bearing
Marginal	41.80	8.72	33.08	4.32	28.76	2.56	13.80	0.20	1.52
Small	67.84	14.48	53.36	12.24	41.12	3.72	17.92	0.32	2.24
Semi Medium	50.48	12.48	38.00	9.52	28.48	2.04	12.68	0.20	1.68
Medium	16.12	1.52	15.04	1.80	12.80	0.84	7.12	0.04	0.48
Large	-	-	-	-	-	-	-	-	-
Total	176.24	37.20	139.48	27.88	111.16	9.16	51.52	0.76	5.92

Annexure- 1.3 Continued.....

Farm Size	Kagzi lime		Galgal		Fellow Land	Ghasni	Total holding	Per farm holding
	Non-bearing	Bearing	Non-bearing	Bearing				
Marginal	1.56	7.44	-	1.68	3.44	1.40	46.64	0.85
Small	2.52	11.68	-	2.72	4.16	1.84	73.84	1.72
Semi Medium	1.48	8.72	-	1.68	3.32	1.52	55.32	2.91
Medium	0.40	3.28	-	0.64	0.84	0.48	17.44	5.81
Large	-	-	-	-	-	-	-	-
Total	5.96	31.12	-	6.72	11.76	5.24	193.24	1.61

Annexure- 1.4: Cropping pattern sampled Household in Distt. Kangra.

(Hectare)

Farm Size	Sale Crops						
	Maize	Paddy	Wheat	Tomato	Cauliflower	Toria	Chari
Marginal	1.68	2.48	4.48	1.68	0.92	1.04	1.64
Small	3.76	4.48	6.16	2.76	1.48	1.56	2.72
Semi Medium	3.32	4.12	5.68	2.16	1.20	1.24	2.00
Medium	0.28	0.68	0.80	0.28	-	0.20	0.28
Large	-	-	-	-	-	-	-
Total	9.04	11.76	17.12	6.88	3.60	4.04	6.64

Annexure- 1.4 : Continued.....

Farm Size	Mixed Crops		Inter Crops			
	Maize + Mash	Lady Finger + Toria	Maize	Toria	Lady Finger	Tomato
Marginal	1.40	1.20	1.12	1.24	1.40	3.32
Small	1.72	1.48	1.72	1.52	1.68	4.36
Semi Medium	1.36	1.24	0.92	1.12	1.00	2.68
Medium	0.20	0.16	0.32	0.48	0.40	0.92
Large	-	-	-	-	-	-
Total	4.68	4.08	4.08	4.36	4.48	11.28

Annexure- 1.5: No. of Non-bearing and bearing Plants of Kinnow in different age groups in Distt Kangra.

Farm Size	Non- bearing				Bearing					
	1 year	2 year	3 year	Total	4-5 Years		6-7 Years		8-10 years	
					No	Production (Kg.)	No	Production (Kg.)	No	Production (Kg.)
Marginal	268	364	296	928	583	18246	598	24748	637	30397
Small	367	584	351	1302	638	19672	764	30636	883	40878
Semi Medium	209	301	214	724	561	16723	573	22874	628	28642
Medium	103	95	109	307	257	7436	269	9985	326	14781
Large	-	-	-	-	-	-	-	-	-	-
Total	947	1344	970	3261	2039	62077	2204	88243	2474	114698

Annexure- 1.5: Continued.....

Farm Size	Bearing Plants									
	11-12 Years		13-15 Years		16-20 Years		21 & above		Total Bearing	
	No	Production (Kg.)	No	Production (Kg.)	No	Production (Kg.)	No.	Production (Kg.)	No.	Production
Marginal	812	45048	805	49812	768	43568	629	30758	4832	242577
Small	912	49924	996	61334	1172	63192	913	43721	6278	309357
Semi Medium	764	39998	778	46587	709	36784	426	19612	4439	211220
Medium	384	19842	396	22956	466	24178	398	18286	2498	117464
Large	-	-	-	-	-	-	-	-	-	-
Total	2872	154812	2975	180689	3115	167722	2366	112377	18045	880618

Annexure- 1.6: Number of Non-bearing and Bearing Plants of Kagzi lime in different age groups in Distt Kangra.

Farm Size	Non- bearing				Bearing					
	1 year	2 year	3 year	Total	4-5 Years		6-7 Years		8-10 years	
				No	No	Production (Kg.)	No	Production (Kg.)		Production (Kg.)
Marginal	156	235	161	552	228	3421	283	5378	396	9108
Small	252	301	362	915	554	8087	573	10657	605	13412
Semi Medium	145	192	183	520	412	5891	461	8483	428	9416
Medium	27	71	43	141	116	1624	142	2584	193	4198
Large	-	-	-	-	-	-	-	-	-	-
Total	580	799	749	2128	1310	19023	1459	27102	1622	36134

Annexure: 1.6 Continued.....

Farm Size	Bearing Plants									
	11-12 Years		13-15 Years		16-20 Years		21 & above		Total Bearing	
	No	Production (Kg.)	No	Production (Kg.)	No	Production (Kg.)	No.	Production (Kg.)	No	Production (Kg.)
Marginal	418	11082	583	17842	324	9493	467	13245	2699	69569
Small	616	15996	621	18754	598	17342	594	16632	4161	100880
Semi Medium	457	11791	514	15412	396	11438	417	11509	3085	73940
Medium	182	4643	209	6167	187	5329	119	3261	1148	27806
Large	-	-	-	-	-	-	-	-	-	-
Total	1673	43512	1927	58175	1505	43602	1597	44647	11093	272195

Annexure-1.7: Number of Non-bearing and bearing plants of Malta/ Sangtra in different age groups in Distt Kangra

Farm Size	Non- bearing				Bearing					
	1 year (No.)	2 year (No.)	3 year (No.)	Total	4-5 Years		6-7 Years		8-10 years	
				No	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)
Marginal	21	23	30	74	69	1738	78	2356	84	2957
Small	34	40	47	121	96	2393	112	3352	132	4616
Semi Medium	20	24	29	73	74	1824	83	2446	89	3082
Medium	4	6	4	14	21	508	23	667	26	885
Large	-	-	-	-	-	-	-	-	-	-
Total	79	93	110	282	260	6463	296	8821	331	11540

Annexure- 1.7: Continued.....

Farm Size	Bearing Plants									
	11-12 Years		13-15 Years		16-20 Years		21 & above		Total Bearing	
	No	Production (Kg.)	No	Production (Kg.)	No	Production (Kg.)	No.	Production (Kg.)	Total No.	Production (Kg.)
Marginal	86	3457	93	4203	72	2823	54	1894	536	19428
Small	136	5412	141	6316	99	3841	68	2376	784	28306
Semi Medium	95	3706	94	4154	76	2892	61	2110	572	20214
Medium	30	1163	29	1277	18	682	15	517	162	5699
Large	-	-	-	-	-	-	-	-	-	-
Total	347	13738	357	15950	265	10238	198	6897	2054	73647

Annexure-1.8: No. of bearing plants of Galgal in different age groups in District Kangra.

Farm Size	Bearing Plants and Production (NO non-bearing plants are reported)									
	4-5 Years		6-7 Years		8-10 Years		11-12 year		13-15 year	
	No	Production (Kg.)	No	Production (Kg.)	No	Production (Kg.)	No.	Production (Kg.)	No.	Production (Kg.)
Marginal	65	2080	74	2886	85	3825	89	4094	82	4182
Small	66	2046	123	4735	130	5784	142	6461	157	7974
Semi Medium	55	1676	68	2582	77	3387	87	3910	78	3912
Medium	18	538	23	871	28	1224	30	1322	34	1702
Large	-	-	-	-	-	-	-	-	-	-
Total	204	6340	288	11074	320	14220	348	15787	351	17770

Annexure- 1.8: Cont.....

Farm size	Bearing Plants and Production (No non-bearing plants are reported)					
	16-20 year		21 & above		Total	
	No.	Production (Kg.)	No.	Production (Kg)	No.	Production (Kg)
Marginal	94	5358	102	5712	591	28137
Small	174	9814	160	8664	952	45478
Semi Medium	96	5383	109	5989	570	26839
Medium	40	2276	42	2352	215	10285
Large	-	-	-	-	-	-
Total	404	22831	413	22717	2358	110739

Annexure-1.9: Initial cost of Kinnow Plantation.

(Rs/Hectare)

Cost Components	Kangra				
	Marginal	Small	Semi Medium	Medium	Average
Layout	2435	2408	2389	2376	2402
Digging of pits	5553	5517	5503	5491	5516
Filling of pits	1242	1224	1215	1260	1231
Cost of plant	3059	3036	3021	2985	3025
Cost of Plantation	1645	1639	1680	1624	1647
Plant support	705	692	643	632	668
Fencing of individual plants	285	278	270	262	274
FYM	2820	2793	2710	2673	2749
I&P	850	835	807	792	821
Watering	1235	1205	1183	1124	1187
Miscellaneous	260	257	251	246	254
Total	20089	19884	19672	19465	19774

Annexure- 1.10: Maintenance Cost and Returns from Non-bearing orchard of Kinnow in Distt Kangra.

(Rs/Hectare)

Cost Components	Marginal			Small			Semi-medium			Medium		
	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year
Labour	3456	3757	3904	3417	3681	3798	3405	3652	3774	3369	3573	3752
Value of Manure	1585	1689	1768	1524	1671	1758	1512	1654	1725	1503	1646	1713
Value of fertilizer	1720	1838	1974	1713	1805	1959	1710	1796	1934	1696	1782	1910
Value of I&P	745	846	905	740	836	898	732	829	893	728	820	884
Land revenue Cesses & other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	512	529	542	504	524	536	498	518	531	490	512	523
Depreciation	231	231	231	228	228	228	224	224	224	221	221	221
Rental value of owned land	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	534	534	534	541	541	541	546	546	546	539	539	539
Interest on accumulated establishment cost	1993	2084	2181	1972	2056	2163	1964	2031	2143	1952	2016	2108
Sub total (A)	32288	33028	33551	32151	32854	33393	32105	32762	33282	32010	32621	33162
Returns from inter crops	14572	13984	13356	13897	13265	12994	13150	12783	12695	12896	12583	12192
Net Returns	-17716	-19044	-20195	-18254	-19589	-20399	-18955	-19979	-20587	-19114	-20038	-20970

**Annexure- 1.11: Maintenance Cost of Bearing orchard of Kinnow in District Kangra
(Marginal Farmers)**

(Rs./ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2453	2687	2893	3084	3296	3412	3484
Value of Manure	802	861	912	953	1016	1058	1098
Value of fertilizer	829	872	931	967	1024	1078	1109
Value of I&P	743	798	839	886	946	1021	1083
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	792	863	912	1056	1114	1176	1218
Depreciation	386	464	496	512	551	569	607
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1070	1070	1070	1070	1070	1070	1070
Prorated establishment cost	13896	13896	13896	13896	13896	13896	13896
Total	43483	44023	44461	44936	45425	45784	46077

**Annexure- 1.12: Maintenance Cost of Bearing orchard of Kinnow in District Kangra
(Small Farmers)**

(Rs./ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2418	2631	2868	3027	3251	3382	3418
Value of Manure	791	842	903	943	996	1026	1052
Value of fertilizer	812	857	914	952	1003	1037	1065
Value of I&P	715	776	821	866	932	1005	1057
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	756	839	898	954	1063	1203	1210
Depreciation	374	453	492	507	538	589	598
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1084	1084	1084	1084	1084	1084	1084
Prorated establishment cost	13907	13907	13907	13907	13907	13907	13907
Total	43369	43901	44399	44752	45286	45745	45903

**Annexure- 1.13: Maintenance Cost of Bearing Fruits of Kinnow in
District Kangra (Semi Medium Farmers)**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2386	2584	2803	2976	3207	3312	3378
Value of Manure	769	807	882	912	954	1005	1021
Value of fertilizer	803	819	886	936	981	1013	1032
Value of I&P	702	754	802	851	902	989	1028
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	738	814	863	932	1028	1184	1193
Depreciation	361	445	467	516	531	568	591
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1096	1096	1096	1096	1096	1096	1096
Prorated establishment cost	13961	13961	13961	13961	13961	13961	13961
Total	43328	43792	44272	44692	45172	45640	45812

**Annexure- 1.14: Maintenance Cost of Bearing Fruits of Kinnow in District Kangra
(Medium Farmers)**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2341	2513	2767	2916	3168	3273	3312
Value of Manure	740	782	860	894	941	989	1007
Value of fertilizer	792	798	851	905	963	992	1012
Value of I&P	681	741	783	836	878	967	996
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	726	801	842	913	1009	996	984
Depreciation	352	434	448	502	518	554	546
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1103	1103	1103	1103	1103	1103	1103
Prorated establishment cost	14028	14028	14028	14028	14028	14028	14028
Total	43275	43712	44194	44609	45120	45414	45500

Annexure- 1.15: Cost of Cultivation of Kinnow in District Kangra

(Rs./Hectare)

Cost Components	Marginal	Small	Semi-medium	Medium	Large	Overall
Labour	3444	2999	2949	2899	-	3073
Value of manure	957	936	907	887	-	922
Value of fertilizer	973	949	924	902	-	937
Value of I &P	902	882	861	840	-	871
Land revenue, Cess & other taxes	12	12	12	12	-	12
Interest on working capital	1019	965	989	896	-	967
Depreciation	512	497	507	479	-	499
Rental value of owned land	22500	22500	22500	22500	-	22500
Interest on fixed capital	1070	1084	1096	1103	-	1088
Prorated establishment cost	13896	13907	13961	14028	-	13948
Sub total (A)	45285	44731	44706	44546	-	44817
B harvesting and assembling cost	7152	6994	6847	6763	-	6939
Total (A+B)	52437	51725	51553	51309	-	51756
Productivity (Kg/ha)	17578	17263	16658	16498	-	16999
Cost Incurred (Per Kg.)	2.98	3.00	3.09	3.11	-	3.04

Annexure-1.16: Initial Cost of Kagzi Lime orchard in District Kangra

(Rs/hectare)

Cost Components	Kangra				
	Marginal	Small	Semi Medium	Medium	Average
Layout	2312	2286	2235	2210	2261
Digging of pits	5360	5298	5262	5218	5285
Filling of pits	1209	1216	1207	1193	1206
Cost of plant	2842	2839	2814	2791	2822
Cost of Plantation	1605	1623	1602	1586	1604
Plant support	638	631	624	614	627
Farming of individual plants	268	262	253	246	257
FYM	2736	2712	2709	2692	2714
I&P	807	809	812	803	808
Watering	1132	1106	1081	1056	1094
Miscellaneous	226	223	216	211	219
Total	19135	19010	18815	18620	18892

Annexure-1.17: Maintenance Cost and Returns from Non-bearing orchard of Kagzi Lime in District Kangra.

(Rs./Hectare)

Cost Components	Marginal			Small			Semi-medium			Medium		
	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year
Labour	2932	3094	3682	2904	3046	3632	2892	3021	3604	2862	2996	3561
Value of Manure	1510	1623	1696	1502	1611	1683	1493	1603	1672	1463	1582	1654
Value of fertilizer	1683	1798	1912	1678	1776	1890	1669	1768	1884	1642	1746	1861
Value of I&P	726	805	897	721	794	886	718	790	881	712	781	868
Land revenue Cess & other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	502	521	536	498	519	531	493	514	526	484	510	518
Depreciation	218	218	218	224	224	224	231	231	231	238	238	238
Rental value of owned land	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	518	518	518	526	526	526	534	534	534	539	539	539
Interest on accumulated establishment cost	1935	2073	2164	1912	2056	2147	1906	2032	2118	1901	2018	2097
Sub total (A)	31536	32162	33135	31477	32064	33031	31148	32005	32962	31353	31922	32848
Returns from inter crops	14796	13992	13430	14584	13768	13125	14258	13281	12764	13996	13064	12592
Net Returns	-16740	-18170	-19695	-16893	-18296	-19906	-16890	-18724	-20198	-17357	-18858	-20256

**Annexure- 1.18: Maintenance Cost of Bearing Orchard of Kagzi Lime in District Kangra
(Marginal Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2405	2640	2848	3036	3243	3468	3531
Value of Manure	772	839	880	931	988	1031	1064
Value of fertilizer	796	837	903	940	992	1042	1073
Value of I&P	710	763	812	856	921	990	1058
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	751	836	885	1015	1086	1141	1197
Depreciation	362	441	467	485	528	544	579
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1042	1042	1042	1042	1042	1042	1042
Prorated establishment cost	13381	13381	13381	13381	13381	13381	13381
Total	42731	43291	43730	44190	44693	45151	45437

**Annexure-1.19: Maintenance Cost of Bearing orchard of Kagzi Lime in District Kangra
(Small Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2398	2634	2841	3032	3239	3462	3526
Value of Manure	768	830	874	927	981	1024	1061
Value of fertilizer	791	832	896	934	986	1038	1070
Value of I&P	708	758	807	851	916	985	1052
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	748	831	878	1012	1081	1137	1192
Depreciation	360	438	461	478	521	537	572
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1036	1036	1036	1036	1036	1036	1036
Prorated establishment cost	13264	13264	13264	13264	13264	13264	13264
Total	42585	43135	43559	44046	44536	44995	45285

**Annexure- 1.20: Maintenance Cost of Bearing Fruits of Kagzi Lime in
District Kangra (Semi Medium Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2389	2630	2832	3024	3228	3451	3520
Value of Manure	761	823	870	922	976	1018	1054
Value of fertilizer	786	825	891	930	978	1031	1063
Value of I&P	702	751	802	846	910	980	1048
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	743	824	873	1007	1072	1131	1184
Depreciation	357	432	456	472	516	532	566
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1031	1031	1031	1031	1031	1031	1031
Prorated establishment cost	13145	13145	13145	13145	13145	13145	13145
Total	42426	42975	43412	43889	44368	44831	45123

**Annexure- 1.21: Maintenance Cost of bearing orchard of Kagzi Lime in
District Kangra (Medium Farmers)**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2381	2618	2820	3014	3216	3442	3509
Value of Manure	754	820	863	918	970	1013	1048
Value of fertilizer	782	818	885	923	972	1025	1058
Value of I&P	700	746	796	840	906	975	1041
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	739	820	867	1002	1064	1123	1176
Depreciation	352	427	450	466	511	526	561
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1026	1026	1026	1026	1026	1026	1026
Prorated establishment cost	13023	13023	13023	13023	13023	13023	13023
Total	42269	42810	43242	43724	44200	44665	44954

Annexure- 1.22: Cost of Cultivation of Kagzi Lime in District Kangra.

(Rs/ Hectare)

Cost Components	Marginal	Small	Semi-medium	Medium	Large	Overall
Labour	3024	3019	3011	3000	-	3014
Value of manure	929	924	918	912	-	921
Value of fertilizer	940	935	929	923	-	932
Value of I &P	873	868	863	858	-	866
Land revenue ,Cess & other taxes	12	12	12	12	-	12
Interest on working capital	987	983	976	970	-	979
Depreciation	487	481	476	470	-	479
Rental value of owned land	22500	22500	22500	22500	-	22500
Interest on fixed capital	1042	1036	1031	1026	-	1034
Prorated establishment cost	13381	13264	13145	13023	-	13203
Sub total (A)	44157	44022	43861	43694	-	43940
B harvesting and assembling cost	8472	8291	8137	8054	-	8239
Total (A+B)	52629	52313	51998	51748	-	52179
Productivity (Kg/ha)	9351	8640	8479	8477	-	8747
Cost Incurred (Per Kg.)	5.63	6.05	6.13	6.10	-	5.97

Annexure- 1.23: Initial Cost of Malta/Sangtra Orchard in District Kangra.

(Rs/Hectare)

Cost Components	Kangra				
	Marginal	Small	Semi Medium	Medium	Average
Layout	2412	2387	2365	2351	2379
Digging of pits	5526	5408	5412	5403	5437
Filling of pits	1218	1205	1193	1176	1198
Cost of Plantation	3042	3014	2996	2967	3005
Plant support	1631	1607	1602	1612	1613
Farming of individual plants	690	683	667	662	676
FYM	272	268	261	258	265
I&P	2778	2734	2713	2705	2733
Watering	836	829	821	814	825
Miscellaneous	1197	1183	1174	1162	1179
Total	19602	19318	19204	19110	19310

**Annexure-1.24: Maintenance Cost and Returns from Non-bearing Orchard of
Malta/Sangtra in District Kangra.**

(Rs/Hectare)

Cost Components	Marginal			Small			Semi-medium			Medium		
	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year	1 year	2 year	3 year
Labour	3437	3726	3866	3403	3708	3828	3391	3691	3805	3362	3682	3792
Value of Manure	1681	1748	1935	1510	1721	1897	1507	1603	1894	1496	1605	1886
Value of fertilizer	1713	1805	1959	1702	1796	1952	1696	1796	1947	1682	1792	1918
Value of I&P	739	841	894	726	837	891	721	721	885	718	880	715
Land revenue Cess & other taxes	12	12	12	12	12	12	12	12	12	12	12	12
Interest on working capital	506	527	538	498	523	532	493	520	516	489	512	485
Depreciation	228	228	228	223	223	223	221	221	221	218	218	218
Rental value of owned land	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500	21500
Interest on fixed capital	531	531	531	538	538	538	532	532	532	527	527	527
Interest on accumulated establishment cost	1978	2071	2168	1965	2056	2159	1960	2047	2048	1952	2036	1945
Sub total (A)	32225	32989	33631	32077	32914	33532	32033	32643	33360	31956	32764	32998
Returns from inter crops	14368	14152	13986	13862	13724	13608	13798	13589	13432	13621	13462	13294
Net Returns	-17857	-18837	-19645	-18215	-19190	-19924	-18235	-19054	-19928	-18335	-19302	-19704

Annexure- 1.25: Maintenance Cost of Bearing Orchard of Malta/Sangtra in District Kangra (Marginal Farmers) .

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2438	2678	2884	3072	3281	3402	3478
Value of Manure	796	856	903	947	1010	1051	1089
Value of fertilizer	821	867	926	963	1022	1073	1103
Value of I&P	740	791	832	882	941	1016	1082
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	786	860	902	1048	1106	1170	1213
Depreciation	384	461	489	507	546	562	601
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1065	1065	1065	1065	1065	1065	1065
Prorated establishment cost	13886	13886	13886	13886	13886	13886	13886
Total	43428	43976	44399	44882	45369	45737	46029

Annexure- 1.26: Maintenance Cost of Bearing Orchard of Malta/Sangtra in District Kangra (Small Farmers).

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2432	2669	2876	3063	3270	3392	3463
Value of Manure	791	851	898	942	1003	1046	1081
Value of fertilizer	819	862	921	957	1012	1066	1097
Value of I&P	738	784	824	873	936	1009	1076
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	778	852	896	1028	1102	1161	1210
Depreciation	381	456	482	501	541	557	592
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1061	1061	1061	1061	1061	1061	1061
Prorated establishment cost	13845	13845	13845	13845	13845	13845	13845
Total	43357	30047	44315	44782	45282	45649	45937

**Annexure- 1.27: Maintenance Cost and Returns from Bearing Orchard of Malta/Sangtra
in District Kangra (Semi- Medium Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2421	2658	2867	3051	3261	3381	3449
Value of Manure	785	847	891	937	997	1040	1073
Value of fertilizer	812	853	914	950	1005	1053	1084
Value of I&P	731	776	819	868	931	1003	1068
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	769	841	890	1021	1094	1156	1204
Depreciation	376	450	474	492	536	551	586
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1057	1057	1057	1057	1057	1057	1057
Prorated establishment cost	13652	13652	13652	13652	13652	13652	13652
Total	43115	43646	44076	44540	45045	45405	45685

**Annexure- 1.28: Maintenance Cost of Bearing Orchard of Malta/Sangtra in
District Kangra (Medium Farmers)**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	2415	2643	2852	3039	3248	3372	3437
Value of Manure	780	841	883	932	991	1032	1067
Value of fertilizer	805	847	910	944	998	1046	1078
Value of I&P	728	770	814	861	926	995	1062
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	762	837	886	1016	1087	1142	1198
Depreciation	371	443	468	486	529	545	580
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	1050	1050	1050	1050	1050	1050	1050
Prorated establishment cost	13494	13494	13494	13494	13494	13494	13494
Total	42917	43437	43869	44334	44835	45188	45478

Annexure- 1.29: Cost of Cultivation of Malta Orchard in District Kangra.

(Rs/ Hectare)

Cost Components	Marginal	Small	Semi-medium	Medium	Large	Overall
Labour	3033	3024	3013	3001	-	3018
Value of manure	950	945	939	932	-	942
Value of fertilizer	968	962	953	947	-	958
Value of I &P	898	891	885	880	-	889
Land revenue, Cess & other taxes	12	12	12	12	-	12
Interest on working capital	1012	1004	996	990	-	1001
Depreciation	507	501	495	489	-	498
Rental value of owned land	22500	22500	22500	22500	-	22500
Interest on fixed capital	1065	1061	1057	1050	-	1058
Prorated establishment cost	13886	13845	13652	13494	-	13719
Sub total (A)	44831	44745	44502	44294	-	44595
B harvesting and assembling cost	6997	6834	6705	6618	-	6789
Total (A+B)	51828	51579	51207	50913	-	51384
Productivity (Kg/ha)	12782	12637	12032	11873	-	12331
Cost Incurred (Per Kg.)	4.05	4.08	4.26	4.29	-	4.17

**Annexure- 1.30: Maintenance Cost of Bearing Orchard of Galgal in
District Kangra (Marginal Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	1603	1718	1832	1917	2071	2210	2262
Value of Manure	617	762	820	910	1009	1023	1161
Value of fertilizer	499	538	599	634	714	752	804
Value of I&P	472	499	532	587	634	683	718
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	534	617	704	801	894	774	1045
Depreciation	301	346	396	451	495	538	609
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	823	823	823	823	823	823	823
Prorated establishment cost	11415	11415	11415	11415	11415	11415	11415
Total	38776	39230	39633	40050	40513	40730	41349

**Annexure- 1.31: Maintenance Cost of Bearing orchard of Galgal in District Kangra
(Small Farmers).**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	1596	1712	1820	1912	2063	2199	2253
Value of Manure	612	760	817	907	1004	1018	1157
Value of fertilizer	497	534	597	629	710	750	801
Value of I&P	469	496	529	583	631	681	714
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	531	614	699	797	891	771	1041
Depreciation	299	343	391	446	492	534	602
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	819	819	819	819	819	819	819
Prorated establishment cost	11307	11307	11307	11307	11307	11307	11307
Total	38642	39097	39491	39912	40429	40591	41206

**Annexure: 1.32: Maintenance Cost of Bearing Orchard of Galgal in District Kangra
(Semi -Medium Farmers) .**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	1593	1734	1824	1921	2078	2203	2254
Value of Manure	609	767	834	907	1005	1018	1157
Value of fertilizer	501	533	597	628	712	749	802
Value of I&P	466	494	534	581	628	684	714
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	532	613	699	792	893	970	1042
Depreciation	298	343	394	446	491	536	602
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	816	816	816	816	816	816	816
Prorated establishment cost	11285	11285	11285	11285	11285	11285	11285
Total	38612	39097	39495	39888	40420	40773	41184

**Annexure- 1.33: Maintenance Cost of Bearing Orchard of Galgal in District Kangra
(Medium Farmers) .**

(Rs/ hectare)

Cost components	Age in year						
	4-5 year	6-7 year	8-10 year	11-12 year	13-15 year	16-20 year	21 & above
Labour	1582	1703	1812	1905	2052	2193	2246
Value of Manure	603	756	812	903	998	1014	1152
Value of fertilizer	494	531	593	624	702	746	797
Value of I&P	463	491	526	579	623	676	709
Land revenue Cess & other taxes	12	12	12	12	12	12	12
Interest on working capital	524	610	696	792	886	967	1038
Depreciation	296	341	387	442	487	532	598
Rental value of owned land	22500	22500	22500	22500	22500	22500	22500
Interest on fixed capital	813	813	813	813	813	813	813
Prorated establishment cost	11254	11254	11254	11254	11254	11254	11254
Total	38541	39011	39405	39824	40327	40707	41119

Annexure- 1.34: Cost of Cultivation of Galgal in District Kangra.

(Rs/Hectare)

Cost Components	Marginal	Small	Semi-medium	Medium	Large	Overall
Labour	1948	1939	1932	1928	-	1937
Value of manure	900	892	889	882	-	891
Value of fertilizer	649	642	637	631	-	640
Value of I &P	589	583	576	570	-	579
Land revenue, Cess & other taxes	12	12	12	12	-	12
Interest on working capital	767	761	756	752	-	759
Depreciation	438	421	418	415	-	423
Rental value of owned land	22500	22500	22500	22500	-	22500
Interest on fixed capital	823	819	816	813	-	818
Prorated establishment cost	11415	11307	11285	11254	-	11315
Sub total (A)	40041	39876	39821	39757	-	39874
B harvesting and assembling cost	6892	6596	6273	6058	-	6455
Total (A+B)	46933	46472	46094	45815	-	46329
Productivity (Kg/ha)	16748	16720	15976	16070	-	16379
Cost Incurred (Per Kg.)	2.80	2.78	2.89	2.85	-	2.83

Annexure- 1.35: Utilization pattern of Kinnow in District Kangra.

(Qty=Kg. & Value= Rs.)

Farm size Category	Total Production (Kg.)	Home consumption (Kg.)	Gifted (Kg.)	Sold to processing Plants (Kg)	Sold in Markets					
					Local Market		Distant Market			
					Jassur		Pathankot		Jammu	
					Qty	Value	Qty	Value	Qty	Value
Marginal	242577	1467	852	8893	56785	522425	48140	491028	48960	528768
Small	309357	1385	697	9785	67862	644689	57365	587994	61562	675951
S. Medium	211220	832	364	3725	48970	479906	45125	465690	42540	470067
Medium	117464	362	176	1868	10420	105240	20164	209302	30167	349937
Large	-	-	-	-	-	-	-	-	-	-
Total	880618	4046	2089	24271	184037	1752260	170794	1754014	183229	2024723

Annexure: 1.35 Continued.....

Farm size Category	Distant Market					
	Srinagar		Jalandhar		Other	
	Qty	Value	Qty	Value	Qty	Value
Marginal	28152	318710	10938	110085	38390	391570
Small	31845	366218	17372	178063	61484	630214
S. Medium	26432	309254	14516	150241	28716	295775
Medium	45162	530654	7595	70983	1550	16120
Large	-	-	-	-	-	-
Total	131591	1524836	50421	509372	130140	1333679

Annexure- 1.36: Utilization pattern of Kagzi Lime in District Kangra.

(Qty=Kg. & Value= Rs.)

Farm size Category	Total Production (Kg.)	Home consumption (Kg.)	Gifted (Kg.)	Sold in Markets					
				Local Market		Distant Market			
				Jassur		Pathankot		Jammu	
				Qty	Value	Qty	Value	Qty	Value
Marginal	69569	218	197	26452	339908	18454	249135	12213	168539
Small	100880	196	139	35363	457951	24852	338046	18535	259483
S. Medium	73940	73	46	24568	320645	18973	259930	18585	261124
Medium	27806	48	30	6982	91472	8376	115589	8462	120160
Large	-	-	-	-	-	-	-	-	-
Total	272195	535	412	93365	1209976	70655	962700	57795	809306

Annexure- 1.36: Continued.....

Farm size Category	Distant Market			
	Jalandhar		Other	
	Qty	Value	Qty	Value
Marginal	3168	43243	8867	120591
Small	5346	73242	16449	225516
S. Medium	2734	37593	8961	123667
Medium	1363	18793	2545	35250
Large	-	-	-	-
Total	12611	172871	36822	505024

Annexure: 1.37: Utilization pattern of Malta/Sangtra in District Kangra

(Qty=Kg. & Value= Rs.)

Farm size Category	Total Production (Kg.)	Home consumption (Kg.)	Gifted (Kg.)	Sold in Markets					
				Local Market		Distant Market			
				Jassur		Pathankot		Jammu	
				Qty	Value	Qty	Value	Qty	Value
Marginal	19428	564	509	5183	58205	6387	79837	2132	27185
Small	28306	439	386	7246	81734	9781	123243	3453	44406
S. Medium	20214	242	173	5097	58208	6376	80848	3058	39692
Medium	5699	106	82	1382	15866	1263	16090	1267	16476
Large	-	-	-	-	-	-	-	-	-
Total	73647	1351	1150	18908	214013	23807	300018	9910	127759

Annexure: 1.37 Continued.....

Farm size Category	Distant Market			
	Srinagar		Others	
	Qty	Value	Qty	Value
Marginal	1486	20072	3167	40063
Small	1895	26151	5106	65152
S. Medium	1981	27635	3287	42238
Medium	1034	14490	565	7299
Large	-	-	-	-
Total	6396	88348	12125	154752

Annexure- 1.38: Utilization pattern of Galgal in District Kangra

(Qty=Kg. & Value= Rs.)

Farm size /Category	Total Production (Kg.)	Home consumption (Kg.)	Gifted (Kg.)	Sold to processing Plants (K.g)	Sold in Markets					
					Local Market		Distant Market			
					Jassur		Pathankot		Jammu	
					Qty	Value	Qty	Value	Qty	Value
Marginal	28137	135	103	1485	16862	95270	5564	33273	552	3456
Small	45478	121	96	1392	27978	159475	8456	51159	2281	15625
S. Medium	26839	90	81	1225	14784	84713	5260	32081	1736	12083
Medium	10285	39	30	985	5733	33079	1531	9431	739	5171
Large	-	-	-	-	-	-	-	-	-	-
Total	110739	385	310	5087	65357	372537	20811	125944	5308	36335

Annexure- 1.38: Continued.....

Farm size Category	Distant Market	
	Others	
	Qty	Value
Marginal	3436	21128
Small	5154	31436
S. Medium	3663	23809
Medium	1230	8241
Large	-	-
Total	13483	84614

District Sirmour

Annexure- 2.1: Socio-Economic Profile of Sampled households in District Sirmour.

Farm Size	Male	Female	Total population	Family Size	Sex Ratio
Marginal(59)	180	172	352	5.97	956
Small (45)	134	125	259	5.76	933
Semi Medium (16)	49	44	93	5.81	898
Medium	-	-	-	-	-
Large (-)	-	-	-	-	-
Total (120)	363	341	704	5.87	939

Note: Figures in brackets are the total number of sampled Households.

Annexure- 2.2: Educational Status of Sampled households in District Sirmour.

Farm Size	0-5 age groups		Illiterate		Primary		Middle		Matric		10+2		Graduate		Post-Graduate		Other professional		Total		Literacy Rate (%)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
MR	6	7	40	43	30	42	28	26	27	22	21	18	14	9	8	3	6	2	180	172	77.01	73.94
SI	4	3	30	32	22	20	21	20	20	19	17	21	11	7	6	2	3	1	134	125	76.92	73.77
SM	2	1	7	8	10	12	7	8	8	8	7	4	5	2	2	1	1	-	49	44	85.11	81.40
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	12	11	77	83	62	74	56	54	55	49	45	43	30	18	16	6	10	3	363	341	78.06	74.85

Annexure- 2.3 : Land utilization pattern of sampled farms in district Sirmour.

(Hectare)

Farm Size	Total Cultivated area	Field crops	Orchards Total	Mangoes	Citrus total	Kinnow (A)		Malta (B)		Kagzi Lime		Galgal		Fellow land	Ghasni	T	L	h
						Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing					
MR (59)	38.76	20.52	18.24	8.09	10.15	1.00	2.25	0.40	0.80	1.20	3.20	-	1.30	5.15	10.37	5		
Small (45)	39.75	22.43	17.32	6.78	10.54	1.20	2.80	0.50	1.00	1.30	3.10	-	0.64	7.33	14.12	6		
SM(16)	41.23	5.96	35.27	23.50	7.15	0.70	1.90	0.20	0.50	1.00	2.30	-	0.55	2.08	3.73	4		
Med	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total (120)	119.74	48.91	70.83	38.37	27.84	2.90	6.95	1.10	2.30	3.50	8.60	-	2.49	14.56	28.22	16		

Annexure-: 2.4 : Cropping Pattern of Sampled Households in District Sirmour.

(Hectare)

Farm Size Code	Sale Crops (Excluding orchard)					Mixed crops			Inter Crops				
	Maize	Arbi	Wheat	Ginger	Tomato	Maize + Rajmash	Arbi + Ginger	Wheat + Peas	Maize	Arbi	Peas		
MR	3.25	2.20	11.90	3.40	2.27	4.30	5.10	7.10	0.50	0.60	1.40	-	-
SI	3.35	2.25	12.10	3.50	4.08	4.25	5.00	8.80	0.60	0.80	1.50	-	-
SM	1.20	0.70	3.00	1.40	0.21	1.20	1.25	2.90	0.40	0.55	0.85	-	-
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7.80	5.15	27.00	8.30	6.56	9.75	11.35	18.80	1.50	1.95	3.75	-	-

Annexure- 2.5: Number of Non-Bearing and Bearing Plants of Kinnow in Different age groups in District Sirmour.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg)	No.	Prod. (kg)	No.	Prod. (kg)	No.	Prod. (kg)
MR	84	110	98	292	86	2537	93	3627	81	3645	98	4996	105	5983	112	7052	60	3896	635	31736
SI	112	128	123	363	123	3505	129	4904	124	5457	103	5201	121	6835	98	6115	89	5740	787	37757
SM	60	49	86	195	81	2265	87	3223	80	3480	92	4602	76	4252	72	4464	44	2816	532	25102
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	256	287	307	850	290	8307	309	11754	285	12582	293	14799	302	17070	282	17631	193	12452	1954	94595

Annexure- 2.6: Number of Non-Bearing and Bearing Plants of Kagzi Lime in Different age groups in District Sirmour.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg.)	No.	Prod. (No.)	No.	Prod. (Kg.)	No.	Prod. (kg.)	No.	Prod. (Kg)	No.	Prod. (kg.)	No.	Prod. (kg)	No.	Prod. (kg)
MR	112	123	131	366	155	2403	168	2486	180	4464	143	4261	118	4075	96	3835	58	2556	918	24080
SI	126	134	135	395	151	2284	156	2230	148	3596	187	5516	105	3591	84	2990	53	2327	884	22534
SM	88	106	109	303	112	1768	130	1815	127	3073	104	3037	77	2690	65	2535	32	1423	653	16341
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	326	363	375	1064	424	6455	454	6531	455	11133	434	12814	300	10356	245	9360	143	6306	2455	62955

Annexure- 2.7: Number of Non-Bearing and Bearing Plants of Malta/Sangtra in Different age groups in District Sirmour.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (Kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)
MR	41	37	36	114	29	720	37	1098	59	2050	32	1274	24	1070	21	1045	18	987	220	8244
SI	39	53	50	142	55	1347	51	1504	40	1418	39	1536	35	1558	32	1573	24	1302	276	10238
SM	19	16	21	56	19	456	36	1051	18	615	22	860	18	793	15	735	12	650	140	5160
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	99	106	107	312	103	2523	124	3653	117	4083	93	3670	77	3421	68	3353	54	2939	636	23642

Annexure- 2.8: Number of Non-Bearing and Bearing Plants of Galgal in Different age groups in District Sirmour.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)
MR	-	-	-	-	18	718	37	1670	46	2346	51	2860	58	3540	72	4766	63	4475	345	20375
SI	-	-	-	-	10	393	21	945	23	1154	25	1395	28	1275	30	1977	29	2045	166	9184
SM	-	-	-	-	8	310	18	805	20	998	23	1265	25	1490	27	1765	21	1468	142	8101
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	36	1421	76	3420	89	4498	99	5520	111	6305	129	8508	113	7988	653	37660

Annexure- 2.9: Initial Cost of Kinnow Plantation in district Sirmour.

(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Average
Layout/ Clearing	2472	2450	2441	2454
Digging of pits	5583	5567	5543	5564
Filling of pits	1251	1246	1232	1243
Cost of plants	3064	3042	3014	3040
Cost of plantation	1650	1635	1624	1636
Plant support	700	676	670	682
Fencing of Individual plants	281	275	271	276
FYM	2832	2809	2802	2814
I&P	843	831	826	833
Watering	1235	1227	1220	1227
Miscellaneous	258	250	245	251
Total	20169	20008	19888	20020

**Annexure 2.10: Maintenance cost and returns from non-bearing orchard
of Kinnow in District Sirmour.**

(Rs./hectare)

Cost of Components	Marginal			Small			Semi Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Value of Labour	3426	3748	3887	3402	3716	3853	3395	3703	3840
Value of manure	1561	1672	1760	1516	1667	1756	1507	1651	1742
Value of fertilizer	1705	1821	1956	1708	1814	1943	1702	1806	1934
Value of I & P.	712	883	894	737	828	886	731	822	880
Land revenue & cess and Other taxes	13	13	13	13	13	13	13	13	13
Interest on working capital	502	523	537	502	518	530	496	510	523
Depreciation	225	225	225	220	220	220	215	215	215
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	521	521	521	528	528	528	532	532	532
Interest on accumulated establishment cost	1968	2039	2158	1954	2025	2132	1925	2005	2110
Sub-total (A)	30933	31695	32251	30880	31629	32161	30816	31557	32089
Return from Inter crops	16967	15893	15352	15898	14767	14245	15548	14863	14173
Net Returns	-13966	-15802	-16899	-14982	-16862	-17916	-15268	-16694	-17916

Annexure- 2.11: Maintenance cost of bearing orchard of Kinnow in district Sirmour (Marginal Farmers)

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2568	2697	2909	3097	3307	3432	3503
Manure	812	865	918	960	1020	1064	1105
Fertilizer	823	868	925	962	1017	1065	1102
Insecticide & Pesticides	740	793	830	880	941	1015	1076
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	796	868	917	1063	1120	1184	1225
Depreciation	392	472	502	517	557	573	610
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1092	1092	1092	1092	1092	1092	1092
Prorated establishment cost	13912	13912	13912	13912	13912	13912	13912
Sub-total	41448	41880	42318	42796	43279	43650	43938

Annexure- 2.12: Maintenance cost of bearing orchard of Kinnow in district Sirmour (Small Farmers)

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2552	2684	2902	3081	3296	3418	3493
Manure	805	860	912	953	1015	1062	1090
Fertilizer	820	863	920	960	1013	1060	1095
Insecticide & Pesticides	735	786	824	875	936	1009	1067
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	790	864	902	918	953	1048	1092
Depreciation	390	467	497	512	550	568	604
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1085	1085	1085	1085	1085	1085	1085
Prorated establishment cost	13883	13883	13883	13883	13883	13883	13883
Sub-total	41373	41805	42238	42580	43044	43486	43722

**Annexure- 2.13: Maintenance cost of bearing orchard of Kinnow plants in district Sirmour.
(Semi-medium farmers)**

(Rs./Hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2543	2672	2886	3068	3284	3407	3489
Manure	801	853	907	946	1008	1054	1082
Fertilizer	814	857	915	954	1009	1053	1084
Insecticide & Pesticides	730	781	818	868	930	1003	1061
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	786	860	893	912	946	1041	1086
Depreciation	385	462	492	507	546	561	600
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1078	1078	1078	1078	1078	1078	1078
Prorated establishment cost	13680	13680	13680	13680	13680	13680	13680
Sub-total	41130	41556	41982	42326	42794	43190	43473

Annexure- 2.14: Cost of Cultivation of Kinnow in District Sirmour.
(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Medium	Large	Overall
Labour	3073	3061	3050	-	-	3061
Value of Manure	963	957	950	-	-	957
Value of Fertilizer	966	962	955	-	-	961
Value Insecticide & Pesticides	896	890	884	-	-	890
Land revenue and Other taxes	13	13	13	-	-	13
Interest on working capital	1025	938	932	-	-	965
Depreciation	518	513	508	-	-	513
Rental Value of Owned land	20300	20300	20300	-	-	20300
Interest on fixed capital	1092	1085	1078	-	-	1085
Prorated establishment cost	13912	13883	13680	-	-	13825
Total Cost	42758	42602	42350	-	-	42570
Harvesting and Assembling cost	7365	7085	6872	-	-	7107
Total (A+B)	50123	49687	49222	-	-	49677
Productivity (kg/ha)	10702	8048	8601	-	-	9117
Cost Incurred (per/kg.)	4.68	6.17	5.72	-	-	5.45

Annexure-2.15 Initial Cost of Kagzi Lime Plantation in Sirmour district.
(Rs./ hectare)

Cost Components	MR	Small	SM	Average
Layout/ Clearing	2327	2314	2305	2315
Digging of pits	5375	5356	5340	5357
Filling of pits	1215	1209	1202	1209
Cost of plants	2852	2840	2823	2838
Cost of plantation	1610	1607	1601	1606
Plant support	643	629	618	630
Fencing of Individual plants	273	262	254	263
FYM	2752	2734	2717	2734
I&P	812	808	807	809
Watering	1143	1131	1120	1131
Miscellaneous	231	224	221	225
Total	19233	19114	19008	19117

**Annexure-2.16: Maintenance cost and returns from non-bearing fruits
of Kagzi Lime in District Sirmour.**

(Rs./hectare)

Cost of Components	Marginal			Small			Semi Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	3263	3396	3490	3286	3408	3505	3298	3421	3517
Value of Manure	1418	1562	1644	1437	1581	1658	1445	1594	1665
Value of Fertilizer	1503	1681	1768	1512	1694	1776	1520	1698	1786
Value of I&F	691	756	793	697	763	798	703	767	805
Land revenue & Less and Other taxes	13	13	13	13	13	13	13	13	13
Interest on working capital	446	483	507	451	493	514	459	499	520
Depreciation	220	220	220	226	226	226	234	234	234
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	502	502	502	512	512	512	517	517	517
Interest on accumulated establishment cost	1854	1968	2029	1923	1996	2045	1948	2005	2068
Sub-total (A)	30210	30881	31266	30357	30986	31347	30437	31048	31425
Return from Inter crops	17305	16790	16125	17092	16368	15875	16786	16042	15236
Net Returns	-12905	-14091	-15141	-13265	-14610	-15472	-13651	-15006	-16189

**Annexure- 2.17: Maintenance cost of bearing orchard of Kagzi Lime in district Sirmour
(Marginal Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2486	2573	2812	2984	3210	3337	3416
Manure	801	854	907	951	1005	1027	1081
Fertilizer	812	856	910	956	1014	1032	1083
Insecticide & Pesticides	714	767	823	858	908	1002	1051
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	689	854	901	1029	1096	1135	1184
Depreciation	357	451	490	513	542	561	592
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	993	993	993	993	993	993	993
Prorated establishment cost	12885	12885	12885	12885	12885	12885	12885
Sub-total	40050	40546	41034	41482	41966	42285	42598

**Annexure- 2.18: Maintenance cost of bearing orchard of Kagzi lime in District Sirmour
(Small Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2459	2556	2801	2939	3185	3273	3351
Manure	793	834	886	935	958	996	1030
Fertilizer	802	836	889	941	963	998	1034
Insecticide & Pesticides	705	728	761	782	807	829	847
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	680	840	891	986	1051	1094	1135
Depreciation	351	442	483	507	535	552	583
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	984	984	984	984	984	984	984
Prorated establishment cost	12657	12657	12657	12657	12657	12657	12657
Sub-total	39744	40190	40665	41044	41453	41696	41934

**Annexure- 2.19: Maintenance cost of bearing orchard of Kagzi lime in District Sirmour
(Semi Medium Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2434	2527	2778	2891	2983	3096	3198
Manure	790	828	876	927	951	978	1023
Fertilizer	796	834	883	935	957	982	1032
Insecticide & Pesticides	701	724	757	778	800	823	842
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	673	835	883	978	1040	1079	1115
Depreciation	346	435	478	495	528	546	573
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	972	972	972	972	972	972	972
Prorated establishment cost	12581	12581	12581	12581	12581	12581	12581
Sub-total	39606	40049	40521	40870	41125	41370	41649

Annexure- 2.20: Cost of Cultivation of Kagzi lime in District Sirmour

(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Medium	Large	Overall
Labour	2974	2938	2844	-	-	2919
Value of Manure	947	919	910	-	-	925
Value of Fertilizer	952	923	917	-	-	931
Value Insecticide & Pesticides	875	780	775	-	-	810
Land revenue and Other taxes	13	13	13	-	-	13
Interest on working capital	984	954	943	-	-	960
Depreciation	501	493	486	-	-	493
Rental Value of Owned land	20300	20300	20300	-	-	20300
Interest on fixed capital	993	984	972	-	-	983
Prorated establishment cost	12885	12657	12581	-	-	12708
Total Cost	41424	40961	40741	-	-	41042
Harvesting and Assembling cost	7683	7520	7445	-	-	7549
Total (A+B)	49107	48481	48186	-	-	48591
Productivity (kg/ha)	7525	7269	7105	-	-	7300
Cost Incurred (per/kg.)	6.53	6.67	6.78	-	-	6.66

Annexure- 2.21: Initial Cost of Malta/Sangtra Plantation in Sirmour district.

(Rs./hectare)

Cost Components	Marginal	Small	Semi Medium	All
Layout/ Clearing	2438	2418	2405	2420
Digging of pits	5540	5523	5509	5524
Filling of pits	1224	1215	1204	1214
Cost of plants	3056	3032	3012	3033
Cost of plantation	1642	1628	1617	1629
Plant support	698	684	671	684
Fencing of Individual plants	274	267	262	268
FYM	2789	2763	2740	2764
I&P	843	832	824	833
Watering	1190	1172	1163	1175
Miscellaneous	208	205	203	205
Total	19992	19739	19610	19749

**Annexure- 2.22: Maintenance cost and returns from non-bearing orchard of Malta/Sangtra
in District Sirmour**

(Rs./hectare)

Cost of Components	Marginal			Small			Semi Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	3294	3396	3492	3281	3369	3473	3267	3352	3456
Value of Manure	1467	1550	1612	1458	1542	1602	1448	1536	1593
Value of Fertilizer	1535	1603	1696	1524	1596	1684	1517	1584	1672
Value of I&F	702	759	785	697	750	775	690	742	768
Land revenue & Less and Other taxes	13	13	13	13	13	13	13	13	13
Interest on working capital	468	483	499	461	476	490	456	470	481
Depreciation	231	231	231	235	235	235	238	238	238
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	518	518	518	523	523	523	528	528	528
Interest on accumulated establishment cost	2035	2096	2157	2012	2076	2140	1996	2058	2103
Sub-total (A)	30563	30951	31303	30504	30880	31235	30453	30821	31152
Return from Inter crops	16735	15692	15025	16486	15293	14918	16235	15096	14724
Net Returns	-13828	-15259	-16278	-14018	-15587	-16317	-14218	-15725	-16428

**Annexure- 2.23: Maintenance cost of bearing orchard of Malta/Sangtra in district Sirmour
(Marginal Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2546	2679	2886	3083	3276	3368	3457
Manure	803	853	902	948	1003	1051	1090
Fertilizer	810	858	910	951	1005	1054	1193
Insecticide & Pesticides	731	790	823	871	935	1003	1068
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	782	854	899	1044	1106	1173	1205
Depreciation	384	467	495	514	550	568	597
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1084	1084	1084	1084	1084	1084	1084
Prorated establishment cost	13865	13865	13865	13865	13865	13865	13865
Sub-total	41318	41763	42177	42673	43137	43479	43872

**Annexure- 2.24: Maintenance cost of bearing orchard of Malta/Sangtra in District Sirmour
(Small Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2521	2653	2858	3049	3251	3350	3432
Manure	796	847	894	941	997	1043	1081
Fertilizer	802	850	900	945	998	1048	1087
Insecticide & Pesticides	725	781	816	866	929	997	1060
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	776	848	891	1037	1101	1165	1198
Depreciation	380	461	492	509	542	560	591
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1063	1063	1063	1063	1063	1063	1063
Prorated establishment cost	13712	13712	13712	13712	13712	13712	13712
Sub-total	41008	41528	41939	42435	42906	43251	43537

**Annexure- 2.25: Maintenance cost of bearing orchard of Malta/Sangtra in district Sirmour
(Semi Medium Farmer)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	2503	2630	2825	3021	3218	3309	3405
Manure	783	835	884	932	990	1037	1082
Fertilizer	796	942	896	939	994	1041	1085
Insecticide & Pesticides	720	775	810	859	920	989	1051
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	770	841	886	1031	1096	1158	1190
Depreciation	374	457	483	501	536	554	585
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	1028	1028	1028	1028	1028	1028	1028
Prorated establishment cost	12995	12995	12995	12995	12995	12995	12995
Sub-total	40282	40816	41120	41619	42090	42424	42734

Annexure- 2.26: Cost of Cultivation of Malta/Sangtra in District Sirmour.

(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Medium	Large	Overall
Labour	3042	3016	2987	-	-	3015
Value of Manure	950	943	928	-	-	940
Value of Fertilizer	969	947	956	-	-	957
Value Insecticide & Pesticides	889	882	875	-	-	882
Land revenue and Other taxes	13	13	13	-	-	13
Interest on working capital	1009	1002	996	-	-	1002
Depreciation	511	505	499	-	-	505
Rental Value of Owned land	20300	20300	20300	-	-	20300
Interest on fixed capital	1084	1063	1028	-	-	1058
Prorated establishment cost	13865	13712	12995	-	-	13524
Total Cost	42632	42383	41577	-	-	42196
Harvesting and Assembling cost	7235	7160	7055	-	-	7150
Total (A+B)	49867	49543	48632	-	-	49346
Productivity (kg/ha)	10305	10238	10320	-	-	10288
Cost Incurred (per/kg.)	4.84	4.84	4.71	-	-	4.80

**Annexure- 2.27: Maintenance cost of bearing orchard of Galgal in district Sirmour
(Marginal Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1642	1739	1820	1935	2052	2170	2243
Manure	617	689	705	743	783	809	841
Fertilizer	413	432	463	492	510	534	546
Insecticide & Pesticides	232	252	268	283	596	317	334
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	330	356	381	396	423	440	456
Depreciation	253	264	278	291	301	318	326
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	698	698	698	698	698	698	698
Prorated establishment cost	11705	11705	11705	11705	11705	11705	11705
Sub-total	36203	36448	36631	36856	37381	37304	37462

**Annexure- 2.28: Maintenance cost of bearing orchard of Galgal in District Sirmour
(Small Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1627	1725	1809	1921	2035	2147	2225
Manure	612	683	699	736	772	797	831
Fertilizer	405	428	457	483	504	529	542
Insecticide & Pesticides	225	247	263	278	291	312	328
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	324	351	376	393	418	435	452
Depreciation	248	261	273	287	298	312	321
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	692	692	692	692	692	692	692
Prorated establishment cost	11552	11552	11552	11552	11552	11552	11552
Sub-total	35998	36252	36434	36655	36875	37089	37256

**Annexure- 2.29: Maintenance cost of bearing orchard of Galgal
(Semi Medium Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1605	1710	1796	1903	2010	2123	2205
Manure	603	678	692	731	765	790	823
Fertilizer	398	422	450	475	496	522	536
Insecticide & Pesticides	220	242	258	272	284	306	321
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	318	346	368	385	413	430	446
Depreciation	242	257	269	281	293	309	318
Rental Value of Owned land	20300	20300	20300	20300	20300	20300	20300
Interest on fixed capital	684	684	684	684	684	684	684
Prorated establishment cost	11365	11365	11365	11365	11365	11365	11365
Sub-total	35748	36017	36195	36409	36623	36842	37011

Annexure- 2.30: Cost of Cultivation of Galgal in District Sirmour
(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Medium	Large	Overall
Labour	1943	1927	1907	-	-	1926
Value of Manure	741	733	726	-	-	733
Value of Fertilizer	484	478	471	-	-	478
Value Insecticide & Pesticides	326	278	272	-	-	292
Land revenue and Other taxes	13	13	13	-	-	13
Interest on working capital	397	393	387	-	-	392
Depreciation	290	285	281	-	-	286
Rental Value of Owned land	20300	20300	20300	-	-	20300
Interest on fixed capital	698	692	684	-	-	691
Prorated establishment cost	11705	11552	11365	-	-	11541
Total Cost	36897	36651	36406	-	-	36652
Harvesting and Assembling cost	6764	6692	6540	-	-	6665
Total (A+B)	43661	43343	42946	-	-	43317
Productivity (kg/ha)	15673	14350	14729	-	-	14917
Cost Incurred (per/kg.)	2.79	3.02	2.92	-	-	2.90

Annexure- 2.31: Utilization Pattern of Kinnow in District Sirmour

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold to processing plant (kg)	Sold in Market								Others	
					Local market				Distant Market				Qty (Kg)	Value (Rs.)
					Nahan		Paonta Sahib		Yamuna Nagar		Chandigarh			
					Qty (kg)	Value (Rs)	Qty. (Kg)	Value (Rs.)	Qty. (Kg)	Value (Rs)	Qty (Kg)	Value (Rs.)		
Marginal	31736	593	280	2360	8735	80798	9656	88352	4168	46890	4090	47038	1854	20945
Small	37757	507	253	2635	9563	89412	10842	100287	5784	65362	5245	60845	2928	33089
Semi-Medium	25102	260	115	1391	6356	59748	7965	74075	3580	40805	3249	37852	2186	24833
Medium	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	94595	1360	648	6386	24654	229958	28463	262714	13532	153057	12584	145735	6958	78867

Annexure- 2.32: Utilization Pattern of Kagzi Lime in District Sirmour

Farm size category	Total production (kg)	Gift etc. (kg)	Home Consumption	Sold in Market								Others	
				Local market				Distant Market				Qty (Kg)	Value (Rs.)
				Nahan		Paonta Sahib		Yamuna Nagar		Chandigarh			
				Qty (kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty (Kg)	Value (Rs.)		
Marginal	24080	312	693	3960	49495	2355	28253	4165	56645	7386	105989	5209	72826
Small	22534	290	578	3567	45302	2095	25768	3928	54206	6420	92962	5656	79750
Semi-Medium	16341	108	204	1683	21626	1419	17731	2343	32682	3862	57736	6722	95452
Medium	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	62955	710	1475	9210	116423	5869	71752	10436	143533	17668	256687	17587	248028

Annexure- 2.33: Utilization Pattern of Malta/Sangtra in District Sirmour

Farm size category	Total production (kg)	Home Consumption (kg)	Gift etc. (kg)	Sold in Market								Others	
				Local market				Distant Market				Qty (Kg)	Value (Rs.)
				Nahan		Paonta Sahib		Yamuna Nagar		Chandigarh			
				Qty (kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty (Kg)	Value (Rs .)		
Marginal	8244	395	192	2095	21992	2078	21297	786	9825	1263	16105	1435	18085
Small	10238	283	160	2180	23108	2365	24476	1393	17691	1152	14748	2705	34624
Semi-Medium	5160	115	45	1255	13305	1342	14091	596	7599	673	8680	1134	14630
Medium	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	23642	793	397	5530	58405	5785	59864	2775	35115	3088	39533	5274	67339

Annexure- 2.34: Utilization Pattern of Galgal in District Sirmour

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold to processing plant (kg)	Sold in Market								Others	
					Local market				Distant Market				Qty (Kg)	Value (Rs.)
					Nahan		Paonta Sahib		Yamuna Nagar		Chandigarh			
					Qty (kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty (Kg)	Value (Rs.)		
Marginal	20375	735	285	1150	5635	18314	3995	12381	2160	7452	1868	6540	4547	15458
Small	9184	514	140	765	1705	5658	1655	5298	1045	3663	1020	3725	2340	8235
Semi-Medium	8101	238	85	595	1640	5576	1560	5068	945	3445	875	3220	2163	7680
Medium	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	37660	1487	510	2510	8980	29548	7210	22747	4150	14560	3763	13485	9050	31373

District Mandi

Annexure- 3.1: Socio-Economic Profile of Sampled Orchardists of District Mandi.

Farm Size	Male	Female	Total population	Family Size	Sex Ratio
Marginal(67)	194	183	377	5.63	943
Small (39)	115	106	221	5.67	922
Semi Medium (14)	42	40	82	5.86	952
Medium (-)	-	-	-	-	-
Large (-)	-	-	-	-	-
Total (120)	351	329	680	5.67	937

Note: Figures in brackets are the number of sampled households.

Annexure- 3.2: Educational Status of Sampled household in District Mandi.

Farm Size	0-5 age groups		Illiterate		Primary		Middle		Matric		10+2		Graduate		Post-Graduate		Other professional		Literacy Rate Percent	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Marginal	21	20	35	39	22	23	26	25	27	30	23	27	21	10	11	6	8	3	79.77	76.07
Small	10	9	10	12	15	16	17	18	18	17	27	23	9	6	5	3	4	2	90.48	87.63
SM	3	3	4	5	6	8	7	8	6	6	6	5	5	3	3	1	2	1	88.74	86.49
Med.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	34	32	49	56	43	47	50	51	51	53	56	55	35	19	19	10	14	6	84.54	81.14

Annexure-3.3 : Land utilization pattern of sampled farms in district Mandi.

(Hectare)

Farm Size	Total Cultivated area	Field crops	Orchards Total	Mangoes	Citrus total	Kinnow (A)		Malta (B)		Kagzi Lime		Galgal		Fellow land	Ghasni	Total Land hold.	Per household Holding
						Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing	Non Bearing	Bearing				
Marginal	38.57	20.85	17.72	8.30	9.42	-	-	-	-	-	-	3.28	6.14	3.20	12.50	54.27	0.81
Small	37.36	19.30	18.06	7.50	10.56	-	-	-	-	-	-	4.25	6.31	5.10	13.75	56.21	1.44
Semi Medium	28.52	14.60	13.92	7.80	6.12	-	-	-	-	-	-	2.52	3.60	4.30	8.90	41.72	2.98
Medium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	104.45	54.75	49.70	23.60	26.10	-	-	-	-	-	-	10.05	16.05	12.60	35.15	152.20	1.27

Annexure- 3.4 : Cropping Pattern of Sampled Households in District Mandi.

(Hectare)

Farm Size Code	Sole Crops (Excluding Orchard)					Mixed Crops (Excluding Orchards)					Inter Crops			
	Maize	Paddy	Wheat	Tomato	Chairi	Maize + Mamas	Toria + Lady finger	Wheat + Peas			Maize	Toria	Tomato	Cauliflower
MR	6.30	2.90	9.25	3.80	4.15	4.70	3.15	5.20	-	-	0.84	0.52	1.47	0.45
Small	6.10	2.35	8.80	3.70	4.00	4.50	3.05	4.90	-	-	0.95	0.70	1.40	1.20
SM	5.10	2.20	5.20	2.60	2.20	3.00	1.70	5.00	-	-	0.50	0.35	1.42	0.25
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	17.50	7.45	23.25	10.10	10.35	12.20	7.90	15.10	-	-	2.29	1.57	4.29	1.90

Annexure- 3.5 : Number of Non-Bearing and Bearing Plants of Galgal in Different age groups in District Mandi.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Years (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)
Marginal	139	513	168	820	148	5923	193	9072	218	11772	246	15496	312	22460	207	16565	168	16830	1492	98118
Small	231	357	453	1041	202	7872	205	9630	221	11735	275	17042	253	17958	166	13272	196	19450	1518	96959
Semi Me	126	248	238	612	109	4145	107	4975	103	5461	105	6412	85	6042	191	14554	162	15902	862	57491
Medium.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	496	1118	859	2473	459	17940	505	23677	542	28968	626	38950	650	46460	564	44391	526	52182	3872	252568

Annexure- 3.6: Initial Cost of Galgal Plantation in District Mandi.

(Rs./hectare)

Cost Components	Marginal	Small	Semi-Medium	Medium	Average
Layout/ Clearing	1848	1839	1814	-	1834
Digging of pits	4156	4124	4109	-	4130
Filling of pits	1142	1123	1112	-	1126
Cost of plants	2350	2337	2316	-	2334
Cost of plantation	1525	1529	1507	-	1520
Plant support	602	598	590	-	597
Fencing of plants	209	204	201	-	204
FYM	2130	2113	2105	-	2116
I&P	430	424	411	-	422
Watering	1120	1109	1102	-	1110
Miscellaneous	205	201	203	-	203
Total	15717	15601	15470	-	15596

Annexure-3.7: Maintenance cost and returns from non-bearing orchard of Galgal in District Mandi.

(Rs./hectare)

Cost of Components	Marginal			Small			Semi Medium		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Labour	2823	2935	3012	2805	2916	2998	2793	2905	2983
Value of Manure	1235	1341	1418	1223	1337	1410	1216	1325	1402
Value of Fertilizer	409	457	489	402	450	481	398	445	475
Value of I&F	325	402	496	320	405	492	316	401	485
Land revenue & cesses and other taxes	13	13	13	13	13	13	13	13	13
Interest on working capital	305	321	335	302	318	330	296	312	321
Depreciation	203	203	203	201	201	201	205	205	205
Rental Value of Owned land	20750	20750	20750	20750	20750	20750	20750	20750	20750
Interest on fixed capital	275	275	275	281	281	281	285	285	285
Interest on accumulated establishment cost	1085	1145	1230	1072	1140	1223	1065	1132	1220
Sub-total (A)	27423	27842	28221	27369	27811	28179	27337	27773	28139
Return from Inter crops	11985	11362	11045	11755	11230	10851	11580	11063	10672
Net Returns	-15438	-16480	-17176	-15614	-16581	-17328	-15757	-16710	-17467

**Annexure- 3.8: Maintenance cost of bearing orchard of Galgal in district Mandi.
(Marginal Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1590	1721	1815	19.10	2063	2191	2242
Manure	603	760	823	901	998	1009	1150
Fertilizer	499	527	590	621	705	742	793
Insecticide & Pesticides	460	491	528	576	620	672	706
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	526	610	683	787	8.81	967	1035
Depreciation	281	338	381	438	485	526	591
Rental Value of Owned land	20750	20750	20750	20750	20750	20750	20750
Interest on fixed capital	535	535	535	535	535	535	535
Prorated establishment cost	11190	11190	11190	11190	11190	11190	11190
Sub-total	36447	36935	37308	37721	38240	38595	39005

**Annexure- 3.9: Maintenance cost of bearing orchard of Galgal in district Mandi
(Small Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1583	1697	1792	1890	2042	2173	2218
Manure	598	750	812	892	989	1002	1141
Fertilizer	492	518	581	613	696	735	786
Insecticide & Pesticides	456	485	520	571	614	667	701
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	520	602	676	780	875	961	1024
Depreciation	272	328	372	427	475	520	582
Rental Value of Owned land	20750	20750	20750	20750	20750	20750	20750
Interest on fixed capital	521	521	521	521	521	521	521
Prorated establishment cost	11065	11065	11065	11065	11065	11065	11065
Sub-total	36270	36729	37102	37522	38040	38407	38801

**Annexure- 3.10: Maintenance cost of bearing orchard of Galgal in district Mandi
(Semi Medium Farmers)**

(Rs./hectare)

Cost Component	Age in years						
	4-5	6-7	8-10	11-12	13-15	16-20	21 & above
Labour	1572	1684	1780	1875	2018	2154	2203
Manure	590	742	801	885	980	995	1132
Fertilizer	486	513	574	607	691	730	780
Insecticide & Pesticides	451	480	512	608	610	661	696
Land revenue and Other taxes	13	13	13	13	13	13	13
Interest on working capital	518	594	670	771	868	954	1009
Depreciation	267	321	367	421	470	515	575
Rental Value of Owned land	20750	20750	20750	20750	20750	20750	20750
Interest on fixed capital	516	516	516	516	516	516	516
Prorated establishment cost	11023	11023	11023	11023	11023	11023	11023
Sub-total	36186	36636	37006	37469	37939	38311	38697

Annexure- 3.11: Cost of Cultivation of Galgal in District Mandi.

Cost Components	(Rs./Hectare)					
	Marginal	Small	Semi-Medium	Medium	Large	Overall
Labour	1933	1914	1898	-	-	1915
Value of Manure	892	883	875	-	-	883
Value of Fertilizer	640	632	626	-	-	633
Value Insecticide & Pesticides	579	573	574	-	-	575
Land revenue and Other taxes	13	13	13	-	-	13
Interest on working capital	784	777	769	-	-	777
Depreciation	434	425	419	-	-	426
Rental Value of Owned land	20750	20750	20750	-	-	20750
Interest on fixed capital	535	521	516	-	-	524
Prorated establishment cost	11190	11065	11023	-	-	11093
Total Cost	37750	37553	37463	-	-	37589
Harvesting and Assembling cost	6539	6460	6391	-	-	6463
Productivity (kg/ha)	15980	15366	15970	-	-	15772
Total (A+B)	44289	44013	43854	-	-	44052
Cost Incurred (per/kg.)	2.77	2.86	2.75	-	-	2.79

Annexure- 3.12: Utilization Pattern of Galgal in District Mandi

Farm size category	Total production (kg)	Home consumption (kg)	Gift etc. (kg)	Sold to processing plant (kg)	Sold in Market							
					Local market				Distant Market			
					Sunder Nagar		Mandi		Yamuna Nagar		Chandigarh	
					Qty (kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty. (Kg)	Value (Rs)	Qty (Kg)	Value (Rs.)
Marginal	98118	983	520	13620	8930	28576	35685	115924	18862	75455	20038	78148
Small	96959	812	480	12225	7545	24425	32390	107535	17525	71860	25982	103930
Semi-Medium	57491	325	290	6386	5180	16835	15320	51322	10485	44012	19505	79952
Medium	-	-	-	-	-	-	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	-	-	-	-	-
Total	252568	2120	1290	32231	21655	69836	83395	274782	46872	191327	65525	262030

Himachal Pradesh

Annexure- 4.1: Number of Non-Bearing and Bearing Plants of Kinnow in sampled households of H.P.

Category Code	Non-Bearing				Bearing															
	1 Years (No)	2 Years (No)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (kg)	No.	Prod. (Kg.)	No.	Prod. (Kg.)	No.	Prod. (Kg.)
MR	352	474	394	1220	669	20783	691	28375	718	34042	910	50044	910	55795	880	50620	689	34654	5467	274313
SI	479	712	474	1665	761	23177	893	35540	1007	46335	1015	55125	1117	68169	1270	69307	1002	49461	7065	347114
SM	269	350	300	919	642	18988	660	26097	708	32122	856	44600	854	50839	781	41248	470	22428	4971	236322
Md.	103	95	109	307	257	7436	269	9985	326	14781	384	19842	396	22956	466	24178	466	24178	398	18286
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1203	1631	1277	4111	2329	70384	2513	99997	2759	127280	3165	169611	3277	197759	3397	185353	2559	124829	20001	975213

Annexure- 4.2: Number of Non-Bearing and Bearing Plants of Kagzi lime in sampled households of H.P.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)
Marginal	268	358	292	918	383	5824	451	7864	576	13572	561	15343	701	21917	420	13328	525	15801	5079	93649
Small	378	435	497	1310	705	10371	729	12887	753	15642	803	21512	705	22345	682	20332	647	18959	5045	123414
Semi Medium	233	298	292	823	530	7959	591	10298	555	12489	561	14828	691	18102	461	13973	449	12932	3738	90281
Medium.	27	71	43	141	116	1624	142	2584	193	4198	182	4643	209	6167	187	5329	119	3261	1148	27806
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	906	1162	1124	3192	1734	25478	1913	33633	2077	47267	2107	56326	2227	68531	1750	52962	1740	50953	13548	335150

Annexure- 4.3: Number of Non-Bearing and Bearing Plants of Malta/Sangtra in sampled households of H.P.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (Kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)
MR	62	60	66	188	98	2458	115	3454	143	5007	125	5477	117	5273	93	3868	72	2881	756	27672
Sl	73	93	97	263	151	3740	163	4856	712	6034	175	6948	176	7874	131	5414	92	3678	1060	38544
SM	39	40	50	129	93	2280	119	3496	107	3697	117	4566	112	4947	91	3627	73	2760	712	25374
Md.	4	6	4	14	21	508	23	667	26	885	30	1163	29	1277	18	682	15	517	162	5699
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	178	199	217	594	363	8986	420	12474	448	15623	447	18154	434	19371	333	13591	252	9836	2690	97289

Annexure- 4.4: No. of Non-Bearing and Bearing Plants of Galgal in sampled households of H.P.

Category Code	Non-Bearing				Bearing															
	1 Years (No.)	2 Years (No.)	3 Year (No.)	Total (No.)	4-5 Years		6-7 Years		8-10 Years		11-12 Years		13-15 Years		16-20 Years		21 & Above		Total	
					No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)	No.	Prod. (kg.)
MR	139	513	168	820	232	8721	304	13628	349	17943	386	22450	452	30182	373	26689	333	27017	2428	146630
Sl	231	357	453	1041	278	10311	349	15310	374	18673	442	24898	438	27207	370	25063	385	30159	2636	151621
SM	126	248	238	612	172	6131	193	8362	200	9846	215	11587	188	11444	314	21702	292	23359	1574	92431
Md.	-	-	-	-	18	538	23	871	28	1224	30	1322	34	1702	40	2276	42	2352	215	10285
Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	496	1118	859	2413	700	25701	869	38171	951	47686	1073	60257	1112	70535	1097	75730	1052	82887	6853	400967

